Agenda Item D.1
PUBLIC HEARING
Meeting Date: March 19, 2019

TO: Mayor and Councilmembers

FROM: Peter Imhof, Planning and Environmental Review Director

CONTACT: Anne Wells, Advance Planning Manager

SUBJECT: Ellwood Mesa / Sperling Preserve Monarch Butterfly Habitat Management Plan Adoption

RECOMMENDATION:

A. Adopt Resolution No. 19-__ entitled "A Resolution of the City Council of the City of Goleta Adopting the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program for the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan; Case No. 13-085" (Attachment 1); and

B. Adopt Resolution No. 19-__ entitled "A Resolution of the City Council of the City of Goleta Adopting the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan" (Attachment 2).

BACKGROUND:

Each fall, monarch butterflies (*Danaus plexippus*) in the western United States migrate to the coast of California from various locations throughout western North America. The butterflies arrive at the coast in mid-September and as winter approaches, they form permanent roosts, often called overwintering or wintering colonies. The butterflies remain until about mid-February, when they generally disperse inland.

The eucalyptus groves at the City's Ellwood Mesa / Sperling Preserve Open Space (Ellwood Mesa Open Space) were planted by horticulturist Ellwood Cooper in the late 1800s and are called the Ellwood Complex. These groves support overwintering monarchs on a regular basis. Five monarch butterfly overwintering sites occur in the Ellwood Mesa Open Space: Ellwood North, Ellwood West, Ellwood Main, Sandpiper, and Ocean Meadows aggregation sites (Figure 3 in Exhibit 1 of Attachment 1). The Ellwood Main site historically harbored many overwintering butterflies, consisting of hundreds of thousands of individuals in some years.

Ellwood Mesa Monarch Butterfly Habitat Management Plan

The Ellwood Main butterfly aggregation site is a highly treasured community asset, which played an important role in the City's purchase of the Ellwood Mesa Open Space. The Open Space Element of the Goleta General Plan / Coastal Land Use Plan (General Plan) reflects how much the Goleta community values the resource and includes policies devoted to the protection of monarch butterfly habitat areas (Attachment 4). The Ellwood-Devereux Coast Open Space and Habitat Management Plan, adopted by the City in 2004, similarly calls for the protection of butterfly habitat and recommends that the City prepare a Monarch Butterfly Habitat Management Plan (MBHMP) (Attachment 5).

In response to this policy direction, the City initiated the MBHMP process in 2011. Since initiation, the City has conducted annual field surveys and completed extensive public outreach, with the release of an administrative review draft MBHMP in July 2018. City Council and public input was received and a revised draft MBHMP was released in January 2019.

Draft MBHMP Public Outreach

After the release of the administrative draft MBHMP in July 2018, staff hosted a stakeholder meeting to review the plan and receive input. Stakeholder feedback was used to inform a public workshop hosted at City Hall on August 16, 2018 and a presentation before the Public Tree Advisory Commission on August 22, 2018.

Comments and suggestions generally related to modifying the administrative draft MBHMP to include more citations and an executive summary, expanding fire protection actions with more detail and specificity, expanding the signage program and related sign information / contact detail, and clarifying other details and adding specificity wherever possible. Some comments were received in support for native plant habitat restoration as opposed to eucalyptus restoration while many others emphasized the need for eucalyptus plantings to support the butterflies. Comments and suggestions were consolidated by staff to inform the revised draft MBHMP. The California Coastal Conservancy will be considering the adopted MBHMP (and Final MND) at a meeting in May 2019 to release a State budget allocation of $3.9 million to the City for MBHMP implementation. The funds will expire on June 30 if the agreement is not in place.

2018 Implementation Plan (Emergency Permit Tree Replacement)

The MBHMP is an overarching, long-term conservation strategy, setting forth the broad objectives, desired outcomes, and management policies for the Ellwood Mesa monarch butterfly habitat. Periodic Implementation Plans (IPs) are required as part of the MBHMP (Policy 1-4) to identify and describe short-term actions needed to further the goals and objectives of the MBHMP. As required under the MBHMP, IPs require City Council authorization before activity commences.

On September 22, 2017, the City submitted a request to the California Coastal Commission (CCC) for an emergency permit to remove 29 dead and dying trees posing a risk to Ellwood Mesa trail users and to close specific trails with trail closure signs. In

response to the City's request, the CCC issued an emergency permit (No. G-4-17-0048), dated September 26, 2017, subject to special conditions including required tree replacement plans, a trail re-opening strategy, and habitat management strategies.

A 2018 IP was released with the administrative draft MBHMP in July 2018 to address the CCC emergency permit special conditions. The CCC is currently reviewing the 2018 IP and collaborating with City staff and consultant team on addressing habitat restoration approaches. As part of this collaborative effort, CCC staff are considering the issuance of a programmatic Coastal Development Permit (CDP) for the MBHMP and a separate CDP for a possible pilot program to test implementation approaches. These permitting efforts and future IPs will follow City Council adoption of the MBHMP and will be the subject of future staff reports for Council's consideration.

DISCUSSION:

The purpose of the MBHMP is to maintain and improve habitat conditions to ensure long-term viability of the monarch butterfly population, consistent with General Plan policy direction. The coverage area for the MBHMP (Coverage Area) encompasses approximately 75 acres of eucalyptus habitat supporting monarch butterfly seasonal aggregation areas in the 137-acre Ellwood Mesa Open Space. The MBHMP outlines a programmatic approach and methods for the City to manage and improve the Ellwood Mesa eucalyptus woodland for the benefit of the monarch butterfly, other wildlife, and the public's use and enjoyment.

The MBHMP details 22 programs intended to organize and integrate the diverse aspects of habitat management into an overall plan that can be implemented in a clear and concise manner. Each program identifies individual goals, policies, and actions to establish a well-organized and efficient process leading to a management strategy for the sustainability of monarch habitat at Ellwood Mesa. The programs are followed by implementation priorities, schedules, needs, and contacts for those responsible for the implementation.

The 22 programs are organized into four categories: Administrative Programs; Natural Resources Management Programs; Outreach Programs; and Monitoring, Research, and Adaptive Management Programs and are summarized below:

- The nine Administrative Programs are designed to assist the City with and inform the many MBHMP stakeholders of the details regarding implementation of the MBHMP.
- The seven Natural Resources Management Programs articulate the goals, policies, and actions necessary to maintain and improve the many important natural resources, including biological diversity and ecosystem functions associated with the Ellwood Mesa eucalyptus groves and the monarch butterfly aggregation sites they support.
- The three Outreach Programs are designed to provide information for visitors, educators, and students to help develop a broad appreciation for natural resources and local natural heritage, with a focus on monarch butterflies.

- The three Monitoring, Research, and Adaptive Management Programs provide a mechanism for assessing environmental conditions and conducting original studies to help understand the ecology of monarch butterflies, particularly at Ellwood Mesa. Information obtained from these programs and other sources can be used to adapt the MBHMP in response to additional information or changing conditions.

The MBHMP sets a long-term management vision for the Ellwood Mesa Open Space butterfly groves, using annual monitoring to track habitat health. Monitoring results are intended to provide the City and the community-at-large with the facts necessary to implement proactive, rather than reactive management practices.

For example, the MBHMP Monitoring Program goals, policies, and actions would require annual data collection on biological variables such as butterfly numbers by site, pests, tree health, understory health, and presence of invasive plants within the Ellwood Mesa Open Space eucalyptus canopy. If monitoring indicates an escalation of adverse conditions, for example, the corresponding MBHMP policies provides direction and action to remedy the impact.

The MBHMP itself does not offer the remedy for every possible management scenario, but instead requires additional studies or plans for action (Implementation Plans or IPs) to correct a negative condition. The IP addresses the unique circumstance present in the habitat at a point in time, as guided by the policies in the MBHMP.

ENVIRONMENTAL REVIEW:

The City reviewed environmental impacts of the MBHMP pursuant to the California Environmental Quality Act (Public Resources Code §§ 21000 et seq., “CEQA”), the regulations promulgated thereunder (14 Cal. Code of Regulations §§ 15000 et seq., the “CEQA Guidelines”), and the City’s Environmental Thresholds and Guidelines Manual. A Draft Initial Study-Mitigated Negative Declaration (MND) (State Clearinghouse #2019011059) was prepared and made available for public review from January 25, 2019 through February 25, 2019.

During this period nine comment letters were received, including eight letters from the public and one letter from the California Coastal Commission. The comments addressed topics including the importance of monarch habitat restoration, the need for eucalyptus trees to be planted and maintained, the need for fire safety and vegetation management, the need to abate risks to adjacent property from hazard trees, and the importance of including natives in habitat restoration, among others. Responses to all comments are included in Appendix C to the Final IS-MND. In addition, because some comments related to the MBHMP itself, rather than the environmental analysis in the IS-MND, the comment matrix in Appendix B to the IS-MND was updated to include responses to these comments.

The Final MND finds that the MBHMP would not have a significant adverse effect on the environment with the implementation of the mitigation measures to address impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, and noise. Standard mitigation measures were applied to

address potential effects of the MBHMP, including dust suppression during covered activities; species surveys and biological monitoring; archaeological, paleontological, and Native American monitoring during ground disturbance; erosion control and chemical application control measures to protect water quality; and noise management requirements. Additionally, Mitigation Measures require monitoring of replacement trees planted in the Coverage Area for at least five years to ensure successful establishment.

With the inclusion of the proposed mitigation measures in the Final MND, impacts would be reduced to a less than significant level. The Final MND is included as Exhibit 1 of Attachment 1.

PUBLIC NOTICE:

On March 1, 2019, notice for this hearing was published in the Independent and mailed to property owners within 1,000 feet and interested persons. The agenda was posted at Goleta City Hall and on the City's website at least 72 hours prior to the City Council meeting.

CONCLUSION/RECOMMENDATION:

The Ellwood Mesa is the heart of Goleta for many people in the community and symbolizes the commitment the City has made to protect and restore critical coastal open space. The monarch butterfly holds a special place in the hearts of many Goleta residents, and is part of the City's identity, as it appears on our logo and was the inspiration for the name of our community newsletter, *The Monarch Press*.

The presence of dead and dying trees on Ellwood Mesa threatens the future of our overwintering monarch butterflies. New management strategies in the form of the MBHMP are needed to guide recovery efforts. The MBHMP outlines a programmatic approach and methods for the City to manage and improve the Ellwood Mesa eucalyptus forest for the benefit of the monarch butterfly, other wildlife, and the public's use and enjoyment.

Adoption of the MBHMP will enable the City to fulfill a major commitment to the natural resources of Ellwood Mesa and its residents, and to all those committed to the conservation of monarch butterflies. From an implementation perspective, the City is in the fortunate position of having fiscal support from the State of California. With the help of the State's $3.9 million budget allocation to the City for butterfly habitat restoration on Ellwood Mesa, implementation of the MBHMP can be realized sooner rather than later.

Staff recommends that the City Council adopt the Final IS-MND, as outlined in City Council Resolution No. 19-__, entitled, "A Resolution of the City Council of the City of Goleta Approving the City of Goleta Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan Mitigated Negative Declaration; Case No. 13-085" (Attachment 1), and approve the MBHMP, as outlined in City Council Resolution No. 19-__, entitled "A Resolution of the City Council of the City of Goleta Approving the City of Goleta Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan" (Attachment 2).

FISCAL IMPACTS:

The approved FY 2018 and 2019 Budget includes $135,000 of General Fund monies in the Advance Planning Professional Services account (101-5-4300-505) for the preparation of a MBHMP and associated environmental document. The estimated cost for 5 years of implementation of the MBHMP is $3,898,450 and 23,082 staff hours. Funding for implementation of the MBHMP will be drawn from a variety of sources, which may include grants, donations, mitigation fees, and the City's General Fund.

On June 29, 2018, the Governor approved the California state budget for the 2018–2019 Fiscal Year. The budget includes a provision allocating $3,900,000 to the City for management and restoration of the monarch butterfly habitat on Ellwood Mesa. The state funds will be used only for actions to restore, enhance, manage, and monitor butterfly habitats on Ellwood Mesa. In the near term, this funding will be instrumental in getting the MBHMP's programs operational and in addressing some of the imminent habitat issues that presently face the grove.

ALTERNATIVES:

The Council could elect to adopt the MBHMP with revisions or decide not to adopt it. Declining to adopt the MBHMP would jeopardize the State's $3.9 million budget allocation to the City. In order for the City to receive the funding allocation, the City must adopt a MBHMP and execute a funding agreement by June 30, 2019.

Legal Review By:

Michael Jenkins
City Attorney

Approved By:

Michelle Greene
City Manager

Attachments

1 Resolution No. 19-__ entitled "A Resolution of the City Council of the City of Goleta Adopting the Mitigated Negative Declaration and the Mitigation Monitoring Program for the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan; Case No. 13-085"

2 Resolution No. 19-__ entitled "A Resolution of the City Council of the City of Goleta Adopting the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan"

3 Guiding Policies from the Goleta General Plan / Coastal Land Use Plan

4 Guiding Policies from the Ellwood-Devereux Coast Open Space and Habitat Management Plan

Attachment 1

Resolution No. 19-__ entitled “A Resolution of the City Council of the City of Goleta Adopting the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program for the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan; Case No. 13-085”

RESOLUTION NO. 19-__

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GOLETA ADOPTING THE MITIGATED NEGATIVE DECLARATION AND THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE ELLWOOD MESA/SPERLING PRESERVE OPEN SPACE MONARCH BUTTERFLY HABITAT MANAGEMENT PLAN, CASE NO. 13-085

WHEREAS the City has prepared the Monarch Butterfly Habitat Management Plan (MBHMP), consistent with policies of the City's Open Space Element of the Goleta General Plan / Coastal Land Use Plan and Ellwood-Devereux Coast Open Space and Habitat Management Plan.

WHEREAS the MBHMP provides a programmatic approach to management of habitats that support monarch butterfly seasonal aggregations, while maintaining the functionality of habitat for other plants and wildlife species.

WHEREAS the City reviewed the MBHMP's environmental impacts in a Draft Initial Study – Mitigated Negative Declaration (IS-MND), in accordance with the California Environmental Quality Act (Public Resources Code §§21000 et seq., CEQA), the regulations promulgated there under (14 Cal. Code of Regulations §§15000 et seq., the "CEQA Guidelines"), and the City's Environmental Review Guidelines Manual ("Goleta Guidelines").

WHEREAS the Draft IS-MND for the MBHMP was prepared in full compliance with CEQA, the CEQA Guidelines, and the City's Thresholds Manual and was released for public review from January 25, 2019 to February 24, 2019. A total of nine comment letters were received during the public review period: one comment letter from the California Coastal Commission and eight comment letters from the public.

WHEREAS the responses to comments were prepared and the Final IS-MND (SCH #2019011059) was released on February 28, 2019, pursuant to the requirements of the CEQA Guidelines. The Final IS-MND for the MBHMP concludes that the MBHMP will not have a significant effect on the environment with the inclusion of mitigation measures.

WHEREAS on March 19, 2019, the City Council of the City of Goleta held a duly-noticed hearing at which all interested parties were heard. Further, the City Council considered the entire administrative record including, without limitation, staff reports, and evidence submitted during the public hearing.

WHEREAS the staff report concludes that the MBHMP is consistent with the General Plan/Coastal Land Use Plan Open Space-Passive Recreation land use

designation and the Recreation zoning district and recommends that the City Council adopt the Final IS-MND.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GOLETA, AS FOLLOWS:

SECTION 1. *Recitals.* The City Council hereby finds and determines that the foregoing recitals, which are incorporated herein by reference, are true and correct.

SECTION 2. *Factual Findings and Conclusions.* The City Council finds as follows:

1. The Coverage Area encompasses approximately 75 acres of the Ellwood Mesa/Sperling Preserve Open Space and contains all or a portion of the following parcels: Assessor's Parcel Number (APNs) 079-210-070, 079-210-69, 079-210-071, 079-210-072, 079-210-024, 079-491-016, 079-210-051, 079-210-050, 079-445-001, 079-395-015, 079-442-023, 079-210-019, 079-210-015, 079-210-014, and 079-210-013.
2. The Coverage Area is owned by the City of Goleta and bordered to the north by Hollister Avenue, the south by Ellwood Bluffs, the west by Sandpiper Golf Club, and the east by Ellwood Beach Drive and the University of California, Santa Barbara.
3. The Coverage Area consists of existing eucalyptus groves used by monarch butterflies as winter habitat. The existing groves are threatened by ongoing drought conditions and susceptible to pest infestations, and overwintering monarch butterfly populations in the groves have declined dramatically since reaching a 30-year high in 2011.
4. The MBHMP involves habitat restoration and protection strategies for monarchs and other wildlife, tree management activities, trail maintenance efforts, and monarch butterfly research programs.

SECTION 3. *Environmental Review of the MBHMP.* The City Council makes the following environmental findings pursuant to Public Resources Code § 21081 and CEQA Guidelines § 15074:

A. The City completed a Final IS-MND for the MBHMP in accordance with applicable law including, without limitation, CEQA Guidelines §§ 15070, 15071, and 15073; and

B. The City distributed the Draft IS-MND for public review and comment for a period of 30 days from January 25, 2019 to February 24, 2019 and responded to all comments in writing by updating the Final IS-MND as appropriate.

C. The Final IS-MND and Mitigation Monitoring and Reporting Program (MMRP) were presented to the City Council, which reviewed the record of proceedings and considered all information contained in the Final IS-MND and its appendices, the MMRP, and the testimony and additional information presented at or before all public hearings in accordance with CEQA Guidelines § 15074; and

D. Pursuant to CEQA Guidelines § 15074, the Final IS-MND reflects the City's independent judgement and analysis. The City Council has independently reviewed and analyzed the Final IS-MND prepared for the MBHMP. The Final IS-MND is an accurate and complete statement of the potential environmental impacts of the MBHMP. The Final IS-MND was prepared under direction of the City of Goleta Planning and Environmental Review Department and reflects the independent judgment and analysis of the environmental impacts and comments received on the Final IS-MND.

SECTION 5: *Action.* The City Council adopts the Final IS-MND and MMRP, provided as Exhibit 1 to this Resolution, which is incorporated herein by reference and directs staff to file the Notice of Determination within five (5) business days of passage of this Resolution.

SECTION 6: *Reliance on the Record.* Each and every one of the actions in this Resolution is based on the competent and substantial evidence, both oral and written, contained in the entire record relating to the MBHMP. The findings and determinations constitute the independent findings and determinations of the City Council in all respects and are fully and completely supported by substantial evidence in the record as a whole.

SECTION 7: *Limitations*. The City Council's analysis and evaluation of the MBHMP is based upon the best information currently available. It is inevitable that in evaluating a project that absolute and perfect knowledge of all possible aspects of the project will not exist. One of the major limitations on analysis of the MBHMP is the City Council's lack of knowledge of future events. In all instances, best efforts have been made to form accurate assumptions. Somewhat related to this area are the limitations on the City's ability to solve what are in effect regional; state; and national problems and issues. The City must work within the political framework within which exists and with the limitations inherent in that framework.

SECTION 8: *Summaries of Information.* All summaries of information in the findings contained in this Resolution are based on the substantial evidence in the record. The absence of any particular fact from any such summary is not an indication that a particular finding is not based in part on that fact.

SECTION 9: This Resolution shall become effective upon adoption. This Resolution shall become effective until superseded by a subsequent resolution.

SECTION 10: A copy of this Resolution must be mailed to any person requesting a copy. The documents and other materials, which constitute the record of proceedings upon which this decision is based, are in the custody of the City Clerk, City of Goleta, 130 Cremona Drive, Suite B, Goleta, California, 93117.

SECTION 11: The City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original resolutions.

PASSED, APPROVED, AND ADOPTED this 19th of March, 2019.

_____
PAULA PEROTTE
MAYOR

ATTEST:

_____
DEBORAH S. LOPEZ
CITY CLERK

APPROVED AS TO FORM:

_____
MICHAEL JENKINS
CITY ATTORNEY

STATE OF CALIFORNIA)
COUNTY OF SANTA BARBARA) ss.
CITY OF GOLETA)

I, DEBORAH S. LOPEZ, City Clerk of the City of Goleta, California, DO HEREBY CERTIFY that the foregoing Resolution No. 19-__ was duly adopted by the City Council of the City of Goleta at a regular meeting held on the 19th day of March, 2019, by the following vote of the Council:

AYES:

NOES:

ABSENT:

(SEAL)

_____
DEBORAH S. LOPEZ
CITY CLERK

EXHIBIT 1

Final Initial Study-Mitigated Negative Declaration (IS-MND) and Mitigation Monitoring and Reporting Program (MMRP)

The Final IS-MND is also available online at:

https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/monarch-butterfly-inventory-and-habitat-management-plan

Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan

Final Initial Study – Mitigated Negative Declaration

prepared by

City of Goleta
130 Cremona Drive, Suite B
Goleta, California 93117
Anne Wells, Advance Planning Manager

prepared with the assistance of

Rincon Consultants, Inc.
209 East Victoria Street
Santa Barbara, California 93101

March 2019

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan

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March 2019

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Initial Study

1. Project Title

Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan (MBHMP)

2. Lead Agency Name and Address

City of Goleta, Planning and Environmental Review
130 Cremona Drive, Suite B
Goleta, California 93117

3. Contact Person and Phone Number

Anne Wells, Advance Planning Manager
(805) 961-7557

4. Project Location

The coverage area for the MBHMP (Coverage Area) encompasses approximately 75 acres of habitat supporting monarch butterfly (*Danaus plexippus*) seasonal aggregation areas in Ellwood Mesa/Sperling Preserve Open Space (Ellwood Mesa Open Space), a 137-acre open space area located on Ellwood Mesa and owned by the City of Goleta (City). The Coverage Area is south of Hollister Avenue, north of Ellwood Bluffs, east of Sandpiper Golf Club, and west of Ellwood Beach Drive and the University of California, Santa Barbara (UCSB). Figure 1 shows the MBHMP's regional location, and Figure 2 shows the Coverage Area and Ellwood Mesa Open Space.

5. Project Sponsor's Name and Address

City of Goleta, Planning and Environmental Review
130 Cremona Drive, Suite B
Goleta, California 93117

6. General Plan Designation

In October 2010, the City authorized a contract for development of the MBHMP, which outlines strategies to manage the monarch butterfly population in Ellwood Mesa Open Space. The MBHMP is scheduled for City Council consideration in March 2019.

Figure 1 Regional Location

Imagery provided by Esri and its licensors © 2018.

MBHMP Location

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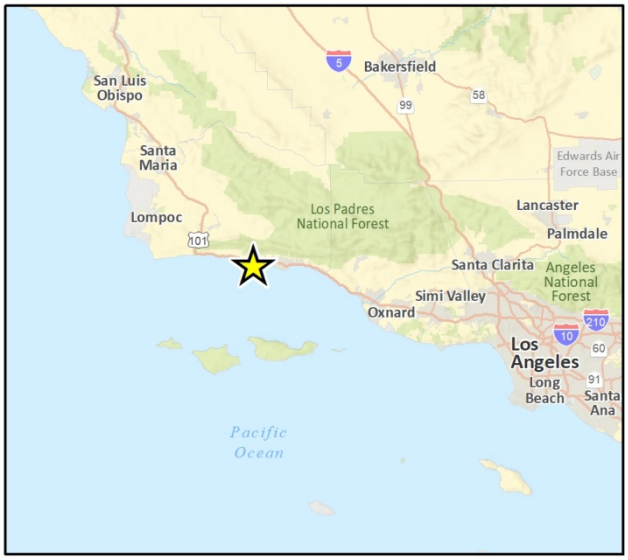

Figure 2 MBHMP Coverage Area Location

Imagery provided by Microsoft Bing and its licensors © 2018.

Fig 2 Project Location

7. Background Information

Ellwood Mesa Open Space

Ellwood Mesa Open Space is a City-owned, 137-acre open space area on the coastal bluffs between Sandpiper Golf Course and UCSB. The current configuration of Ellwood Mesa Open Space was formed in 2004 when private development rights transferred from coastal parcels to a portion of what was formerly Santa Barbara Shores Park. This location was subsequently used for development of a Comstock Homes housing development, "The Bluffs," at which time the coastal parcels and remaining portion of the park were designated as permanent open space and zoned for Recreation (City of Goleta et al. 2004). The adjoining Coronado Butterfly Preserve is privately owned and managed by the Land Trust for Santa Barbara County, and is not part of Ellwood Mesa Open Space.

Eucalyptus Groves

Ellwood Mesa was cultivated by Ellwood Cooper in the 1870s. Cooper was a horticulturalist, entrepreneur, and a Goleta Valley rancher who introduced eucalyptus trees (*Eucalyptus* spp.) to Goleta in 1872. By the mid-1870s Cooper had successfully planted approximately 50,000 eucalyptus trees, comprised of more than 50 varieties. The eucalyptus trees thrived in the area and were intended to provide a source of lumber and pier pilings. However, the wood's grain made it difficult to cut and the wood rotted in sea water. The eucalyptus groves eventually matured and became useful for windbreaks. Eucalyptus groves present on Ellwood Mesa today are a remnant of Cooper's early attempt at eucalyptus forestry.

Ellwood Mesa is currently threatened by drought and pest infestation. The Goleta Valley is in its seventh year of the most severe drought on record, which began in 2012 (Goleta Water District [GWD] 2018). The drought has compromised the health of eucalyptus trees on Ellwood Mesa, exacerbating wildfire risk and increasing the vulnerability of eucalyptus trees to pest infestation.

Eucalyptus trees are subject to a variety of pests and diseases that can injure or kill trees. When trees occur in groves, the spread of pests and disease is facilitated by proximity, resulting in potential widespread losses. Current and past infestations at Ellwood Mesa of blue gum (*Eucalyptus globulus*) and river red gum (*E. camaldulensis*) include redgum lerp psyllids (a parasitic insect that attacks red gum eucalyptus; *Glycaspis brimblecombei*) on leaves, tortoise beetles (family Chrysomelidae), longhorned borer beetles (*Phoracantha* spp.), and orange sulfur fungus (*Laetiporus sulphureus*). Invasive, non-native species such as English ivy (*Hedera helix*) and cape ivy (*Delairea odorata*) also can be problematic, smothering entire trees and changing or destroying wildlife habitat.

The ongoing drought conditions and associated pest infestations have degraded the habitat at Ellwood Mesa, resulting in the degradation and death of numerous eucalyptus trees. According to a field study performed by Althouse and Meade, Inc., in July 2017, over 1,200 trees in the eucalyptus forest were dead, with hundreds more highly degraded and dying.

Monarch Butterflies

The monarch butterfly uses eucalyptus groves and windrows on Ellwood Mesa as winter habitat. Each fall, monarch butterflies in the western U.S. migrate to the coast of California from various locations throughout western North America. Up to tens of thousands of these butterflies converge on Ellwood Mesa annually, making this area one of the most important sites for monarch butterflies

in California. The butterflies arrive at Ellwood Mesa in mid-September and, as winter approaches, cluster into aggregation roosts, often called overwintering or wintering colonies. The butterflies remain until about mid-February, when they generally disperse inland. The congregation of butterflies attracts tourists to the site during the overwintering period. Figure 3 shows monarch butterfly aggregation sites in and around Ellwood Mesa Open Space. These include Ellwood North, Sandpiper, Ellwood West, Ellwood Main, Ellwood East and Ocean Meadows.

Monarch butterfly populations at Ellwood Mesa, and throughout California, have been in decline for several years. On average, approximately 13,800 butterflies visit Ellwood Mesa per year. In 2011, the monarch population at Ellwood Main was at a 30-year high with approximately 47,500 butterflies, as shown in Figure 4. The population has since declined to less than 0.5 percent of that level, to approximately 230 butterflies in 2018. Similarly, the state has experienced a dramatic decline in monarch populations over the last two decades, with populations in western North America currently at their lowest point in five years, despite recovery efforts (The Xerces Society 2018).

The monarch butterfly is included on the California Department of Fish and Wildlife (CDFW) Special Animals List, with overwintering roosts designated as imperiled to vulnerable in the state. The species is under review for potential listing under the federal Endangered Species Act (ESA), and the United States Fish and Wildlife Service (USFWS) plans to make its determination whether this species warrants federal ESA listing by June 30, 2019.

Community Wildfire Protection Plan

Goleta is prone to large wildfires and the combination of hot, dry weather and ignitable vegetation adjacent to structures creates a fire environment that could potentially threaten public safety. Santa Barbara County typically experiences numerous small fires throughout the summer and occasionally is hit by large, catastrophic fires. Recent large wildfires that burned near Goleta's boundaries include the 1990 Painted Cave Fire, 1997 Eagle Canyon Fire, 2008 Gap Fire, 2009 Jesusita Fire, 2016 Sherpa Fire, 2017 Whittier Fire, and 2017/2018 Thomas Fire. The Jesusita Fire burned 8,733 acres east of Goleta, destroying 74 residences and damaging 18 residences. The Thomas Fire burned 281,893 acres from Fillmore to Santa Barbara, destroying 1,063 structures and damaging 280 structures.

The City Council adopted the Community Wildfire Protection Plan (CWPP) in March 2012 to enhance the City's wildlife protection by identifying key hazard treatments that are in balance with sustainable ecological management and fiscal resources (City of Goleta 2012). The CWPP covers the city of Goleta, including the Ellwood Mesa area, identifies and prioritizes areas for hazardous fuel reduction treatments, and recommends the types and methods of treatment and measures to reduce the ignitability of structures throughout Goleta. The protection of human life and safety is the highest priority for all fire management strategies in Goleta, followed by the protection of property. Given the CWPP has been approved, activities under the CWPP would occur in Ellwood Mesa Open Space regardless of whether the MBHMP is implemented.

The CWPP was developed with consideration of the butterfly aggregation sites on Ellwood Mesa, and includes policies intended to minimize adverse effects on butterfly habitat while reducing fire hazards from fuel loads in these areas. The CWPP acknowledges conditions in the eucalyptus groves can change and butterfly aggregation locations may shift. The CWPP also notes the need to coordinate with City-approved butterfly and wildland fire experts during planning and implementation of any fuel treatments to minimize potential effects to butterflies. In addition, the CWPP requires any work performed near butterfly aggregation areas be conducted between April 1 and September 15, outside the monarch butterfly overwintering season.

Figure 3 Monarch Butterfly Aggregation Sites

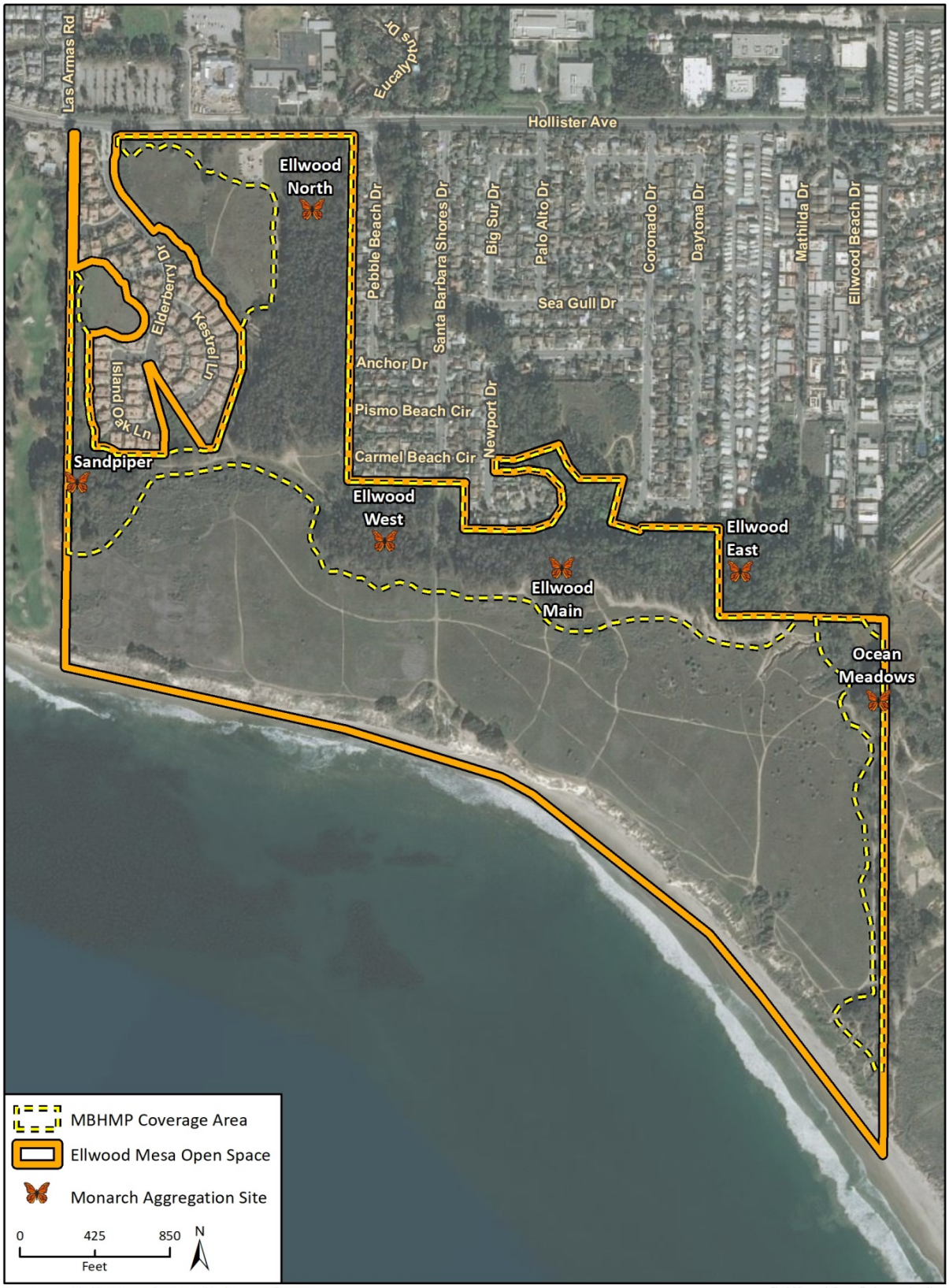

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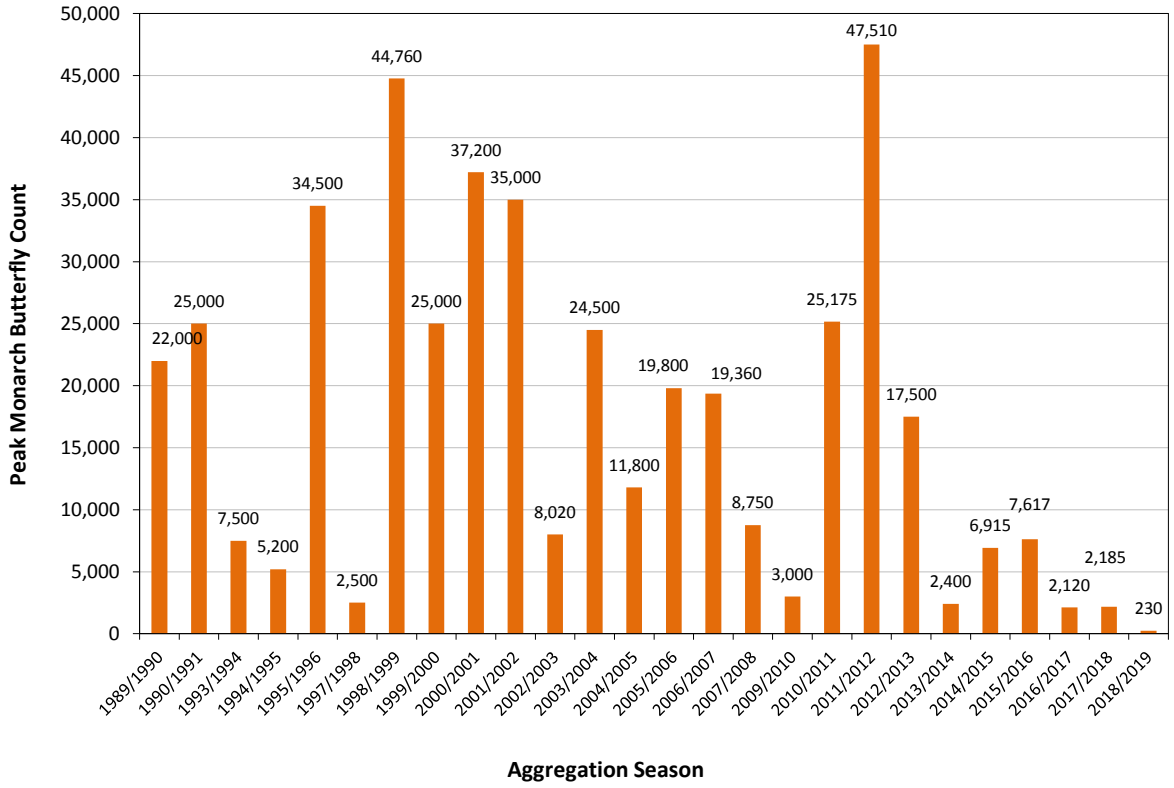
Fig 4 Monarch Butterfly Aggregation Sites

Figure 4 Peak Monarch Populations at Ellwood Main, 1997-2018



Fuel treatments in areas near human developments are critical measures in the wildfire protection strategy for residences and butterfly aggregations and habitat. The CWPP includes prescription guidance for fuel treatments specific to the butterfly aggregation areas adjacent to structures that is less intensive than the prescription guidance for non-aggregation areas to balance fire safety with protection of butterfly aggregation areas. Table 1 details prescription guidance measures for the primary defense zone (0 to 30 feet from structures) and fuel reduction zone (30 to 100 feet from structures) by fuel type.

Because trees along the grove edges buffer aggregation sites from wind and weather, fuel treatment strategies are designed to maintain adequate tree density in these areas. These large trees are not the primary fuel of concern in the spread potential of wildfire. Instead, the greater threat is from the understory vegetation, dead-downed trees, and fuels that can create fire ladders. Therefore, fuel treatment activities focus on removing hazardous fuels rather than large trees, and the CWPP's prescription guidance for areas within 100 feet of residences and structures states only trees that do not provide protection to monarch butterfly aggregation sites should be trimmed or thinned.

The CWPP also provides prescription guidance for fuel treatment in areas not adjacent to structures; however, the CWPP limits fuel treatments for aggregation areas to mowing along the outside edge of the grove. This limited fuel treatment would apply to the Sandpiper aggregation site, adjacent to the Sandpiper Golf Course on the western edge of Ellwood Mesa Open Space, and to the Ocean Meadows aggregation site, adjacent to the undeveloped property on the eastern edge of the open space owned by UCSB.

Table 1 Prescription Guidance for Butterfly Aggregation Areas Adjacent to Structures

Fuel Type	Primary Defense Zone (A)*** (0 – 30 feet from structures)	Fuel Reduction Zone *** (30 – 100 feet from structures)
	Based on Defensible Space PRC – 4291 and Firefighter Safety	
Grass/forbs	Reduce fuel depth to 4 inches; methods include mowing, masticating, weed-whacking, biological browsing.	Same treatment as in the Primary Defense Zone; longer grass in isolated open areas is acceptable.
Surface dead/ down material	Clear dead/down flammable materials; methods include raking, hand-piling/removal, masticating chipping/dispersal on site.	Reduce dead/down flammable material to less than 3-inch depth; methods same as in the Primary Defense Zone.
Brush/shrub fuel	Remove to a spacing (between edges of brush) generally 2 times brush height on <20% slopes; methods include masticating or hand-cutting, biological browsing.	Same treatment as in the Primary Defense Zone; a pocket or clump of brush can be treated as one large shrub in more open site conditions.
Trees overstory (without brush understory)	**Trim or thin only trees that do not provide protection to monarch butterfly aggregation sites.*** Thin smaller or unhealthy trees at 10-20 foot crown spacing (as determined by slope, tree size, and type). Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches 6-15 feet up, or lower third of tree height on trees smaller than 18 feet.	**Trim or thin only trees that do not provide protection to monarch butterfly aggregation sites.*** Thin smaller or unhealthy trees at approximately 10-foot crown spacing (as determined by slope, tree size, and type). Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches approximately 6 feet up, or lower third of tree height on trees smaller than 18 feet.
Trees overstory (with brush understory)	**Trim or thin only vegetation that does not provide protection to monarch butterfly aggregation sites.*** Thin small or unhealthy trees at 10-20 foot crown spacing (based on slope, tree size, and type). Leave larger trees at 10 foot crown spacing unless toppling hazard.** Reduce ladder fuels by pruning lower branches 6-15 feet up, or lower third of tree height on smaller trees. In understory: remove brush ladder fuel. Methods include masticating or hand-cutting.	**Trim or thin only vegetation that does not provide protection to monarch butterfly aggregation sites.*** Thin small or unhealthy trees to approximately 10 foot crown spacing. Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches approximately 6 feet up, or lower third of tree height on smaller trees. In understory remove brush ladder fuel. In non-canopied areas, non-continuous patches of shrubs or small trees in openings are acceptable. Methods include masticating or hand-cutting.

*As determined by the Goleta City Project Manager overseeing mitigation work in consultation with a City-approved monarch butterfly specialist and a City-approved wildland fire specialist.

**As determined by the Goleta City Project Manager and Goleta City arborist.

***For further information specific to homeowner/structure mitigation measures, see City of Goleta CWPP Section 6.2.1.

Source: Table 14 of the CWPP (City of Goleta 2012)

8. Monarch Butterfly Habitat Management Plan

The purpose of the MBHMP is to provide a programmatic approach to management of habitats that support monarch butterfly seasonal aggregations, while maintaining the Coverage Area's functionality as habitat for other plants and other animals, such as red-shouldered hawks (*Buteo lineatus*), turkey vultures (*Cathartes aura*), and acorn woodpeckers (*Melanerpes formicivorus*). The City prepared the MBHMP in compliance with the two, key policy documents that drive the protection of monarch butterflies in Goleta: the City of Goleta General Plan/Coastal Land Use Plan (General Plan; City of Goleta 2006a) and Ellwood-Devereux Coast Open Space and Habitat

Management Plan (Open Space Plan; City of Goleta et al. 2004). In addition to Ellwood Mesa Open Space, the Open Space Plan area includes properties under the jurisdiction of UCSB and the County of Santa Barbara east of Ellwood Mesa; however, the properties under UCSB and County jurisdiction are not included in the MBHMP Coverage Area.

The MBHMP is composed of 22 programs organized into 4 categories: administrative programs; natural resources management programs; outreach programs; and monitoring, research, and adaptive management programs. Each program contains a goal, one or more policies, and one or more actions to implement each policy. The MBHMP is incorporated by reference and summarized below. Analysis in this Initial Study – Mitigated Negative Declaration (IS-MND) focuses on several programs with actions that could have direct, indirect, and/or cumulative physical effects on the environment, as summarized in Table 2. These programs include five administrative programs, six natural resource programs, one outreach program, and one monitoring, research, and adaptive management program.

The specific activities that could occur under each of the MBHMP programs and have the potential to result in direct, indirect, and/or cumulative physical effects to the environment are referred to as covered activities, and are described for each applicable program below. Restrictions or limitations to activities that could otherwise occur in Ellwood Mesa Open Space are included as covered activities because they could result in physical effects to the environment, some of which may be beneficial effects or reductions in adverse effects from other covered activities.

Administrative Programs

The MBHMP includes nine administrative programs articulating the goals, policies, and actions necessary for the City and stakeholders to implement the MBHMP. The purpose of the programs is to establish a well-organized and efficient process that supports a management strategy for the sustainability of habitat(s) for the monarch butterfly and other wildlife at Ellwood Mesa. The administrative programs include:

- Municipal Management Program
- Fiscal Program
- Interagency Cooperative Program
- Community Wildfire Protection Program
- Trail Management Program
- Waste Management Program
- Aesthetic Resources Management Program
- MBHMP Review, Update, and Amendment Program
- Catastrophic Event Response Program

Four of the administrative programs—the Municipal Management Program; Fiscal Program; Interagency Cooperative Program; and MBHMP Review, Update, and Amendment Program—relate to administrative structure, funding, agency coordination, and review and update of key planning documents. These four programs do not relate to physical effects to the environment, and therefore are not analyzed in this IS-MND. The remaining five administrative programs include covered activities that have the potential to result in direct, indirect, and/or cumulative physical effects to the environment, as described below.

Community Wildfire Protection Program

The goal of the Community Wildfire Protection Program is to provide management practices in the eucalyptus groves and windrows that support healthy monarch butterfly habitat and are compatible with the CWPP. As discussed in Section 7, Background Information, the CWPP includes policies intended to minimize adverse effects on butterfly habitat while reducing fire hazards from fuel loads in these areas. Because the CWPP was adopted in March 2012, activities that would occur under the CWPP, such as reducing ladder fuels by pruning lower branches and clearing dead wood and brush, would occur regardless of whether the MBHMP is implemented.

The Community Wildfire Protection Program pledges support for the policies and activities contained in the CWPP, particularly those related to minimizing adverse effects on butterfly habitat, and reiterates some of the restrictions contained in the CWPP. Given these activities would occur under the CWPP regardless of whether the MBHMP is implemented, the potential environmental effects of these activities are not a result of the MBHMP and are therefore not considered in this IS-MND.

The Community Wildfire Protection Program also calls for implementation of the Tree Management Program. Covered activities related to the Tree Management Program are discussed under the Natural Resource Programs. The Community Wildfire Protection Program includes one covered activity separate from the CWPP, but designed to be consistent with the intent of the CWPP:

- Maintain and revegetate moderate cover of understory in and around aggregation sites with fire-resistant, native plant species

Trail Management Program

The goal of the Trail Management Program is to develop and maintain public access trails that provide a safe and meaningful experience for visitors while limiting impacts to habitats and wildlife, in particular monarch butterflies and their seasonal aggregation sites. This program includes the following covered activities:

- Remove safety hazards such as hanging branches
- Remove tripping hazards such as fallen branches, protruding roots, and rocks
- Install and maintain trail boundary posts, ropes, rails, and signs
- Use wood chips on trails to reduce soil compaction and decrease erosion during wet months
- Adjust locations of trail and viewing areas if needed to protect trees or butterflies
- Install water bars and/or culverts to reduce erosion
- Perform minor trail relocations to avoid wet or eroded areas
- Construct and maintain crossings over drainages or other sensitive features

Waste Management Program

The goal of the Waste Management Program is to maintain a waste-, trash-, and debris-free butterfly habitat management area. This program includes the following covered activities:

- Post signs citing anti-dumping ordinances and butterfly rules
- Place trash cans in the parking lot

Aesthetic Resources Management Program

The goal of the Aesthetic Resources Management Program is to integrate the MBHMP's programs into an effort to improve the quality of Ellwood Mesa aesthetic resources, in particular the eucalyptus groves and windrows supporting monarch butterfly aggregation sites. The Aesthetic Resources Management Program relates to maintaining a consistent theme and aesthetic compatibility with natural conditions for any signage, fencing, and restoration plantings installed under some of the other programs of the MBHMP. The physical effect to the environment related to the installation of such features, and not the aesthetic components of the features, are discussed in the applicable MBHMP programs. The Aesthetic Resources Management Program includes the following covered activities:

- Ensure signs for the interpretive program are consistently designed
- Ensure any new signs, fencing, and restoration plantings are aesthetically compatible with natural conditions

Catastrophic Event Response Program

The goal of the Catastrophic Event Response Program is to prepare for possible catastrophic environmental events in the monarch butterfly aggregation sites by adopting actions that potentially minimize the impacts and plan for a response should such events affect the groves in which aggregation sites are located. This program includes implementation of some of the other programs outlined in the MBHMP. The covered activities related to these other programs are discussed under each of the applicable programs. The following covered activities would potentially occur under the Catastrophic Event Response Program:

- Install warning signage
- Implement closures of areas that are not safe for public use
- Remove trees that are dead, dying, diseased, burnt, hazardous, or otherwise affected by the catastrophic event
- Dispose of trees off site or chip for use on site as ground cover
- Plant new trees to replace trees that were removed
- Monitor the success of the plantings and irrigation over a set time
- Replace plantings as needed

Natural Resources Management Programs

The MBHMP describes seven natural resources management programs that articulate the goals, policies, and actions necessary to maintain and improve the many important natural resources, including biological diversity and ecosystem functions, associated with the Ellwood Mesa eucalyptus groves and the monarch butterfly aggregation sites the groves support. The natural resources management programs include:

- Monarch Butterfly Management Program
- Wildlife Habitat Management Program
- Tree Management Program
- Integrated Pest Management Program
- Habitat Enhancement and Restoration Program

- Invasive Plant Management Coordination Program
- Ecosystem-wide Management Coordination Program

The Ecosystem-wide Management Coordination Program includes actions focused on coordinating activities under other MBHMP programs. Such actions would not generate physical impacts beyond those associated with covered activities in other MBHMP programs. The remaining six natural resources management programs include activities that have the potential to result in direct, indirect, and/or cumulative physical effects. These programs and associated covered activities are described below.

Monarch Butterfly Management Program

The goal of the Monarch Butterfly Management Program is to facilitate the ongoing use of Ellwood Mesa by the monarch butterfly. This program incorporates actions under the Tree Management Program, Biological Monitoring Program, and Habitat Enhancement and Restoration Program, and includes the following covered activity:

- Unless authorized by a qualified biologist, limit all potentially invasive activities to the period between April 1 and September 30, including site maintenance, habitat restoration, exotic plant removal, and tree trimming and removal

Wildlife Habitat Management Program

The goal of the Wildlife Habitat Management Program is to manage eucalyptus groves at Ellwood Mesa for monarch butterflies in a manner consistent with ecosystem functions for other wildlife species that use the groves as habitat. This program includes the following covered activities:

- Preserve some trees with cavities for cavity-nesting birds
- Avoid tree or woody vegetation removal during the nesting season (March 15 to August 15), when feasible
- Limit vegetation removal and ground disturbance activities to the dry season
- Plant native trees, shrubs, and groundcover, including mid-canopy and low-stature or groundcover species in eucalyptus groves
- Plant riparian trees and vegetation along Devereux Creek
- Install irrigation system and irrigate newly planted vegetation

Tree Management Program

The goal of the Tree Management Program is to manage the eucalyptus groves in monarch butterfly aggregation sites at Ellwood Mesa in a manner that provides for healthy trees, suitable aggregation site structure, sustainable butterfly aggregation sites, public safety while visitors are on trails in the groves, and sensitivity to wildfire hazards. The program implements activities included under the Community Wildfire Protection Program, Monarch Butterfly Management Program, Integrated Pest Management Program, and Biological Monitoring Program. This program includes the following covered activities:

- Selectively prune or remove standing dead, dying, or vulnerable trees that pose a threat to public safety or monarch aggregation sites
- Selectively remove downed trees and debris that pose a threat to public safety or grove health
- Remove tree tangles or debris that interfere with monarch patrolling

- Plant new eucalyptus trees, native and/or fire-resistant understory species, and native nectar sources
- Use downed trees or logs to provide seating, slope stability, or erosion control, as feasible
- Irrigate existing and newly planted trees and other vegetation with potable and/or reclaimed water using water trucks with driplines or irrigation systems with above-ground water tanks
- Install irrigation systems, using the following steps:
  - Site above-ground water tanks such that they avoid existing eucalyptus trees
  - Utilize solar pumps to distribute water
  - Remove vegetation, as needed, to install driplines
  - Bury driplines a maximum of six inches below the surface
  - Replace soil to existing contours
  - Perform replacement plantings along disturbed soils
- Drive trucks on trails/paths to deliver and apply irrigation water
- Prune or remove understory plants
- Re-contour or grade drainage channels following flood events to protect trees
- Apply seed or mulch to disturbed soils
- Mow or weed-whack grass along the margins of eucalyptus groves

Integrated Pest Management Program

The goal of the Integrated Pest Management Program is to control or eradicate, as feasible, plant, animal, fungal, and other pests that would result in impacts on monarch butterflies or degrade monarch butterfly habitat. This program would implement management actions contained in the Invasive Plant Management Program and Tree Management Program, and includes the following covered activities:

- Introduce natural enemies of identified pests as part of planned biological control strategies
- Limit stress-inducing activities (e.g., pruning, transplanting) to periods of reduced pest activity
- Apply insecticides, herbicides, and other pesticides, as necessary
- For replacement plantings, use species that are resistant to pests and tolerant of site conditions

Habitat Enhancement and Restoration Program

The goal of the Habitat Enhancement and Restoration Program is to provide for the enhancement of native plant and animal habitats in the context of preserving the monarch butterfly habitat associated with established eucalyptus groves. This program includes the following covered activities:

- Plant experimental plots of native ground cover species
- Enhance existing native species, such as toyon (*Heteromeles arbutifolia*) and plants with nectar sources
- Plant new and replace/replant unhealthy existing native plant species individuals
- Apply chemical or mechanical weed control, as necessary
- Apply fertilizers to support new or existing native plantings, as necessary

- Apply organic material and wetting agents to soil around new plantings
- Plant native species in areas between eucalyptus groves
- Eradicate non-native herbaceous cover (except for eucalyptus saplings) in areas between eucalyptus groves through hand removal or herbicide application
- Remove vegetation along Devereux Creek riparian corridor, as needed
- Plant native riparian tree species along Devereux Creek
- Install irrigation systems and water native plantings

Invasive Plant Management Program

The goal of the Invasive Plant Management Program is to eradicate existing stands of invasive, non-native species and prevent or control new occurrences of invasive, non-native plant species in the monarch butterfly habitat at Ellwood Mesa. This program would incorporate activities under the Biological Monitoring Program and includes the following covered activities:

- Conduct hand removal of invasive, non-native plant species (excluding eucalyptus)
- Apply herbicides as needed to control invasive, non-native plant species
- Avoid removal of invasive, non-native plant species upon which monarch butterflies depend

Outreach Programs

Outreach programs are designed to provide information to visitors, educators, and students to help develop a broad appreciation for natural resources and local natural heritage, with a focus on monarch butterflies. The three outreach programs include the Community Advisory and Docent Program, Interpretive Program, and Education Program. The Community Advisory and Docent Program and Education Program would include actions targeted at improving administrative and interdepartmental coordination, creating educational materials and opportunities, and providing training to butterfly docents. Such activities would not result in physical effects on the environment and, as such, these programs are discussed no further in this IS-MND. The Interpretive Program could result in physical effects on the environment and is discussed below.

Interpretative Program

The goal of the Interpretative Program is to establish a useful and informative interpretive signage program at Ellwood Mesa monarch butterfly aggregation sites that is environmentally sensitive and minimally intrudes into habitats. This program includes the following covered activities:

- Install interpretive signage that is sensitive to the environment
- Locate interpretive signage in key locations minimally intrusive to the sensitive habitats of Ellwood Mesa

Monitoring, Research, and Adaptive Management Programs

Monitoring and research programs provide the mechanism for assessing environmental conditions and conducting original studies to help understand the ecology of monarch butterflies, particularly at Ellwood Mesa. Information obtained from these programs and other sources can be used to adapt the MBHMP to account for improved or additional information or changing conditions. The three monitoring, research, and adaptive management programs include the Biological Monitoring Program, Monarch Research Program, and Adaptive Management Program. The Biological Monitoring Program would involve maintaining butterfly counts, assessing ecosystem health using

spectral imaging, and creating monitoring reports. The Adaptive Management Program would incorporate adaptive management actions into other MBHMP programs, and includes policy review and reporting requirements. None of the actions associated with the Biological Monitoring Program or Adaptive Management Program would result in physical effects on the environment beyond those associated with other MBHMP programs, and actions associated with these programs are not discussed further in this IS-MND. The Monarch Research Program could result in physical effects on the environment and is discussed below.

Monarch Research Program

The goal of the Monarch Research Program is to encourage research projects and identify funding for research associated with monarch butterflies and their habitats at Ellwood Mesa. This program includes the following covered activities:

- Capture, tag, and release monarch butterflies for tracking
- Modify habitat structure and composition through pruning, trimming, or debris removal
- Plant plots of native species as part of experimental designs

Table 2 MBHMP Programs, Policies, and Actions with Potential Effects on the Environment

Programs		Goal	Policies	Actions
4	Community Wildfire Protection	To provide management practices within the eucalyptus groves and windrows that support healthy monarch butterfly habitat and are compatible with the City's Community Wildfire Protection Plan.	**4-1:** The goals, policies, and actions of this MBHMP shall be consistent with the intent of the *Community Wildfire Protection Plan* to reduce the ignitability of homes and structures.	**4-1.1:** Support implementation of Goleta's CWPP in the 100 ft. buffer from homes and structures as the 100 ft. extends into the Ellwood Mesa eucalyptus groves with actions outlined in Table 1 (Table 14 of the CWPP). **4-1.2**: Support implementation of Goleta's CWPP, specifically in regard to guidelines that are not in potential conflict with the management of the eucalyptus groves that support monarch butterfly aggregation sites, as noted below. **4-1.3:** Maintain and revegetate moderate cover of understory in and around aggregation sites with fire-resistant, native plant species (The Xerces Society 2017). **4-1.4:** Conduct all wildfire protection work within 300 feet of butterfly aggregation areas between April 1 and September 15, outside of monarch butterfly overwintering season. **4-1.5:** Coordinate with City-approved butterfly and wildland fire experts during planning and implementation of any fuel treatments since conditions within groves can change and aggregation locations may shift. **4-1.6:** Install a large, bilingual "NO PARKING -FIRE LANE" sign at Santa Barbara Shores access gate.
			4-2: Eucalyptus trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to ensure their health and longevity in the context of a high fire hazard environment.	**4-2.1:** Implement *Program 12, Tree Management Program*, to reduce fire hazard, improve public safety, and eliminate trees that are threatening the sustainability of the aggregation sites, including dead, diseased, and dying trees.
5	Trail Management	To develop and maintain public access trails that provide a safe and meaningful experience for visitors while also limiting impacts to habitats and wildlife, in particular monarch butterflies and their seasonal aggregation sites.	**5-1:** The City shall maintain existing public access trails that provide a safe experience for visitors to the eucalyptus groves supporting seasonal monarch butterfly aggregation sites.	**5-1.1:** Maintain existing public access trails through the eucalyptus groves supporting monarch butterfly aggregation sites by reducing threats of trips, slips, and falls. May use Trails council and CCC to help with maintenance. **5-1.2:** Implement *Program 12, Tree Management Program*, to reduce the threats from falling tree limbs and trunks. **5-1.3**: Repair damage to trail boundary ropes and posts, as needed. **5-1.4:** Prevent damage to seasonal monarch habitat by installing additional trail boundary posts, ropes, and signs, as necessary, consistent with those at the Ellwood Main monarch aggregation area. **5-1.5:** Use wood chips on trails to reduce soil compaction and decrease erosion during wet months. **5-1.6:** Retain and maintain Ellwood Main visitor viewing area boundary signs and rails.

Programs	Goal	Policies	Actions
			5-1.7: Review locations of trail and viewing area delineations and adjust if needed to protect trees or butterflies, annually. **5-1.8:** Review trail conditions on an annual basis and provide recommendations on improvements and modifications regarding human safety, trail maintenance, and ecosystem health, including conservation of monarch butterfly habitat in relationship to location, condition, use of trails, and number of visitors. Include recommendations for any tree trimming, removal recommendations, or other tree safety issues in the annual Implementation Plan. **5-1.9:** Long-term closure of official trails is undesirable and should not be used as a management approach. It is preferable to remedy trail hazards promptly, or to allow trails to remain open with appropriate signage alerting users to the risks present.
		5-2: Maintain and improve existing links between trails associated with eucalyptus groves that support monarch butterfly aggregation sites at Ellwood Mesa with the adjacent Coronado Butterfly Preserve.	**5-2.1:** Coordinate trail improvement activities with the Santa Barbara Land Trust and UCSB staff to ensure that improvements are compatible. **5-2.2:** Coordinate trail improvements with proposals for the Coastal and Juan Bautista De Anza trails that traverse Ellwood Mesa, which also link to trails within the eucalyptus groves that support monarch butterfly aggregation sites, to ensure protection measures are addressed for the aggregation sites.
6 Waste Management	To maintain a waste-, trash-, and debris-free butterfly habitat management area.	**6-1:** The City shall collect, remove, and appropriately dispose of all waste, trash, and debris that accumulates in monarch butterfly habitat on Ellwood Mesa.	**6-1.1:** Continue to remove existing accumulations of waste, trash, and debris from monarch butterfly habitat and dispose of them in an appropriate manner. Coordinate with the Sheriff's Office for removal of homeless encampments, if necessary.
		6-2: The City shall inform visitors of the monarch butterfly habitat of rules relating to trash and debris policies associated with monarch butterfly habitat.	**6-2.1:** Post signs at appropriate locations stating open space user rules; for example, "Please take out your trash" And, "Day Use Only = Camping Prohibited." **6-2.2:** Educate the public through seasonal, on site presence by the City's butterfly docents about the importance of maintaining the groves free of trash. **6-2.3:** Place trash cans in the parking lot. Inspect annually and replace as needed.

Programs		Goal	Policies	Actions
7	Aesthetic Resources Management	To integrate the MBHMP's programs into an effort to improve the quality of aesthetic resources of the Ellwood Mesa, in particular the eucalyptus groves and windrows supporting monarch butterfly aggregation sites.	**7-1:** The City shall provide stewardship and management oversight of the eucalyptus groves, in particular those groves supporting monarch butterfly aggregation sites.	**7-1.1:** Adopt and implement the MBHMP, including its 22 management programs. **7-1.2:** Provide integration of program goals, policies, and actions to improve the overall aesthetics of the various groves, including installation of a consistently designed interpretive program and strategically placed fencing, as more specifically outlined in Program 18, Interpretive Program.
			7-2: Signs, fencing, and restoration efforts associated with monarch butterfly habitat on Ellwood Mesa shall be aesthetically compatible with natural conditions.	**7-2.1:** Review signage and fencing design for compatibility with the Ellwood Mesa natural areas. **7-2.2:** Review restoration plantings and activities for appropriate aesthetic compatibility.
9	Catastrophic Event Response Program	To prepare for possible catastrophic environmental events within the monarch butterfly aggregation sites by adopting a set of actions that potentially minimize the impacts and plan for a response should such events affect the groves in which aggregation sites are located.	**9-1:** The City shall adopt a set of protocols that could minimize the impacts from potential catastrophic environmental events.	**9-1.1:** Implement *Program 12, Tree Management Program*, to reduce potential impacts on eucalyptus groves that support monarch butterfly aggregation sites. **9-1.2:** Implement *Program 4, Community Wildfire Protection Program*, to reduce potential impacts on monarch butterfly aggregation sites from wildfire. **9-1.3:** Implement *Program 13, Integrated Pest Management Program*, to reduce the potential impacts from pest infestations.
			9-2. The City shall assess the damage of catastrophic events as they occur and respond with corrective action to restore damaged monarch butterfly habitat.	**9-2.1:** Measure the extent and assess the magnitude of the damage to the monarch butterfly overwintering habitat. **9-2.2:** Design and implement a response strategy with actions to correct and restore the habitat after the catastrophic event and include them in the annual Implementation Plan if practical. When feasible, employ phased approaches with consistent monitoring to evaluate success or need for changes in strategy or actions. Assign priorities, including sources of materials, constraints, and methods for debris management. 9-2.3: Request City Council approval for supplemental funding, with a finding that the condition is a catastrophic event. Use funding received from the State Budget, apply for grants, and/or accept private donations for the dedicated mission of monarch butterfly overwintering habitat restoration.

Programs	Goal	Policies	Actions
10 Monarch Butterfly Management	To ensure the ongoing use of Ellwood Mesa by the monarch butterfly.	**10-1:** The City shall implement management strategies that facilitate the use of Ellwood Mesa by monarch butterflies.	**10-1.1:** Implement *Program 12, Tree Management Program,* to help facilitate the conservation of the monarch butterfly aggregation sites. **10-1.2:** Implement *Program 20, Biological Monitoring Program*, and *Program 21, Monarch Research Program*, to expand the body of knowledge and further the understanding of monarch butterflies' use of the resources at Ellwood Mesa.
		10-2: Preservation of aggregation sites on Ellwood Mesa shall be the focus of management activities, as feasible, and in coordination with *Program 9, Catastrophic Event Response Program*.	**10-2.1:** Should one or more catastrophic events result in impacts on the sustainability of monarch butterfly aggregation sites, consider alternative management and recovery strategies that incorporate goals for sustaining aggregation sites at Ellwood Mesa.
		10-3: Ecosystem functions proposed for habitat restoration projects at Ellwood Mesa shall consider inclusion of native plant species.	**10-3.1:** Implement *Program 14, Habitat Enhancement and Restoration Program,* as feasible, to improve conditions for native plants and animals and the ecosystem functions they provide, in and adjacent to the eucalyptus groves containing monarch butterfly aggregation sites.
		10-4: To avoid impacts on monarch butterflies while they are present at the Ellwood aggregation sites, no maintenance or restoration work shall be conducted in the aggregation sites from October 1 through March 31 of each year, unless authorized by a qualified biologist.	**10-4.1:** Unless authorized by a qualified biologist, conduct all site maintenance, tree trimming and removal, habitat restoration, exotic plant removal, and other potentially invasive activities between April 1 and September 30 of each year, when there would not likely be direct impacts on monarch butterflies.
11 Wildlife Habitat Management	Manage eucalyptus groves at Ellwood Mesa for monarch butterflies in a manner consistent with ecosystem functions for other wildlife species that use the groves as habitat.	**11-1:** The eucalyptus groves at Ellwood Mesa that support monarch butterfly aggregation sites shall be managed in a manner consistent with the ecosystem functions supporting other wildlife species, where feasible.	**11-1.1:** All personnel associated with the implementation of the MBHMP will receive educational information regarding the presence of monarch butterfly and other native wildlife species and the need to protect all native wildlife species. **11-1.2:** Preserve some trees with cavities to provide opportunities for cavity-nesting birds, such as acorn woodpeckers. **11-1.3:** Avoid removal of or disturbance to trees or other woody vegetation during nesting bird season (March 15 to August 15), when feasible. If not feasible, a biological monitor will survey for nesting birds in the area of proposed vegetation removal and ensure no active nests are present prior to removal or disturbance. **11-1.4:** Limit vegetation removal and ground disturbance activities to the dry season. Avoid areas with open water in Devereux Creek and tributaries.

Programs	Goal	Policies	Actions
		11-2: *Program 14, Habitat Enhancement and Restoration Program*, shall complement the Wildlife Habitat Management Program.	**11-2.1:** Include native plant species that are important for wildlife habitat and food in enhancement and restoration projects. **11-2.2:** Require a Planting Plan for any proposed enhancement plantings near the groves containing aggregation sites. **11-2.3:** Consider increasing mid-canopy and low-stature or groundcover native plant species to enhance wildlife habitat complexity and increase potential use of eucalyptus groves by a variety of wildlife species. **11-2.4:** Implement restoration for the Devereux Creek riparian corridor to improve functions for wildlife, consistent with the goals of the MBHMP for monarch butterflies.
12 Tree Management	To manage the eucalyptus groves within monarch butterfly aggregation sites at Ellwood Mesa in a manner that provides for (1) healthy trees, (2) sustainable aggregation site structure, (3) sustainable butterfly aggregation sites, (4) public safety while visitors are on trails within the groves, and (5) sensitivity to wildfire hazards.	**12-1:** Eucalyptus trees in the groves within the MBHMP coverage area ~~containing monarch butterfly aggregation sites~~ shall be managed, as feasible, to ensure their health and longevity.	**12-1.1:** Include guidance for necessary tree work in the annual Implementation Plan (Action 1-4.1 of the MBHMP). Tree work will take place in the month of September each year. The Implementation Plan should specify responsible parties, work locations, individual trees addressed, work to be accomplished, restoration measures, and methods and procedures for managing tree health. An annual plan is recommended but may be prepared on an as-needed basis based on conditions and progress of the previous Implementation Plan. **12-1.2:** Preliminarily identify potential threats to aggregation sites that may occur over time, and develop a framework for mitigating the threats and maintaining/recovering suitable overwintering habitat. Threats may include, but are not limited to, the following: ▪ Drought ▪ Pests ▪ Disease ▪ Fire ▪ Flood/erosion ▪ Vandalism ▪ Invasion by non-native plants (not including eucalyptus) These threats, as well as others, may arise and impair the function of Ellwood Mesa as habitat for overwintering monarch butterflies. When threats are encountered, a specific plan of action should be undertaken to address the needs of the situation. However, for planning purposes, the City should be prepared to undertake the response measures outlined in Table 2 of the MBHMP. Although not exhaustive, these measures represent a prudent suite of response tools to address future conditions. Measures listed below may prevent or rectify impacts from multiple types of threats, as the intent of the measures is to restore and encourage healthy habitat.

Programs	Goal	Policies	Actions
			12-1.3: Thresholds should be established to direct professional review and potential action to address conditions in the groves. Ultimately, it is envisioned that quantitative thresholds will be established based on the results of monitoring and scientific study within the groves (Programs 20, 21, and 22). However, until adequate reference data are available, action thresholds will be determined qualitatively by the City in consultation with a qualified monarch butterfly biologist. **12-1.4:** Implement *Program 13, Integrated Pest Management Program*, to help maintain tree health and control infestation in the eucalyptus groves supporting monarch butterfly aggregation sites. **12-1.5:** Cut down or prune trees identified as a threat to butterfly aggregation sites because they may fall and cause injury or collapse on other trees important to sustaining aggregation sites. **12-1.6:** Maintain a living forest within the outline of pre-drought forest extent as determined with historic aerial photographs. Restore sections of the forest where dead zones occur due to multiple tree die-offs. **12-1.7:** Implement *Program 14, Invasive Plant Management Program*, particularly regarding non-native vines that could affect the quality of monarch butterfly habitat, following recommendations for eradication consistent with the California Invasive Plant Council (Cal-IPC) and conservation priorities of monarch butterflies and their habitat. **12-1.8:** Implement *Program 20, Biological Monitoring Program*, to provide information regarding management of eucalyptus groves to ensure their health and longevity. **12-1.9:** Annually, identify conditions that threaten eucalyptus trees at aggregation sites and include recommended actions in the Implementation Plan to reduce perceived threats. **12-1.10:** Plant trees as needed to maintain grove density and improve monarch butterfly habitat. Plant in locations that improve aggregation site conditions as per the best available scientific analysis, and replant areas within historic eucalyptus grove extent where gaps have occurred from drought die-back. **12-1.11:** Following evaluation of compatibility with existing habitat and functionality with respect to butterfly habitat, conduct a pilot planting for any eucalyptus species considered for tree restoration that is not present in the MBHMP area as of 2018.

Programs	Goal	Policies	Actions
		12-2: Eucalyptus trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to provide sustainable habitat for butterfly aggregation sites.	**12-2.1:** When considering eucalyptus or other tree replacement actions, consider tree configurations that retain open areas for monarch butterfly patrolling and monarch overwintering preferences. **12-2.2:** Investigate potential enhancement to monarch butterfly patrolling habitat by reducing tree tangles and fallen debris. **12-2.3:** Remove hazard trees as necessary to protect monarch butterfly cluster locations, as consistent with goals for public safety. **12-2.4:** Implement, as feasible *Program 10, Monarch Butterfly Management Program*, to facilitate improvements in eucalyptus groves that help sustain aggregation sites. **12-2.5:** Protect blue gum saplings as necessary to encourage natural recruitment of trees in the eucalyptus forest.
		12-3: Eucalyptus trees within the groves containing monarch butterfly aggregation sites shall be managed, as feasible and consistent with conservation of monarch habitat, to provide safe conditions for the visiting public.	**12-3.1:** Prune and remove dead, dying, or particularly vulnerable tree trunks and branches that overhang trails and seating areas, or lay across trails, inside and near monarch butterfly aggregation sites to reduce the threat of injury from falling trunks and branches, debris on trails (trip hazards), or low-hanging material across trails that visitors could bump heads on. **12-3.2**: As recommended by the City arborist and detailed in the annual Implementation Plan, conduct work designed to protect the structure of aggregation sites. **12-3.3:** As recommended by the City arborist and detailed in the annual Implementation Plan, remove or prune dead standing, dead suspended, dead on the ground, or thick understory trees both to improve grove tree health and monarch butterfly habitat and to correct hazard conditions for human safety along trails and at observation sites. **12-3.4:** Consider using downed, dead trees for seating along trails, or to add to slope stability or help control erosion, for preservation rather than removal, as feasible, considering human safety or wildfire threat. **12-3.5:** Remove ground debris, such as accumulations of branches and leaves, at trailheads in particular to reduce threat from wildfires, to reduce threat to human safety from obscured view, and to increase aesthetic appeal. **12-3.6:** In consultation with the City arborist, conduct an annual review of tree health in April and May at aggregation sites. Develop and implement an annual Implementation Plan to address issues identified during the review, including potential need for tree removal or pruning, treatment of diseases or pests, and other potential recommendations.

Programs	Goal	Policies	Actions
		12-4: Eucalyptus trees within the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to provide for low wildfire hazards.	**12-4.1:** Implement *Program 4, Community Wildfire Protection Plan*, to provide wildfire protection consistent with the City's adopted CWPP. **12-4.2**: Reduce accumulations of dead, dry, and loose organic and other flammable material within eucalyptus groves to decrease potential for ground-level fires becoming canopy fires as a result of ladder effect of fire hazard materials. Sufficient downed wood, debris, and ground cover will be left in place to provide substrate and shelter for monarchs dislodged from clusters. **12-4.3:** Remove accumulations of dead plant material along southern grassland margins of eucalyptus groves and at southern trailheads to reduce threat of grassland fires becoming eucalyptus grove fires as a result of fire hazards at the boundary between grasslands and groves via mowing or selective weed-whacking. Herbicides shall not be used. **12-4.4:** Replace removed understory plants as recommended by the City monarch butterfly biologist with fire-resistant native shrubs to restore and improve habitat structure for monarch butterflies. **12-4.5:** Coordinate (1) butterfly habitat management, (2) public access and safety needs, (3) fire management requirements, and (4) wildlife habitat restoration proposals to ensure fire management priorities and implementation of procedures that provide the most compatible result for the conservation of monarch butterflies, while also respecting the goals of other MBHMP programs, as feasible.
13 Integrated Pest Management	Control or eradicate, as feasible, plant, animal, fungal, and other pests that would result in detectable impacts on monarch butterflies or degrade monarch butterfly habitat.	**13-1:** To maintain current knowledge of pests and diseases, the City shall conduct an annual inventory of organisms negatively affecting eucalyptus trees in the groves at Ellwood Mesa.	**13-1.1:** Conduct an inventory of pests and diseases throughout the groves and windrows at Ellwood Mesa. **13-1.2:** Conduct an inventory of pests and diseases within the monarch butterfly aggregation sites within the Ellwood North, Ellwood West, Ellwood Main, Ellwood East, Sandpiper, and Ocean Meadows groves.
		13-2: The City shall consider using a variety of approaches to pest management to prevent pests and diseases from impacting Eucalyptus groves, particularly those supporting seasonal aggregation sites for monarch butterflies.	**13-2.1:** As feasible, experiment with different IPM approaches for different pests and diseases to determine which approach best suits the conditions within eucalyptus groves at Ellwood Mesa. **13-2.2:** Implement wise management practices within the eucalyptus groves at Ellwood Mesa that do not facilitate the spread of pests and diseases with groves. **13-2.3:** Identify current problems that require immediate treatment and implement appropriate treatment protocols. **13-2.4**: Implement a pest and disease monitoring program, as feasible, to determine success of treatments and any new infestations requiring treatment.

Programs	Goal	Policies	Actions
14 Habitat Enhancement and Restoration	To provide for the enhancement of native plant and animal habitats in the context of preserving the monarch butterfly habitat associated with established eucalyptus groves.	**14-1:** Establishment of appropriate native plants – in particular ground cover, shrub, and mid-canopy species – shall be encouraged within the eucalyptus groves and along the Devereux Creek corridor outside of the eucalyptus forest.	**14-1.1:** Plant experimental plots of native ground cover species to determine which may result in sustainable populations. **14-1.2:** Focus enhancement efforts on native plants existing within the eucalyptus groves, such as toyon (*Heteromeles arbutifolia*), and native plants with nectar sources for monarchs. **14-1.3:** Coordinate with *Program 13, Integrated Pest Management Program*, and *Program 15, Invasive Exotic Plant Management Program*.
		14-2: Areas between eucalyptus groves shall be considered for habitat enhancement and restoration alternatives.	**14-2.1:** Implement priority native restoration activities along Devereux Creek in areas outside of eucalyptus groves. **14-2.2:** Eradicate non-native herbaceous cover, seedlings, and saplings (not including eucalyptus saplings) in areas between eucalyptus groves to encourage or actively plant local natives.
		14-3: Restoration of Devereux Creek shall include appropriate actions to improve the habitat structure, ecological functions and processes, and native biodiversity of the existing riparian areas.	**14-3.1:** Restoration activities include establishment of a riparian area along the banks of Devereux Creek composed of native riparian tree species. **14-3.2:** Ensure that no restoration activities along Devereux Creek shall result in increased flooding. **14-3.3:** Coordinate to align efforts with other restoration projects under separate permits or mitigation plans for Devereux Creek.
		14-4: Native plant species are considered to be local genotypes of plants occurring naturally within the Ellwood Mesa/Devereux Creek Ecosystem.	**14-4.1:** Collect all plant materials for use in restoration projects from existing native plant populations in the Ellwood Mesa/Devereux Creek Ecosystem, where feasible. **14-4.2:** Collect plant material from the nearest existing populations for re-introduction of extirpated species. **14-4.3:** Obtain native plants for use in restoration from local nurseries or growers within the Santa Barbara area, emphasizing contract-grown material of local genotypes.
		14-5: No enhancement or restoration actions shall result in negative impacts on the quality of the eucalyptus groves that provide monarch butterfly habitat.	**14-5.1:** Coordinate with *Program 10, Monarch Butterfly Management Program*, *Program 11, Wildlife Management Program,* and *Program 12, Tree Management Program*.
		14-6: No enhancement or restoration actions shall conflict with the goals and policies of the *Community Wildfire Protection Plan*.	**14-6.1:** Coordinate all enhancement and restoration activities with the guidelines and recommendations of the CWPP.

Programs	Goal	Policies	Actions
15 Invasive Plant Management	To eradicate existing stands of invasive non-native species and prevent or control new occurrence of invasive non-native plant species within the monarch butterfly habitat at Ellwood Mesa.	**15-1:** The City shall undertake an inventory and generalized mapping program to identify, locate, and prioritize for eradication or control all invasive non-native plants species within the butterfly habitat at Ellwood Mesa.	**15-1.1:** Identify and map all invasive non-native species identified by Cal-IPC as "High" priority species. **15-1.2:** Identify and map all invasive non-native species identified by Cal-IPC as "Moderate" priority invasive species. **15-1.3:** Identify all invasive non-native species identified by Cal-IPC as "Limited" or unrated priority species and map any medium to large populations.
		15-2: The City shall control all "High," "Moderate," and "Limited" priority invasive plant species within the monarch butterfly habitat, as except those species for which monarch butterflies are dependent, as feasible.	**15-2.1:** Control all "High" priority non-native invasive plant species. **15-2.2:** Control all "Moderate" priority, non-native invasive plant species. **15-2.3:** Eradiate or control all medium or large stands of "Limited" or unrated priority non-native invasive species.
		15-3: The City shall undertake annual monitoring as feasible to identify and eradicate or control new occurrences of "High" or "Moderate" priority invasive non-native plant species.	**15-3.1:** Implement monitoring of eradication efforts and potential new occurrences as part of *Program 20, Biological Monitoring Program.* **15-3.2:** Coordinate with other programs in the MBHMP including *Program 14, Habitat Enhancement and Restoration Program.*
18 Interpretative Program	To establish a useful and informative interpretive signage program at Ellwood Mesa monarch butterfly aggregation sites that is environmentally sensitive and creates a minimum of intrusion into the habitats.	**18-1:** The City shall design and install an interpretive signage program that provides important information on the biology of monarch butterflies, the significance of the aggregation sites, and general information on Ellwood Mesa and the eucalyptus groves, when feasible.	**18.1-1:** Apply for grant funding to design, construct, and install the interpretive program signage. **18-1.2:** Design, construct, and install an interpretive signage program that is sensitive to the environment. **18-1.3:** Locate the interpretive signage program in key locations minimally intrusive to the sensitive habitats of Ellwood Mesa.
		18-2: The Butterfly Docent Coordinator shall provide input during design, review the draft interpretive program, and make recommendations to the City.	**18-2.1:** Involve the butterfly docents, as feasible, in ~~all phases of~~ development and review of the content and design of signs for the interpretative signage program.

Programs	Goal	Policies	Actions
21 Monarch Research Program	Encourage research projects and identify funding for research associated with monarch butterflies and their habitats at Ellwood Mesa.	**21-1:** The City shall allow for certain research projects that investigate the biology of monarch butterflies and their habitats at Ellwood Mesa and that provide information helpful to this MBHMP management programs.	**21-1.1:** Evaluate requests for research and, where approved, issue Scientific Research Permits to regulate the research efforts. **21-1.2:** Ensure that scientists use non-invasive research projects at Ellwood Mesa, in particular those that focus on monarch butterflies and their habitats, and require that the results of the research are provided to the City and posted on the City's website at www.goletabutterflygrove.com. **21-1.3**: Encourage research of the plants native to Santa Barbara County with regard to their ability to provide suitable monarch butterfly overwintering habitat and their applications for the restoration of the Ellwood Mesa.

9. Approval Required by Other Public Agencies

No approvals from other public agencies are required.

10. Site Information

Existing General Plan Land Use Designation	Open Space/Passive Recreation	
Zoning Ordinance, Zone District	Coastal Zoning Ordinance, zoned Recreation	
Site Size	137 acres	
Present Use and Development	Ellwood Mesa Open Space	
Surrounding Uses/Zoning	North:	Hollister Avenue and residences (City of Goleta, zoned 7-R-1, M-RP, DR-12.3, and MHP)
	South:	Pacific Ocean and Ellwood Bluffs
	East:	Residences (City of Goleta, zoned DR-10 and DR-6) and UCSB
	West:	Sandpiper Golf Club (City of Goleta, zoned REC)
Access	Existing:	Hollister Avenue
	Proposed:	Hollister Avenue
Utilities and Public Services	Water Supply:	Goleta Water District (GWD)
	Sewage:	Goleta West Sanitary District (GWSD)
	Power:	Southern California Edison
	Natural Gas:	Southern California Gas Company
	Cable:	N/A
	Telephone:	N/A
	Fire:	Santa Barbara County Fire Department
	School Districts:	N/A

11. Environmental Setting

The Coverage Area is on a coastal mesa with gentle slopes and terraces immediately north of the steep, coastal Ellwood Bluffs. Devereux Creek passes through the Coverage Area, generally flowing west to east before emptying to Devereux Slough east of the Coverage Area. The Coverage Area is bordered by Hollister Avenue and single- and multi-family residences to the north; residential development in Goleta and undeveloped land zoned residential in unincorporated Santa Barbara County to the east; the Ellwood Bluffs and the Pacific Ocean to the south; and the Sandpiper Golf Club to the west.

Eucalyptus woodlands form dense canopies on the northern portion of the Coverage Area and native and non-native grasslands and coyote brush scrub are the dominant habitats occurring on the mesa or southern portion of the Coverage Area. Non-native ornamental and invasive plants are also present. The area includes a parking lot and numerous trails. Previously, the area was used for oil development and remnants of the facilities are still on site.

Monarch butterflies aggregate in the on-site eucalyptus groves during winter months to “overwinter” or pass the winter season. The Coverage Area includes five monarch butterfly

aggregation areas, referred to as the Ellwood North, Ellwood West, Ellwood Main, Sandpiper, and Ocean Meadows aggregation sites (Figure 3). Ellwood East is not included in the Coverage Area because it is outside Ellwood Mesa Open Space. Based on data collected statewide and at Ellwood Mesa between 1997 and 2009, the butterflies at the Ellwood aggregations sites account for approximately 10 percent of the entire migrating population in the western United States. Therefore, these aggregation sites are important for the western population of the monarch butterfly, and accordingly, management of the eucalyptus trees that support the butterflies in such great numbers is paramount to continued overwintering by the species.

Some species of eucalyptus trees found on Ellwood Mesa, including blue gum, have deciduous bark, which is shed annually and presents a fire hazard. The bark catches fire readily and streamers from the loose bark tend to carry fire into the canopy and cast firebrands ahead of the main fire front. The leaf litter, which is the accumulation of dead, dry, and oily leaves, is also a fire hazard as it is extremely flammable.

12. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The City prepared and mailed letters to local Native Americans on December 21, 2018. Under Assembly Bill (AB) 52, tribes have 30 days to respond and request consultation, giving tribes until January 21, 2019 to provide a response. As of the data of this draft, the 30-day response period has ended and no tribal representatives requested formal consultation with the City.

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

■	Aesthetics	☐	Agriculture and Forestry Resources	■	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology/Soils	☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials
■	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
■	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	■	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Anne Wells
Signature

1-23-19
Date

Anne Wells
Printed Name

Advance Planning Manager
Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	■	☐	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	■

Existing Setting

The Coverage Area is located in Ellwood Mesa Open Space, an undeveloped open space area categorized in the General Plan as "Open Space/Passive Recreation" where "significant environmental values or resources, wildlife habitats, significant views, and other open space value" exists (City of Goleta 2006a). The visual character of the Coverage Area is dominated by existing eucalyptus groves, creating a forested landscape. The generally evergreen nature of eucalyptus trees creates a patchy- to fully-shaded setting in the Coverage Area, with hanging bark, leaves, and vegetated understory protruding between tree trunks. Parts of the Coverage Area have views of the Pacific Ocean. Hollister Avenue borders the Coverage Area to the north; this road is designated a local scenic corridor in the Visual and Historic Resources Element of the General Plan. U.S. Highway 101 (US-101) is State-eligible for listing as a scenic highway (California Department of Transportation 2018); US-101 parallels and is north of Hollister Avenue near the Coverage Area. The nearest State-designated scenic highway is State Route 154 (SR-154)/San Marcos Pass, located approximately 14

miles away from the Coverage Area. From within its confines, the Coverage Area provides views to the Pacific Ocean and the Santa Barbara Channel Islands in the distance. The General Plan contains policies to safeguard these views by various means. These include restoring and enhancing visual quality in visually degraded areas, such as those created by the dead and dying trees in the Coverage Area. Furthermore, the Santa Ynez Mountains are visible north of the Ellwood Mesa Open Space and are considered a visual resource, along with riparian areas in the Devereux Slough. As with the other scenic resources described here, these views are from the Coverage Area looking outward and, as the images in Figure 5 demonstrate, they are limited by existing dead and fallen tree material throughout the Coverage Area.

Thresholds of Significance

A significant aesthetic impact would occur if the MBHMP would result in any of the impacts noted in the checklist. The City's Environmental Thresholds and Guidelines Manual instructs the project evaluator to assess visual/aesthetic impacts through a two-step process. First, the visual resources of the Coverage Area must be evaluated, including the physical attributes, visual uniqueness, and relative visibility from public viewing areas. Visibility from coastal and mountain areas, as well as visibility from the urban fringe and travel corridors, are of particular concern. Second, the potential impact on visual resources in the Coverage Area and on views in the vicinity that may be partially or wholly obstructed by implementation of the MBHMP must be determined. This step includes an evaluation of the MBHMP's consistency with State and City policies on the protection of visual resources.

Project-Specific Impacts

a. Would the project have a substantial adverse effect on a scenic vista?

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Implementation of the MBHMP would not involve construction of any structures that would block protected views. The nearest State-designated scenic highway is SR-154/San Marcos Pass, located approximately 14 miles away from the Coverage Area. The Coverage Area is visible from points along SR-154, but none of the covered activities or changes proposed in the MBHMP would be visible from that distance. US-101 is approximately 0.2 mile north of the Coverage Area and is State-eligible for listing as a scenic highway. However, trees along the US-101 corridor and structures north of Hollister Avenue obstruct views of the Coverage Area from the freeway. The General Plan designates Hollister Avenue as a local scenic corridor and provides for protection of the "general character of significant natural features" (City of Goleta 2006a). The MBHMP calls for resource preservation measures involving the removal of dead and diseased trees that pose risk to life, prevent General Plan-mandated trail access, and contribute fuel to potentially catastrophic wildfire. Figure 5 includes images of some of the dead and diseased vegetation in the Coverage Area. The implementation of the MBHMP would not substantially damage a scenic resource and would instead improve the eucalyptus grove as a scenic resource, preserving views from Hollister Avenue and SR-154. MBHMP implementation would, therefore, have no adverse effect on a scenic vista and no impact would occur under threshold a. Although the Coverage Area is near a locally-designated scenic corridor and a State-eligible scenic highway, no substantial damage to scenic resources in these areas would occur. Therefore, no impact to scenic resources in a State scenic highway would occur.

NO IMPACT

Figure 5 Site Photographs

Photograph 1. Example of some of the dead/down material in Ellwood North that would be removed as part of the CWPP to reduce the risk of wildfire

Photograph 2. Example of some of the dead/down material in Ellwood Main that would be removed as part of the CWPP to reduce the risk of wildfire

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Implementation of the MBHMP would not involve any changes in land use in the Coverage Area, and resource management in Ellwood Mesa Open Space would be in keeping with the approved policies in the City's General Plan and CWPP. This would involve resource management activities in the eucalyptus grove in Ellwood Mesa Open Space consistent with General Plan policies for Open Space/Passive Recreation land use designations (City of Goleta 2006a). The incremental removal of dead and diseased trees would contribute to grove health, improving its appearance and making it more accessible to passive public use, including public viewing areas. Furthermore, the resource management activities support the MBHMP's intent to provide consistent stewardship of the Coverage Area and would help protect the grove and adjacent neighborhoods from imminent wildfire threat, which would be consistent with the approved CWPP (City of Goleta 2012).

The MBHMP states "portions of Ellwood Mesa eucalyptus groves suffer from … senescence, drought, pests, disease, or lack of formal management efforts that can negatively affect the aesthetic value of that area." Checklist item 4, Biological Resources, includes the requirement to implement Mitigation Measure BIO-7, which requires monitoring and, if necessary, replacement of trees to ensure the groves remain viable habitat for monarch butterflies and retain visual character. The removal of dead and diseased trees or deadfall would not be considered removal of any scenic resources on the Coverage Area as it would benefit the overall health of the groves. The MBHMP Tree Management Program calls for reforestation along with removal of dead and diseased specimens with covered activities that include "plant new eucalyptus trees, native and/or fire-resistant understory species, and native nectar sources" for migrating butterflies. These new plantings would be subject to the replacement tree guidelines detailed in Mitigation Measure BIO-7 and would be consistent with existing open space conservation practices. Therefore, the MBHMP would result in a less than significant impact to the existing visual character with implementation of mitigation.

The MBHMP Aesthetic Resources Program identifies the signs and fencing associated with monarch butterfly habitat on Ellwood Mesa as part of the stewardship program, and intends to ensure the signs and fencing are aesthetically compatible with the natural conditions of the Coverage Area. Designs for signage and other facilities would be subject to review by the City for consistency with the natural conditions of the Coverage Area prior to installation. Adherence to this review process would ensure improvements to the quality of aesthetic resources in the Coverage Area would not result in an impact to scenic visual resources.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Implementation of the MBHMP involves no development that would add new sources of light or glare. Therefore, no impact would occur.

NO IMPACT

Mitigation Measures

No additional mitigation beyond Mitigation Measure BIO-7 is required or recommended.

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2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

Existing Setting

The Coverage Area is undeveloped open space and surrounded by residential and recreational uses to the north, east, and west and the Pacific Ocean to the south. The Coverage Area is not on or adjacent to land currently under agricultural operation and is not designated for agricultural use in the City's General Plan. Based on the Farmland Mapping and Monitoring Program for the California Resources Agency, no portion of the Coverage Area is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2018a). In addition, no portion of the Coverage Area is zoned for forestland, timberland, or timber production.

Thresholds of Significance

A significant impact to agricultural resources would be expected to occur if the MBHMP would result in any of the impacts noted in the above checklist. Additionally, the MBHMP may pose a significant environmental effect on agricultural resources if it conflicts with adopted environmental plans and goals of the City, converts Prime agricultural land to non-agricultural use, or impairs the agricultural productivity of Prime agricultural land.

Project-Specific Impacts

a. Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

The Coverage Area is currently undeveloped open space and is not in agricultural use. Implementation of the MBHMP would not impact farmland designated as Prime, Unique, or of Statewide Importance (California Department of Conservation 2018). In addition, the City's General Plan does not designate any portion of the Coverage Area for agricultural use (City of Goleta 2017a). Implementation of the MBHMP would not result in the displacement of existing farmland or occur adjacent to any existing farmland or agricultural resources. The MBHMP would not affect any lands designated by the City for agricultural purposes, nor would it affect any parcels zoned for agricultural use or parcels under a Williamson Act Contract (City of Goleta 2017a). The MBHMP would not involve any other changes to the existing environment that could result in conversion of farmland to non-agricultural uses. Because implementation of the MBHMP would not conflict with adopted environmental plans and goals of the City, nor would it convert prime agricultural and to non-agricultural use or impair the agricultural productivity of prime agricultural land, no impact would occur.

NO IMPACT

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

As discussed in Section 10, *Land Use and Planning*, the Coverage Area is zoned Recreation (Rec) and has a General Plan land use designation of Open Space/Passive Recreation. According to the City of Goleta Coastal Zoning Ordinance, the intent of the Recreation district is to encourage outdoor recreational uses that will protect and enhance areas that have both active and passive recreation potential because of their beauty and natural features (City of Goleta 1998). No portion of the Coverage Area is zoned for forestland, timberland, or timber production, and timber production is not a permitted use in the Recreation zone. Therefore, no impact would occur.

NO IMPACT

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The Coverage Area in an open space preserve and contains several tree species, including groves of eucalyptus. Implementation of the MBHMP would remove selected dead, dying, or hazardous trees under the Catastrophic Event Response Program and Tree Management Program. Following tree removal, new tree plantings would be installed to enhance habitat conditions for the monarch butterfly. The trees that would be removed during implementation of the MBHMP are dead, dying, or otherwise hazardous trees that are a risk for recreational users in the Coverage Area because they have the potential to fall down. The MBHMP would have a beneficial effect on the eucalyptus groves in the Coverage Area because it would result in replacement of dead, dying, or otherwise hazardous eucalyptus trees, which generally have reduced canopy and provide minimal forest habitat value, with healthy, young trees.

The City amended and approved the Goleta Urban Forest Management Plan (GUFMP) in February 2017 to outline a policy framework for the restoration, enhancement, and management of the urban forest in Goleta. The tree removal strategy proposed by the MBHMP is consistent with Policy 4.12.4 of the GUFMP, which recognizes tree removal may be necessary, at City staff's discretion, for the protection, public health, and safety of citizens in considering dead, dying, or hazardous trees (City of Goleta 2017b). No other trees would be removed because the Coverage Area in an open space preserve and not zoned for timber harvest. Additionally, eucalyptus trees are not used as timber. Given that the MBHMP would be consistent with the GUFMP and would improve the health of the eucalyptus groves, there would be no impact.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

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3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	■	☐	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	■	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	■	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	■

This section addresses the impacts of the MBHMP on air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. The analysis of emissions focuses on whether the MBHMP would cause an exceedance of a State or national ambient air quality standard or an exceedance of a threshold recommended by the local air quality agency.

Local Climate

The climate in and around Goleta, as well as most of southern California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. This high-pressure cell typically produces a Mediterranean climate with warm summers, mild winters, and moderate rainfall. This pattern is interrupted occasionally by periods of extremely hot weather brought in by sundowner winds. Almost all precipitation occurs between November and April, although during these months, the weather is sunny or partly sunny the majority of the time. Cyclic land and sea breezes are the primary factors affecting the region's mild climate. The daytime winds are normally sea breezes, predominantly from the west, which flow at relatively low velocities. Additionally, cool, humid, marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in late spring and early summer.

Surface temperature inversions (0 to 500 feet) are most frequent during the winter, and subsidence inversions (1,000 to 2,000 feet) are most frequent during the summer. Inversions are an increase in temperature with height and directly relate to the stability of the atmosphere. Inversions act as a cap to the pollutants emitted below or within them. The subsidence inversion is common during the summer along the California coast, and is one of the principal causes of air stagnation. Poor air quality is usually associated with air stagnation (high stability/restricted air movement).

Air Quality Standards – Criteria Pollutants

The federal government and the State of California have established air quality standards and emergency episode criteria for various pollutants. Generally, State regulations have stricter standards than those at the federal level. Air quality standards are set at concentrations that provide a sufficient margin of safety to protect public health and welfare. Air quality at a given location can be described by the concentration of various pollutants in the atmosphere. The significance of a pollutant concentration is determined by comparing the concentration to an appropriate federal and/or State ambient air quality standard.

The United States Environmental Protection Agency (USEPA) establishes federal standards, termed the National Ambient Air Quality Standards. The California Air Resources Board (CARB) establishes the State standards, called the California Ambient Air Quality Standards. The region generally has good air quality, as it attains or is considered in maintenance status for most ambient air quality standards. The Coverage Area is in the South Central Coast Air Basin, which encompasses all of Santa Barbara and San Luis Obispo counties. Santa Barbara County Air Pollution Control District (SBCAPCD) is required to monitor air pollutant levels in the South Central Coast Air Basin to ensure federal and State air quality standards are met.

Criteria Pollutants

Criteria pollutants of primary concern include ozone, carbon monoxide (CO), nitrogen oxide (NO_2), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Although there are no ambient standards for volatile organic compounds/reactive organic compounds (VOCs/ROCs) or nitrogen oxides (NO_X), they are important as precursors to ozone.

Ozone air pollution is formed when NO_X and ROCs react in the presence of sunlight. According to the SBCAPCD, the major sources of ozone precursor emissions in Santa Barbara County are motor vehicles, the petroleum industry, and solvent usage (paints, consumer products, and certain industrial processes). Sources of PM_{10} include grading, demolition, agricultural tilling, road dust, mineral quarries, and vehicle exhaust.

The County currently violates the State 8-hour ozone and PM_{10} standards, but it is in attainment of the federal 8-hour ozone standard and the State 1-hour ozone standard. The SBCAPCD adopted a Clean Air Plan in 2013 demonstrating how the County will maintain and/or meet State and federal air quality standards, including ozone and particulate matter standards.

Thresholds of Significance

A significant air quality impact could occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines.

In addition, per the City's Environmental Thresholds and Guidelines Manual, a significant adverse air quality impact may occur when a project, individually or cumulatively:

- Interferes with progress toward the attainment of the ozone standard by releasing emissions which equal or exceed the established long-term quantitative thresholds for NO_X and reactive organic gases
- Equals or exceeds the State or federal ambient air quality standards for any criteria pollutant (as determined by modeling)

A project has a significant impact on regional air quality if emissions related to project operation exceed the significance threshold established by SBCAPCD, currently set at 25 pounds per day for NO_X and ROC emissions for motor vehicle trips. Furthermore, if a project's emissions exceed these thresholds, that project's contribution to cumulative impacts would be considered significant.

The City's thresholds also include criteria for conducting CO emission modeling. However, due to the relatively low background ambient CO levels in Santa Barbara County, localized CO impacts associated with traffic at congested intersections are not expected to exceed the CO health-related air quality standards. Therefore, CO "hotspot" analyses are no longer required.

The SBCAPCD does not have quantitative emission significance thresholds for short-term construction activities because of their temporary nature. Nevertheless, because Santa Barbara County is not compliant with State standards for PM_{10}, construction-generated fugitive dust (50 percent of total dust) is subject to the SBCAPCD's standard dust mitigation requirements.

Project-Specific Impacts

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Temporary emissions associated with implementation of the MBHMP would be minimal, as the MBHMP would not involve demolition of existing structures or construction of any new structures. The MBHMP would involve programs and activities to improve monarch butterfly habitat such as waste reduction, pest management, trail maintenance, and habitat restoration. Most of these activities would not involve the use of heavy diesel equipment resulting in substantial criteria pollutant emissions. Trail and tree maintenance activities would involve tools such as chainsaws and hand tools. Emissions from such equipment would be minimal, as well as temporary and intermittent.

Certain covered activities, such as drainage clearing following flood events, trail relocations, culvert installations, and tree removals may involve limited ground disturbance and require the intermittent use of heavy construction equipment. Additionally, tree maintenance, vegetation removal, habitat restoration, and trail maintenance and relocation activities could require driving trucks on unpaved roads and trails in the Coverage Area, which may generate fugitive dust emissions.

The trail improvement and educational programs associated with the MBHMP would improve the quality of the experience for visitors to the butterfly habitat, which may lead to an incremental increase in visitors to the Coverage Area. However, the MBHMP would not expand the capacity of Ellwood Mesa Open Space to accommodate additional vehicle trips to the open space through additional parking or site access. Therefore, the MBHMP would not substantially increase operational emissions associated with vehicle trips to and from the Coverage Area above current conditions. The MBHMP would not result in human population growth, and therefore, would be consistent with the population growth assumptions contained in the County's 2013 Clean Air Plan and 2016 Ozone Plan. As a result, the MBHMP would not conflict with or obstruct implementation of an applicable air quality plan.

Implementation of the MBHMP would not result in substantial, long-term, operational air quality emissions. However, smaller ground-disturbing activities would have the potential to temporarily and intermittently generate fugitive dust in the Coverage Area. Because the MBHMP would not involve construction of structures, it would not be subject to SBCAPCD Rule 345, which includes various fugitive dust mitigation requirements for construction activities in the County. Nevertheless, the SBCAPCD recommends standard fugitive dust control measures for construction and demolition activities in its jurisdiction. Mitigation Measure AQ-1 features such measures, the incorporation of which would minimize potential fugitive dust emissions resulting from covered activities that require ground disturbance or from vehicles driven on unpaved roads and trails in the Coverage Area. With adherence to dust control measures contained in Mitigation Measure AQ-1, air quality impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Operational activities associated with the MBHMP would not create objectionable odors for nearby residences or visitors to the Ellwood Mesa Open Space because the MBHMP would not involve new facilities other than signage and improved trails. Covered activities, such as tree pruning, trail maintenance, and habitat restoration, would generally not require heavy diesel equipment and would not produce objectionable odors. Therefore, no impact would occur.

NO IMPACT

Mitigation Measures

AQ-1 Dust Control

All covered activities shall incorporate the following dust control measures to reduce potential PM_{10} emissions during implementation of the MBHMP:

- Covered activities shall minimize the amount of disturbed area to the extent feasible
- On-site vehicle speeds shall be limited to 5 miles per hour or less
- The City or City-approved contractor shall install gravel pads at the access points to Ellwood Mesa Open Space to prevent tracking of dirt/mud onto public roads
- After a ground-disturbing activity is completed, the City or City-approved contractor shall treat the disturbed area by watering, revegetating, or spreading soil binders

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
c. Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	■	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	■

Existing Setting

Regional Setting

The Coverage Area is in the South Coast region of Santa Barbara County on a coastal plain, along the south edge of the western Transverse Range. The Coverage Area is in the South Coast subregion as described in the Jepson ecoregion system (Baldwin et al. 2012), which extends from Point Conception to the west southward to Mexico, along the immediate coast in Santa Barbara County, but also extends inland to the San Gabriel and San Bernardino mountains farther east and south. More specifically, the Coverage Area is in the Santa Ynez – Sulphur Mountains subsection of the Southern California Coast, according to the United States Forest Service (USFS) ecoregion system (USFS 2014). This ecological sub-unit extends from the Santa Ynez River mouth in northern Santa Barbara County, south and east into the Sulphur Mountains just west of the Ventura River in northern Ventura County. The ecological unit is defined by its mountainous topography inland, with coastal plains along the coastline. The Santa Ynez Mountains to the north of the Coverage Area form relatively steep hillsides vegetated by with chaparral and scrub vegetation types, drained by incised streams. Some streams in Goleta are lined with narrow bands of oak, while others support riparian shrubs and woodlands. The Coverage Area is on the coastal plain between the southern foot of the mountains and the Pacific Ocean.

The climate in Goleta is influenced by the city's proximity to the Santa Ynez Mountains, whose elevations surpass 4,000 feet. When moist coastal air is pushed up by the mountains, an orographic effect forces the air upward and causes increased precipitation along the South Coastal plain. Annual precipitation in Goleta is typically about 16.3 inches, with the majority of rainfall received between November and April in typical years (Western Region Climate Center 2018). Mean annual temperatures range from 48 to 69 degrees Fahrenheit (°F). Morning fog and sea breezes often moderate summer daytime temperatures. The growing season lasts 340 to 360 days per year (United States Department of Agriculture 2018).

In Goleta, much of the coastal plain between the Santa Ynez Mountains and Pacific Ocean is developed or has been disturbed by historical agriculture or ranching uses. Native vegetation in Goleta is fragmented, but includes riparian and upland woodlands, coastal scrub, native and non-native grasslands, wetlands, and vernal pools. Relatively undisturbed habitats are present along narrow riparian corridors, in scattered undeveloped lands of varying sizes, and in protected open space areas. The Coverage Area in Ellwood Mesa Open Space is one such open space, though vegetation in this area has been disturbed historically for oil development, wood lots, and ranching uses (City of Goleta et al 2004; Campbell Geo 2010).

Coverage Area Setting

The Coverage Area is in the Ellwood Mesa Open Space, situated on Ellwood Mesa, on gentle slopes and terraces immediately north of the Ellwood bluffs. The Coverage Area consists of a series of eucalyptus groves, which were planted on the site beginning in the 1870s, and the immediately adjacent areas. The Coverage Area was selected based on the biology of the monarch butterfly, the focal species of the MBHMP, which is dependent on dense stands of eucalyptus trees for overwintering habitat. Devereux Creek, an intermittent coastal stream, flows through the center of the Coverage Area and likely helps to sustain some of the eucalyptus groves. Two unnamed tributaries to Devereux Creek also occur in the Coverage Area, and flow southward through the eucalyptus forest until joining Devereux Creek.

The Coverage Area is bounded to the north by Hollister Avenue and residential development, to the west by Sandpiper Golf Club, to the east by the City of Goleta/County of Santa Barbara boundary along an undeveloped parcel managed by UCSB, and to the south by Ellwood Mesa Open Space and the Pacific Ocean. The northwest corner of the Coverage Area wraps around the western, southern, and eastern perimeters of the "The Bluffs" residential development. Existing residential development also abuts the northeastern perimeter of the Coverage Area. The majority of MBHMP activities would occur within 150 to 200 feet of existing residential developments along the northern portion of Ellwood Mesa Open Space. Most of the southern coastal plain and bluff habitats on Ellwood Mesa are outside the Coverage Area, and would not be directly affected.

The Coverage Area is on a coastal mesa, within which eucalyptus woodlands form dense canopies with native and non-native grasslands and coyote brush scrub habitats occur in the areas immediately adjacent to the eucalyptus groves. In areas outside the eucalyptus groves, the Devereux Creek corridor supports native riparian and transitional vegetation. Two vernal pools are documented along the southern boundary of the Coverage Area. The Coverage Area also includes a parking lot and numerous trails that are open to the public and used for visiting the monarch butterfly aggregation sites, walking and jogging on Ellwood Mesa, and accessing the beach to the south of Ellwood Mesa. An unpaved fire road along the northern edge of Devereux Creek in the Coverage Area can accommodate vehicle traffic, but is used for emergency purposes only and is not normally open to vehicles. Under normal conditions, this road is used by the public as a walking route through the eucalyptus groves and functions as part of the trail system.

The City's General Plan identifies and maps several Environmentally Sensitive Habitat Areas (ESHA) in the Ellwood Mesa Open Space, including riparian habitat, vernal pools, native grassland, sage scrub, and bluff scrub (City of Goleta 2018). Monarch butterfly aggregation sites and raptor roosting/nesting sites at Ellwood are identified as ESHA in the General Plan. Several of the mapped ESHAs in Ellwood Mesa Open Space are in the Coverage Area (Figure 6). Unmapped ESHA may also be present where native grassland and riparian restoration efforts have expanded these sensitive vegetation types.

Existing Habitat Conditions

Ellwood Mesa Open Space supports both native and non-native communities, as well as non-native ornamental and invasive plants in some areas. Eucalyptus groves (*Eucalyptus [globulus, camaldulensis]* Semi-Natural Woodland Stands) are the dominant vegetation type in the Coverage Area due to their importance for the monarch butterfly. Additional vegetation types in the Coverage Area include:

NON-NATIVE GRASSLANDS

- Wild oats grassland (*Avena [barbata, fatua]* Semi-Natural Herbaceous Stands)
- Annual brome grasslands (*Bromus [diandrus, hordeaceus]-Brachypodium distachyon* Semi-Natural Herbaceous Stands)

NATIVE GRASSLANDS

- Native bunchgrass grassland (*Stipa [=Nassella] pulchra* Grassland Alliance)

COASTAL SCRUB COMMUNITIES

- Coyote brush scrub (*Baccharis pilularis* Shrubland Alliance)
- California sagebrush scrub (*Artemisia californica* Shrubland Alliance)

BLUFF SCRUB COMMUNITIES

- Quail bush scrub (*Atriplex lentiformis* Shrubland Alliance)

RIPARIAN COMMUNITIES

- Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance)

A field reconnaissance-level biological survey conducted by Rincon Consultants in February 2018 confirmed that previous habitat mapping and identification of ESHAs in the Coverage Area and vicinity (e.g., City of Goleta 2013, City of Goleta 2014c; Storrer 2011, Campbell Geo 2010) are largely consistent with current existing conditions. Plant communities observed during the 2018 survey were identified based on A Manual of California Vegetation, Second Edition (MCV2, Sawyer et al. 2009), the currently accepted standard for vegetation classification in California. Because many of the previous biological studies conducted in the Coverage Area and vicinity are dated and did not use this system, the mapped vegetation types have been cross-referenced to previous systems utilized during the prior studies as appropriate (Table 3). Updates to habitat nomenclature are addressed on an individual basis below.

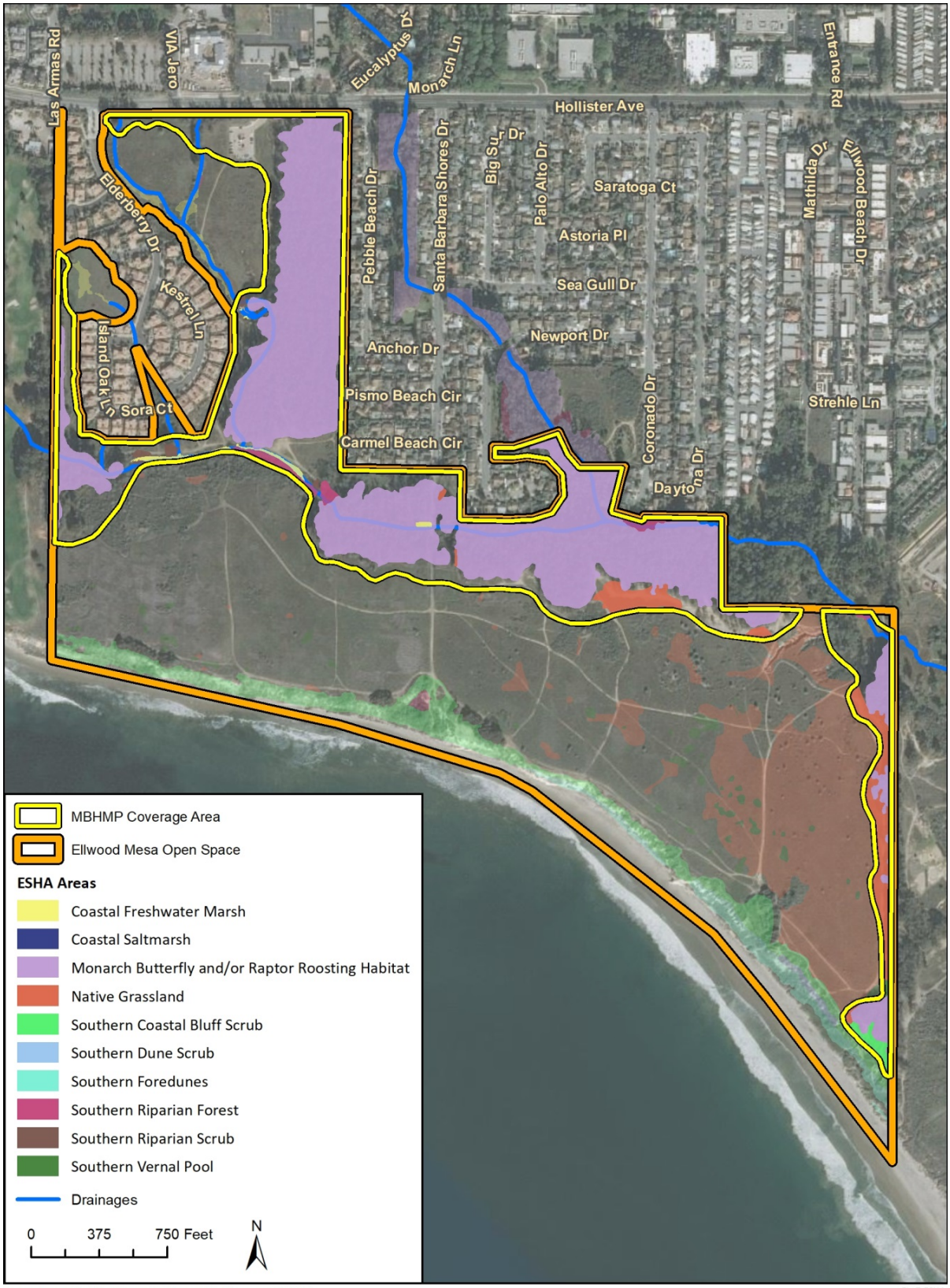
Table 3 Habitat Types in the Coverage Area with Current Classification

General Habitat Type	MCV2 Vegetation Alliances	Global Rank/ State Rank	CDFW Sensitive Community?
Non-native grassland	Avena *[barbata, fatua]* Semi-natural Herbaceous Stands	not ranked	No
	Bromus [diandrus, hordeaceus]-Brachypodium distachyon Semi-Natural Herbaceous Stands	not ranked	No
Native grassland	Stipa *[=Nassella] pulchra* Grassland Alliance	G4/S3?	Yes
Eucalyptus groves	Eucalyptus [*globulus, camaldulensis*] Semi-natural Woodland Stands	not ranked	No
Coyote brush scrub	*Baccharis pilularis.* Shrubland Alliance	G5/S5	No
California Sagebrush scrub	*Artemisia californica* Shrubland Alliance	G5/S5	No
Bluff scrub	*Artemisia californica* Shrubland Alliance intermixed with *Atriplex lentiformis* Shrubland Alliance	G5/S5 G4/S4	No No
Arroyo willow thickets	*Salix lasiolepis* Shrubland Alliance	G4/S4	Yes

Source: CDFW 2018b, 2018d

The approximate distribution of these habitats in the Coverage Area, based on the February 2018 survey and review of previous habitat mapping, is shown in Figure 7. The current condition of habitats in the Coverage Area is described below and depicted in site photographs presented as Photographs 3 through 6 in Figure 8.

Figure 6 Environmentally Sensitive Habitat Areas



Imagery provided by Microsoft Bing and its licensors © 2018.

Figure 7 Drainages and Vegetation Communities

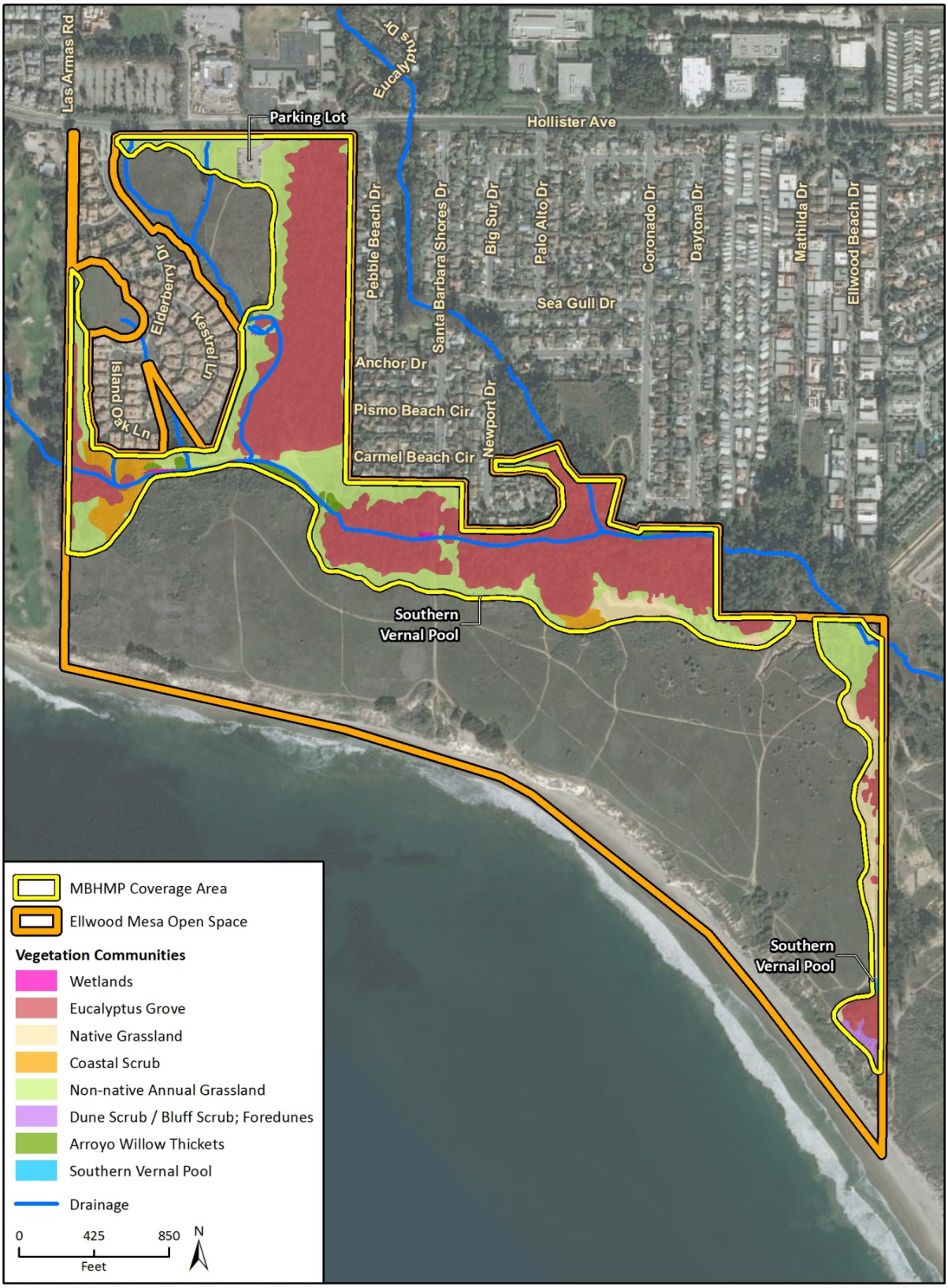


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Figure 8 Site Photographs

Photograph 3. Ellwood North. September 2018.

Photograph 4. Understory Condition in Ellwood North grove, with downed wood, litter buildup, and non-native understory species. September 2018.

Photograph 5. Non-native grassland adjacent to Ellwood Main. September 2018.

Photograph 6. Ellwood Main understory. September 2018.

EUCALYPTUS GROVES

Eucalyptus groves, consistent with *Eucalyptus (globulus, camaldulensis*) Semi-Natural Woodland Stands in MCV2 (Sawyer et al. 2009), form dense canopies throughout the Coverage Area. The tree overstory is almost entirely eucalyptus species, though occasional coast live oak (*Quercus agrifolia*), arroyo willow, and other trees are present in low numbers. Understory in eucalyptus groves is predominantly non-native. Duff layers are thick, and herbaceous vegetation is sparse, with occasional veldt grass (*Ehrharta erecta*), oats, ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), and foxtail barely. Shrubs are also present, including non-native Myoporum (*Myoporum laetum*), pittosporum (*Pittosporum undulatum*), blackwood acacia (*Acacia melanoxylon*), cotoneaster (*Cotoneaster lacteus*). A few native shrub and woody vine species are also present, with poison oak (*Toxicodendron diversilobum*) and toyon (*Heteromeles arbutifolia*) most common. Many of the eucalyptus groves are infested with invasive vines, including Algerian ivy (*Hedera canariensis*). Where Devereux Creek and its tributaries flow through eucalyptus groves, additional weedy perennial plants are present, including cape ivy (*Delairea odorata*), garden nasturtium (*Tropaeolum majus*), and firethorn (*Pyracantha* sp.). However, native species are also more common along the drainage bed and banks than elsewhere in eucalyptus groves, including poison oak, rushes (*Juncus* spp.), elderberry (*Sambucus nigra* ssp. *caerulea*), and blackberry (*Rubus ursinus*), particularly near the Ellwood Main and Sandpiper aggregation sites.

As noted above, five monarch butterfly aggregation areas, referred to as the Ellwood North, Ellwood West, Ellwood Main, Sandpiper, and Ocean Meadows sites, are present in eucalyptus groves in the Coverage Area. As described in Section 7, *Background Information*, eucalyptus trees were introduced in the 1870s to provide a source of lumber. In recent years, the ongoing drought and pest infestations have resulted in the degradation and death of eucalyptus trees. According to a field study performed by Althouse and Meade, Inc. in July 2017, over 1,200 trees in the eucalyptus forest are dead, with hundreds more that are highly degraded and dying. Historically these aggregation sites hosted tens of thousands of monarch butterflies during some years, making Ellwood Mesa one of the most important sites for monarch butterflies in California (Pelton et al. 2016). As shown in Figure 4, overwintering monarch populations on Ellwood Mesa have declined drastically in recent years from 47,510 monarchs at a recent peak in 2011 to an all-time low of 230 monarchs counted in 2018.

Grove and windrow areas between aggregation sites have not been recorded to support monarch butterfly aggregations. Eucalyptus groves in the Coverage Area are predominantly blue gum groves, but some areas of red ironbark (*E. sideroxylon*) and red gum (*E. camaldulensis*) are present, particularly in the areas south of the Ellwood North aggregation site, and occasionally in the Ellwood West, Main, and East sites.

Small stands of eucalyptus are also present on the immediate edge of the Ellwood Mesa Open Space outside the Coverage Area. These include small patches of ironwood, blue gum, and lemon-scented gum (*Corymbia citriodora*). Eucalyptus trees are present in a utility easement near the eastern boundary of the Coverage Area. Monarch aggregations have not been reported and are not expected in these small, exposed stands of trees.

NON-NATIVE GRASSLANDS

The dominant plant community in areas without tree canopy consists of non-native annual grasslands. This vegetation type is most consistent with the *Avena [barbata, fatua]* Semi-Natural Herbaceous Stands alliance and the *Bromus [diandrus, hordeaceus]-Brachypodium distachyon* Semi-Natural Herbaceous Stands alliance in the MCV2 classification system (Sawyer et al. 2009). These

communities are not assigned a rarity rank by the CDFW (2018b), and are not considered sensitive. Typical composition consists of abundant wild oats (*Avena barbata, A. fatua*), with hare barley (*Hordeum murinum*) and a variety of non-native herbaceous plants, including prickly lettuce (*Lactuca serriola*), bristly ox tongue (*Helminthotheca echioides*), cheeseweed (*Malva* sp.), knotweed (*Polygonum aviculare*), and black mustard (*Brassica nigra*). Aggressive weeds such as fennel (*Foeniculum vulgare*) and castor bean (*Ricinus communis*) are common to abundant in patches. Australian saltbush (*Atriplex semibaccata*) is present in many areas. Some native species are also present in non-native grasslands, including tarweed (*Deinandra fasciculata*), horseweed (*Conyza canadensis*), western ragweed (*Ambrosia psilostachya*) and dove weed (*Croton setigerus*). Occasional purple needlegrass (*Stipa pulchra*) plants are present in some areas of non-native annual grassland. Patches and larger areas with at least 10 percent cover of native grasses are classified separately as native grassland. Some ruderal areas consisting of predominantly non-native herbaceous weeds are also present, intermixed with annual grasslands. Patches of ice plant (*Carpobrotus edulis*) are occasional, including several patches near The Bluffs residential development. Non-native annual grasslands occur in the Coverage Area along the margins of the Ellwood North, Sandpiper, Ellwood West, and Ellwood Main aggregation sites, north of the Ocean Meadows site, and areas in between groves.

NATIVE GRASSLANDS

Native grassland in the Coverage Area are present south of the Ellwood Main and Ellwood East aggregation sites, and west of the Ocean Meadows aggregation site and windrow. These areas contain at least 10 percent cover of native grassland species, particularly purple needlegrass, and are consistent with the *Stipa [=Nassella] pulchra* Herbaceous Alliance in MCV2 (Sawyer et al. 2009). These areas are designated ESHA in the General Plan and included on the 2018 CDFW Sensitive Natural Communities list. Restoration of native grasslands in the vicinity of the Coverage Area has been ongoing, beginning with drill seeding over most of the non-native grassland habitats at Ellwood Mesa Open Space in 2008 (City of Goleta 2011a).

COASTAL SCRUB

In the Coverage Area, coastal scrub vegetation is primarily coyote brush scrub habitat consistent with the *Baccharis pilularis* Shrubland Alliance, with small areas of California sagebrush scrub consistent with the *Artemisia californica* Shrubland Alliance in MCV2 (Sawyer et al. 2009). Intermixed with coyote brush are other native shrubs common to coastal scrub habitats, particularly saw-tooth golden bush (*Hazardia squarrosa*) and coastal goldenbush (*Isocoma menziesii*). Non-native weedy species are also present along margins and between shrubs, including annual grasses, fennel, and Italian thistle (*Carduus pycnocephalus*). In the Coverage Area, coyote brush scrub is common adjacent to the Ellwood North, Sandpiper, and Ellwood West groves, as well as along Devereux Creek. This community is not identified as sensitive by the CDFW (2018b).

California sagebrush scrub occurs in small patches on banks of a tributary to Devereux Creek adjacent to The Bluffs development. These patches consist of a mixture of sagebrush (*Artemisia californica*) with toyon, coyote brush, and coast live oak (*Quercus agrifolia*) seedlings. Coast morning glory (*Calystegia macrostegia cyclostegia*) is also present. These patches are not extensive and the majority of coastal scrub on the mesa consists of coyote brush scrub. This community is not identified as sensitive by the CDFW (2018b).

Coastal scrub in the Coverage Area is designated as ESHA as illustrated on Figure 3.4-2 of the Goleta General Plan and shown on Figure 6.

BLUFF SCRUB

Bluff scrub is present in the southeast tip of the Coverage Area adjacent to a patch of eucalyptus grove. Vegetation is primarily California sagebrush scrub (*Artemisia californica* Shrubland Alliance) and quail bush scrub (*Atriplex lentiformis* shrubland alliance). Bluff scrub areas are designated as ESHA in the General Plan; however, neither of these vegetation alliances is considered sensitive by CDFW (2018b). Coastal bluff scrub is restricted to steep slopes and faces of coastal bluffs, and has limited range.

ARROYO WILLOW THICKETS

Portions of Devereux Creek and two unnamed tributaries flow through the Coverage Area. These creeks support some arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance), with scattered young sycamore (*Platanus racemosa*), cottonwood (*Populus trichocarpa*), coast live oak (*Quercus agrifolia*), and box elder (*Acer negundo*) trees, some of which were planted as part of restoration efforts in the past. Arroyo willow thickets occur intermittently along Devereux Creek and one of the unnamed tributaries in the Coverage Area, in areas outside the eucalyptus canopy. Arroyo willow thickets are designated as ESHA in the General Plan, and are included on the 2018 CDFW Sensitive Natural Communities list (CDFW 2018b).

Sensitive Habitats

Sensitive habitats include sensitive natural communities tracked by CDFW, designated critical habitats for species listed under the federal ESA, and other locally designated ESHAs. Sensitive habitats in the Coverage Area include vernal pools (ESHA), riparian habitat adjacent to Devereux Creek (ESHA), arroyo willow thickets (CDFW sensitive), bluff scrub (ESHA), coastal scrub (ESHA), native grasslands (ESHA and CDFW sensitive) and eucalyptus groves (ESHA due to monarch and raptor habitat value).

US FISH AND WILDLIFE SERVICE CRITICAL HABITATS

No designated critical habitat for threatened or endangered species occurs in the Coverage Area. The nearest federally designated critical habitat is for Western snowy plover (*Charadrius alexandrinus nivosus*) on Devereux Beach (Unit CA 34); it extends along the beach at the foot of Ellwood Mesa bluffs outside of the Coverage Area (USFWS 2018a).

LOCALLY DESIGNATED ENVIRONMENTALLY SENSITIVE HABITATS

In the Conservation Element of the General Plan, coastal bluff scrub, native grassland, vernal pools, riparian habitat habitats, and monarch aggregation/raptor roost and nest sites in the Coverage Area are identified as ESHAs (City of Goleta 2017a). Figure 4-1 of the Goleta General Plan Conservation Element identifies and maps these ESHAs. Figure 6 shows these areas in the Coverage Area. Unmapped ESHAs may also be present where native grassland and riparian restoration efforts have expanded presence of these sensitive vegetation types. Due to the MBHMP's focus on monarch butterfly habitat, the vast majority of the Coverage Area is designated ESHA and therefore considered a sensitive habitat.

Special-status Species

For the purposes of this document, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the federal Endangered Species Act (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.); those listed or candidates

for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act or Native Plant Protection Act; animals designated at the State level as "Fully Protected," "Species of Special Concern," "Special Animals" or "Watch List"; those species on the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2018c), and species included in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California, Eighth Edition (CNPS 2018). Section 15125(a) of the State CEQA Guidelines, also directs that special emphasis should be placed on resources that are rare or unique to the region. For example, plants listed by the Santa Barbara Botanic Garden (SBBG) or the Goleta Slough Ecosystem Management Plan may be considered locally sensitive.

The potential for each special status species to occur in the Coverage Area was evaluated according to the following criteria:

- **None.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), or the species is conspicuous and would have been identifiable on site if present (e.g., oak trees).
- **Low Potential.** The species is not likely to be found on the site. Either few of the habitat components meeting the species requirements are present, the majority of habitat on and adjacent to the site is unsuitable or of very poor quality, or protocol surveys were conducted and did not detect the species.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** The species was observed on the site or has been recorded (e.g., California Natural Diversity Database [CNDDB], other reports) on the site recently (within the last 5 years).

SPECIAL-STATUS PLANTS

A five-mile radius search of CNDDB and a six U.S. Geological Survey (USGS) 1:24,000 7.5-minute quadrangle search of the CNPS Online Inventory records identified 21 special-status plant species that have been previously documented in the Coverage Area. Of these, 11 special-status plant species are present or have a high or moderate potential to occur in the Coverage Area based on habitat suitability. One special-status plant species, Santa Barbara honeysuckle (*Lonicera subspicata*), was previously identified in existing biological surveys for this site and is shown on Figure 4-1 of the General Plan Conservation Element, though this location is not currently included in the CNDDB. Table 4 shows the status and habitat requirements for each of these species, with an assessment of their potential to occur in the Coverage Area.

Table 4 Special-status Plant Species in the Vicinity of the Coverage Area

Scientific Name	Status: Fed/State ESA; CRPR; G-Rank/S-Rank	Habitat Requirements	Potential to Occur/Coverage Area Suitability Observations
Amsinckia douglasiana Douglas' fiddleneck	–/– CRPR 4.2 G4/S4	Annual herb. Blooms Mar.-May. Valley and foothill grassland, oak woodland. 0-1950 m (0-6400 ft.)	**Moderate.** Suitable habitat is present in native grassland in the Coverage Area. Could occur.
Arctostaphylos refugioensis Refugio manzanita	–/– CRPR 1B.2 G3/S3	Perennial evergreen shrub. Blooms Dec.-May. Chaparral. On sandstone. 300-820m (985-2690 ft.)	**None.** Appropriate chaparral habitat and sandstone substrates are not present in the Coverage Area. Not expected to occur.
Atriplex coulteri Coulter's saltbush	–/– CRPR 1B.2 G3/S1S2	Perennial herb. Blooms Mar.-Oct. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. 10-440m (30-1445 ft.)	**Moderate.** Suitable habitat is present in bluff scrub and native grassland in the Coverage Area. Could occur.
Atriplex serenana var. davidsonii Davidson's saltscale	–/– CRPR 1B.2 G5T1/S1	Annual herb. Blooms Apr.-Oct. Coastal bluff scrub, coastal scrub. Alkaline soil. 3-250m (10-820 ft.)	**Low.** Suitable habitat is present in bluff scrub on Ellwood Mesa. Not expected to occur in Coverage Area.
Calandrinia breweri Brewer's calandrinia	–/– CRPR 4.2 G4/S4	Annual herb. Blooms Mar.-Jun. Chaparral, coastal scrub. Sandy or loamy soils. Disturbed sites, burns. 150-1200m (490-3940 ft.)	**High.** Suitable habitat is present in coastal scrub and disturbed areas in the Coverage Area. Could occur.
Calochortus catalinae Catalina mariposa lily	–/– CRPR 4.2 G3G4/S3S4	Perennial bulbiferous herb. Blooms Feb.-Jun. Valley and foothill grassland, chaparral, coastal scrub, cismontane woodland. In heavy soils, open slopes, openings in brush. 30-700m (100-2295 ft.)	**High.** Appropriate fine-textured soils are present in some areas, associated with coastal scrub and grassland habitats. Could occur.
Calochortus fimbriatus Late-flowered mariposa-lily	–/– CRPR 1B.3 G3/S3	Perennial bulbiferous herb. Blooms June-Aug. Chaparral, cismontane woodland, riparian woodland. Dry, open coastal woodland, chaparral; on serpentine. 275-1905 m (900-6250 ft.)	**None.** Appropriate serpentinitic soils are not present. Not expected to occur.
Centromadia parryi ssp. australis Southern tarplant	–/– CRPR 1B.1 G3T2/S2	Annual herb. Blooms May-Nov. Marshes and swamps (margins), valley and foothill grassland. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-425m (0-1395 ft.)	**High.** Suitable habitat is present in mesic sites in grassland, along drainage edges and vernal pool margins in the Coverage Area. Could occur.
Chorizanthe palmeri Palmer's spineflower	–/– CRPR 4.2 G4/S4	Annual herb. Blooms April-Aug. Occurs on rocky serpentinite-influence sites in chaparral, valley and foothill grassland, and woodland. 60-700 m.	**None.** Appropriate serpentinitic sites and rocky areas are not present. Not expected to occur.

Scientific Name	Status: Fed/State ESA; CRPR; G-Rank/S-Rank	Habitat Requirements	Potential to Occur/Coverage Area Suitability Observations
Horkelia cuneata var. puberula mesa horkelia	–/– CRPR 1B.1 G4T1/S1	Perennial herb. Blooms Feb.-Sept. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 70-810m (230-2655ft).	**None.** Appropriately sandy soils are not present. Not expected to occur.
Juncus luciensis Santa Lucia dwarf rush	–/– CRPR 1B.2 G3/S3	Annual herb. Blooms Apr.-Jul. Vernal pools, meadows, lower montane coniferous forest, chaparral, Great Basin scrub. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 300-2040m (985-6690ft).	**Low.** Suitable habitat is present in mesic sites along drainage edges and vernal pool margins in Ellwood Mesa Open Space. The Coverage Area is slightly below reported elevation range, but species could potentially occur.
Lasthenia conjugens Contra Costa goldfields	Endangered/– CRPR 1B.1 G1/S1	Annual herb. Blooms Mar.-Jun. Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-470m (3-1540ft).	**High.** Suitable habitat is present in mesic sites in grassland habitat and vernal pool margins in the Coverage Area. Could occur.
Lasthenia glabrata ssp. coulteri Coulter's goldfields	–/– CRPR 1B.1 G4T2/S2	Annual herb. Blooms Feb.-Jun. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1400m (3-4595ft).	**High.** Suitable habitat is present in mesic sites in grassland habitat and vernal pool margins in the Coverage Area. Could occur.
Layia heterotricha pale-yellow layia	–/– CRPR 1B.1 G2/S2	Annual herb. Blooms Mar.-Jun. Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. 270-1365m (885-4480ft).	**Moderate.** Moderately suitable habitat is present in grassland habitat. Could occur.
Lonicera subspicata var. subspicata Santa Barbara honeysuckle	–/– CRPR 1B.2 G5T2?/S2?	Perennial evergreen shrub. Blooms May-Feb. Chaparral, cismontane woodland, coastal scrub. 35-1000m (115-3280ft).	**Present.** Previously reported in the Coverage Area. Coastal scrub in the Coverage Area is suitable; the CNDDB and General Plan report this species in the Coverage Area.
Monardella sinuata ssp. sinuata southern curly-leaved monardella	–/– G3T2/S2 1B.2	Coastal dunes, coastal scrub, chaparral, cismontane woodland. Sandy soils. 20-305 m. annual herb. Blooms Apr-Sep	**Moderate.** Sandy soils and coastal scrub present in Coverage Area. Could occur.
Phacelia hubbyi Hubby's phacelia	–/– CRPR 4.2 G4/S4	Perennial herb. Blooms Feb.–May, occurs in sandy sites with chaparral, coastal scrub near the coast between 60 - 500 meters elevation.	**None.** Appropriately sandy soils and chaparral are not present. Not expected to occur.
Phacelia ramosissima var. austrolitoralis south coast branching phacelia	–/– CRPR 3.2 G5?T3Q/S3	Perennial herb. Blooms Mar.-Aug. Sandy, sometimes rocky substrate. Chaparral, coastal dunes, coastal scrub, and coastal salt marshes and swamps. 5-300 m	**None.** Appropriate sandy or gravelly substrates are not present. Not expected to occur.

Scientific Name	Status: Fed/State ESA; CRPR; G-Rank/S-Rank	Habitat Requirements	Potential to Occur/Coverage Area Suitability Observations
Scrophularia atrata black-flowered figwort	–/– CRPR 1B.2 G2?/S2?	Perennial herb. Blooms Mar.-Jul. Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shale, and soils derived from other parent material; around swales and in sand dunes. 10-250m (30-820ft).	**None.** Appropriate sandy soils or soils derived from diatomaceous shales are not present. Not expected to occur.
Suaeda esteroa estuary seablite	–/– CRPR 1B.2 G3/S2	Perennial herb. Blooms May-Jan. Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-5m (0-15ft).	**None.** Coastal salt marsh habitat is not present in the Coverage Area. Not expected to occur.
Thelypteris puberula var. sonorensis Sonoran maiden fern	–/– CRPR 2B.2 G5T3/S2	Perennial rhizomatous herb. Blooms Jan.-Sep. Meadows and seeps. Along streams, seepage areas. 50-550m (165-1805ft).	**Moderate.** Moderately appropriate habitat is present in riparian woodland. Could occur.

FC = Federal Candidate Species ST = State Threatened
FE = Federally Endangered SR = State Rare
FS=Federally Sensitive SS=State Sensitive
G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind3.
SSC = CDFW Species of Special Concern
SA = CDFW Special Animal
FP = Fully Protected
WL = Watch List
Source: CNDDB 2018, CNPS 2018

Special status plants could occur in the Coverage Area, mainly in native habitats along the margins. However, special-status plants are not expected to occur in eucalyptus groves due to lack of suitable habitat. Eucalyptus groves typically have deep accumulations of leaf litter and shed bark, which are not conducive to native plant growth (Cal-IPC 2018, Strathman 2004), and substantial accumulations of leaf litter and debris have been documented in the groves on Ellwood Mesa. Additionally, many other invasive, non-native species documented as understory to the eucalyptus groves out-compete native vegetation, including rare native plants (CNPS 1996).

Based on the analysis in Table 4, one special-status plant species, Santa Barbara honeysuckle, is known to be present with the Coverage Area in coastal scrub habitat. In addition, the nine special-status plant species listed below have a moderate or high potential to occur in native grasslands, coastal scrub, bluff scrub or vernal pools in the Coverage Area:

- Douglas' fiddleneck
- Catalina mariposa lily
- Southern tarplant
- Contra Costa goldfields
- Coulter's goldfields
- Pale-yellow layia
- Sonoran maiden fern

- Coulter's saltbush
- Brewer's calandrinia

The majority of these species are not formally protected by laws or regulations, but are identified as rare plants by the CNPS. The Contra Costa goldfields, however, is a federally listed endangered plant. Activities associated with implementation of the MBHMP are focused primarily on areas with a high degree of disturbance and non-native vegetation (eucalyptus groves), and special status plants are not expected to occur in these areas due to the highly disturbed nature of the area. However, special status plants may occur in native habitats adjacent to eucalyptus groves in the Coverage Area.

SPECIAL-STATUS WILDLIFE

A search of CNDDB records identified 28 special-status wildlife species in a five-mile radius of the Coverage Area (Table 5). Four of the identified special-status wildlife species are present or have a high or moderate potential to occur in the Coverage Area. The potential to occur for each special-status species in or near the Coverage Area is discussed following Table 5.

Table 5 Special-status Animal Species in the Vicinity of the Coverage Area

Scientific Name Common Name	Status Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Coverage Area Suitability Observations
Invertebrates			
Bombus crotchii Crotch bumble bee	None/None G3G4/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	**Low.** Plant food genera are not known to occur.
Cicindela hirticollis gravida sandy beach tiger beetle	None/None G5T2/S2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	**Low.** Suitable habitat is limited to the beach, outside the Coverage Area.
Coelus globosus globose dune beetle	None/None G1G2/S1S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	**Low.** Suitable habitat is limited to the beach, outside the Coverage Area.
Danaus plexippus monarch butterfly	None*/None SA G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**Present.** Species is present.
Tryonia imitator mimic tryonia (=California brackishwater snail)	None/None G2/S2	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	**Low.** Appropriate lagoon/ perennial stream mouth with perennial water is not present in the Coverage Area.

Scientific Name Common Name	Status Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Coverage Area Suitability Observations
Amphibians			
Rana draytonii California red-legged frog	Threatened/ None SSC G2G3/S2S3	Lowlands & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. must have access to estivation habitat.	**Moderate.** Suitable seasonal breeding pools are not present in the Coverage Area; however, Devereux Creek could serve are a movement corridor.
Taricha torosa Coast range newt	None/None SSC G4/S4	Coastal drainages from Mendocino County to San Diego County.	**None.** Appropriate deep streams with seasonal pools are not present in the Coverage Area.
Reptiles			
Emys marmorata western pond turtle	None/None SSC G3G4/S3	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**None.** Appropriate deep streams with seasonal pools are not present in the Coverage Area.
Fish			
Eucyclogobius newberryi tidewater goby	Endangered/ None SSC G3/S3	Brackish water habitats along the Calif coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	**None.** Appropriate lagoon/perennial stream mouth with perennial water are not present in Coverage Area.
Birds			
Accipiter cooperii Cooper's hawk	None/None WL G5/S4	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	**Present.** Species is present, and one documented nest is known from Ellwood Mesa.
Agelaius tricolor tricolored blackbird	None/ Threatened SSC G2G3/S1S2	Freshwater marsh, swamp, wetlands. Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	**None.** Appropriate freshwater marsh habitat is not present in Coverage Area.
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	None/None WL G5T3/S3	Resident in Southern California coastal sage scrub and sparse mixed chaparral.	**Moderate.** Appropriate habitat in Coverage Area is limited.
Ammodramus savannarum grasshoper sparrow	None/None SSC G5/S3	Valley and foothill grassland. Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	**Low.** Appropriate grassland habitat is limited in areas in Coverage Area.

Scientific Name Common Name	Status Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Coverage Area Suitability Observations
Ardea alba great egret	None/None G5/S4	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**Low (breeding).** Flyover or roosting individuals could be present, but low potential to nest in the Coverage Area. Suitable nesting habitat present on adjacent property at the Devereux Slough.
Ardea herodias great blue heron	None/None G5/S4	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	**Low (breeding).** Flyover or roosting individuals could be present, but low potential to nest in the Coverage Area. Suitable nesting habitat present on adjacent property at the Devereux Slough.
Athene Cunicularia Burrowing Owl	None/None SSC G4/S3	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	**Low.** Appropriate grassland habitat is limited in the Coverage Area.
Buteo regalis ferruginous hawk	None/None WL G4/S3S4	Open grasslands, sagebrush flats, desert scrub, low foothills & fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	**Low.** Ferruginous hawk may winter in open areas on the Ellwood Mesa, outside the Coverage Area, but Goleta is not in the breeding range.
Charadrius alexandrinus nivosus western snowy plover	Threatened/ None SSC G3T3/S2S3	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**Low.** Documented plover habitat is present along the shore, at the base of Ellwood Mesa to the south; suitable nesting habitat is not present on Ellwood Mesa or in the Coverage Area.
Elanus leucurus white-tailed kite	None/None FP G5/S3S4	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Present.** Species is present. Several nests have been documented on the Ellwood Mesa in eucalyptus groves.
Eremophila alpestris actia California horned lark	None/None WL G5T4Q/S4	Bare dry ground and areas of short sparse vegetation. Prairies, deserts, tundra, beaches, dunes, and heavily grazed pastures..	**Low.** Limited suitable bare ground habitat in the Coverage Area.

Scientific Name Common Name	Status Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Coverage Area Suitability Observations
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/ Endangered G5T3/S3	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats.	**None.** Appropriate salt marsh habitat is not present at Ellwood Mesa, including the Coverage Area; however salt marsh is present along Devereux Slough on the adjacent open space property.
Pelecanus occidentalis californicus California brown pelican	Delisted/ Delisted FP G4T3T4/S3	Colonial nester on coastal islands just outside the surf line.	**Low.** Appropriate foraging habitat is present at the beach on the southern boundary of Ellwood Mesa outside the Coverage Area. May fly past the site.
Phalacrocorax auritus double-crested cormorant	None/None WL G5/S4	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state.	**Low.** Appropriate foraging and roosting habitat is present at the beach outside the Coverage Area. May fly past the site.
Rallus longirostris levipes light-footed clapper rail	Endangered/ Endangered FP G5T1T2/S1	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	**None.** Appropriate salt marsh habitat is not present at Ellwood Mesa, including the Coverage Area; however salt marsh is present along Devereux Slough on the adjacent open space property.
Stemula antillarum browni *California least tern*	Endangered/ Endangered FP G4T2T3Q/S2	Coastline. Nests along the coast from San Francisco Bay south to northern Baja California.	**Low.** Appropriate foraging habitat is present at the beach, south of the southern boundary of the Coverage Area.
Mammals			
Antrozous pallidus pallid bat	None/None SSC G5/S3	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	**None (roosting).** Appropriate rocky areas for roosting are not present in the Coverage Area. Foraging habitat is present.
Corynorhinus townsendii Townsend's big-eared bat	None/None SSC G3G4/S2	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls & ceilings. Roosting sites limiting. extremely sensitive to human disturbance.	**None (roosting).** Foraging habitat is present, but suitable roosts are not present.
Lasiurus blossevilii Western red bat	None/None SSC G5/S3	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	**None (roosting).** Foraging habitat is present, but suitable roosts are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Coverage Area Suitability Observations

Regional Vicinity refers to occurrence in the quadrangle containing the Coverage Area and/or in the surrounding 5 quadrangles.

FT = Federally Threatened SE = State Endangered

FC = Federal Candidate Species ST = State Threatened

FE = Federally Endangered SR = State Rare

FP = Fully Protected SSC = CDFW Species of Special Concern

WL = Watch List SA = CDFW Special Animal

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind3.

*Monarch butterfly is currently under review for potential federal ESA listing

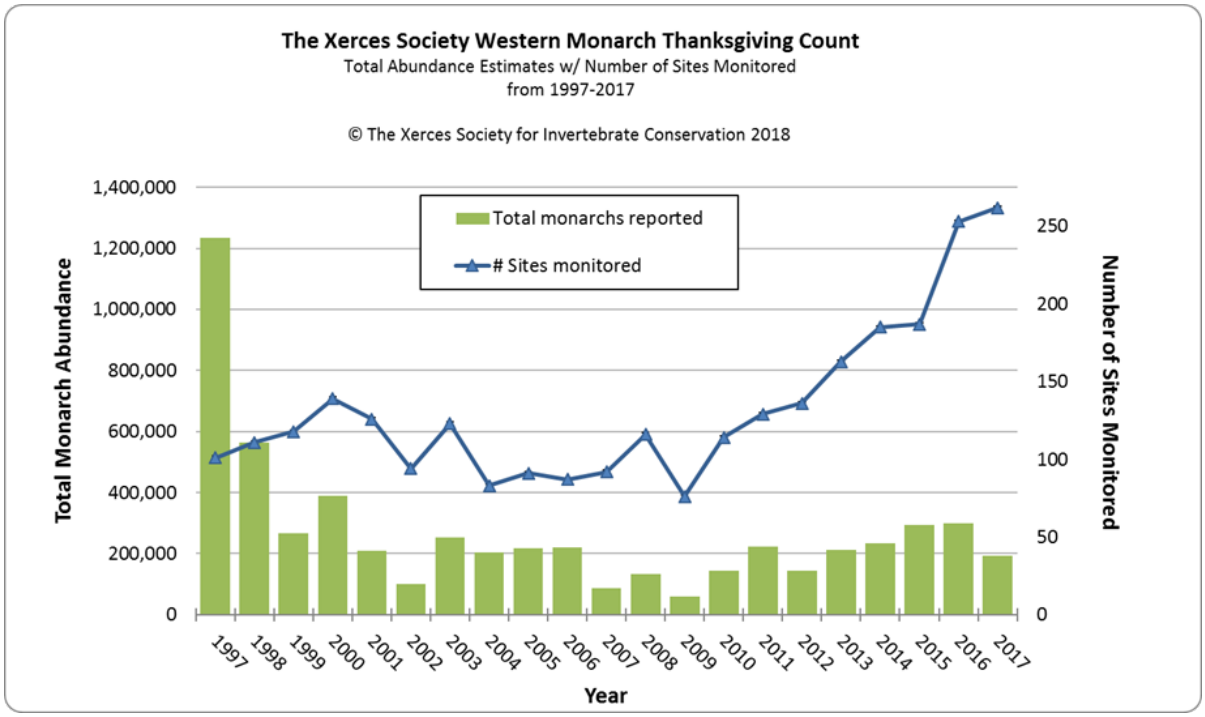
Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a conspicuous black and orange butterfly that occurs in the United States, Mexico, northern South America, southwestern Europe, and Oceania. In the United States the species occurs as two populations, separated by the Rocky Mountains. Both of these populations are migratory, and most of the butterflies in the western population (which overlaps the Coverage Area) spend the summer months distributed across habitats between the Rocky Mountains and the coast, and migrate to sheltered sites along the California coast to aggregate and pass the winter. Overwintering sites are predominately in dense eucalyptus groves, and breeding sites are variable but characterized by the presence of milkweed (*Asclepias* spp.), the larval host plant. The migratory phenomenon causes butterflies to become concentrated at suitable overwintering sites, making overwintering habitat the single most valuable resource needed to complete the monarch's life cycle. The Ellwood Mesa complex of eucalyptus trees is the largest contiguous area of preserved monarch aggregation habitat in Southern California, and the aggregation sites in the Coverage Area provide significant habitat value to the monarch butterfly population. Monarchs typically arrive in the Coverage Area in October and depart between late February and April, depending on conditions. (Warmer temperatures lead to earlier departures).

The monarch butterfly population in California has declined at least 74 percent since the 1990s (Pelton et al. 2016) and by over 95 percent since the 1980s, and the migratory population is at a high risk of extinction (The Xerces Society 2017). The monarch butterfly is listed on the CDFW's Special Animals List, with aggregation roosts designated as imperiled to vulnerable in the state (CDFW 2018c). Currently, the species is under federal review for potential listing under the federal ESA, and the USFWS plans to make its determination of whether this species warrants federal ESA listing by June 30, 2019. Monarch butterfly aggregation sites, including historic aggregation sites that are no longer used, are designated as ESHA in the City's General Plan.

Consistent with the range-wide trend, the western monarch butterfly population has declined throughout its overwintering range in California. This decline is statistically significant despite the fact that the size of the western migrating monarch population fluctuates annually based on a number of environmental factors, including rainfall and milkweed availability. Figure 9 shows the western monarch population trends along with the number of sites counted during the Thanksgiving Count, a yearly effort of volunteer citizen monitors to collect data on the status of monarch populations overwintering along the California coast. These data show that in recent years, the number of sites monitored has increased dramatically while the number of monarchs encountered has remained relatively constant. This marked decrease in observations per unit effort indicates that monarch butterfly abundance has been reduced.

Figure 9 Western Monarch Population, 1997-2017



The long-term decline of the monarch population in California may be attributed to the loss of milkweed and nectar plants (caused by herbicides, drought, and removal), loss and degradation of overwintering groves (removal and aging) and other factors including use of insecticides, disease, and fluctuations in weather and temperatures associated with climate change (The Xerces Society 2017). Scientists, wildlife agencies, and conservation advocates are calling for the protection of this species through the conservation and management of breeding, nectar, and overwintering habitat.

In 2016, The Xerces Society evaluated the overwintering sites in California and created a list of the top 50 priority sites (Pelton et al. 2016). This list prioritizes sites for protection and active management. The highest rank is for sites with the greatest declines that still host the largest proportion of the remaining western overwintering population. These sites have suffered population decline but still hold potential for recovery to support the monarch population. The Xerces Society states that these sites demand the most urgent attention. Ellwood Main is #4 on the list with a decline of 58 percent from the 1997-2001 average, and Ellwood North is #45 on the list with a decline of 98.3 percent. Having two of Ellwood Mesa's five overwintering locations included in this list of 50 shows the importance of this area for the recovery of the migratory monarch butterfly population.

Consistent with the pattern of declining monarch populations statewide, the population at Ellwood Main is in decline, but also fluctuates greatly. Figure 4 shows the annual peak population at Ellwood Main between 1989 and 2018. The overwintering population at Ellwood Mesa between 2013 and 2018 has shown the lowest recorded population numbers for six consecutive years since 1989. Additionally, recent data collected during the 2018 winter season showed an all-time low peak population of 230 monarch butterflies observed. Despite recent population declines, the Ellwood Mesa aggregation sites remain important for the western population of the monarch butterfly and accordingly, agencies and resource experts maintain that management of the eucalyptus trees that support the butterflies are paramount to continued overwintering by the species.

California Red-legged Frog

California red-legged frog (CRLF; *Rana draytonii*) is a federally listed threatened amphibian that requires aquatic habitat for breeding, and typically occurs in or near permanent sources of deep water with emergent vegetation. Recent reports of CRLF from the vicinity include sightings in Bell Canyon and Winchester Canyon, Eagle Canyon Creek, and Tecolote Creek. Sandpiper Golf Course, which contains perennial pools, separates the Bacara resort site from the Ellwood Mesa. CRLF are known to move overland for distances up to one mile, and could move from Tecolote Creek to golf course ponds, and subsequently through Devereux Creek at Ellwood Mesa. CRLF are not reported from Devereux Creek currently, and perennial water is not present on Ellwood Mesa most years, but the creek corridor could serve as a movement corridor for CRLF during the rainy season.

Raptors and Vulture

Nesting and roosting habitat for raptors and vultures, including white-tailed kite, Cooper's hawk, and turkey vulture, are protected as ESHA under Policy CE 8 of the General Plan (City of Goleta 2017a). Small vulture roosts occur in the eucalyptus groves on Ellwood Mesa, particularly Ellwood Main. Foraging territories typically encompass several miles. Turkey vultures (*Cathartes aura*) are frequently observed foraging and/or roosting throughout the Coverage Area. Cooper's hawks (*Accipeter cooperii*) are reported to breed at Ellwood Mesa occasionally, with a documented nest in the Sandpiper grove.

White-tailed kite (*Elanus leucurus*) is a State "Fully Protected" species, and their nest sites are thus protected year-round, even when not in use. The species occurs as a year-round resident breeder at Ellwood Mesa. Seven nest sites were previously documented at Ellwood Mesa. Observations suggest that the Ellwood Mesa Open Space Plan Area serves as a primary foraging territory for kites nesting in the vicinity (City of Goleta 2014c, Storrer 2011). Kites have been recorded nesting in the eucalyptus trees in and surrounding the Coverage Area (City of Goleta 2017a, Santa Barbara Audubon Society 2018). A kite nest was observed in the vicinity of Ellwood North during monarch butterfly population surveys in January and February 2018 by a Rincon biologist. Great horned owls are known to breed in the Ellwood Mesa and are regularly observed by visitors.

Nesting Birds

The Coverage Area contains habitat that can support other nesting birds, including raptors, protected under the California Fish and Game Code Section 3503. Native and non-native trees and woody shrubs are present in and adjacent to the Coverage Area that could provide suitable nesting habitat. As previously stated, known raptor nests are documented in eucalyptus groves at Ellwood Mesa Open Space, and nests of passerine birds are expected in grasslands, scrub, and riparian habitats.

Wildlife Movement Corridors

Wildlife movement corridors, or habitat linkages, are defined generally as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging areas, or they may be regional in nature. The Ellwood Mesa Open Space is situated between open space managed by the University of California, Santa Barbara, to the east, and a golf course to the west. It provides an important linkage in a movement corridor between the eastern natural area and undeveloped lands north and west of the City limits. Devereux Creek and its northern tributaries are the last remaining physical linkages between the Ellwood Mesa Open Space Area and

relatively undisturbed and intact habitats in the foothills to the north. However, these linkages are tenuous and may serve only as semi-permeable movement corridors for many species (City of Goleta 2004). The adjacent golf course, which has large areas of vegetation and a relatively low proportion of hardscape and structures, may also serve as a movement corridor for wildlife that cross the Ellwood Mesa Open Space, particularly during night hours.

Although bird flyways are not traditionally considered wildlife movement corridors, Devereux Slough, located southeast of the Coverage Area, is an important habitat for bird species during migration along the Pacific Flyway. Many bird species use this area as an annual stopover location for several days of rest and feeding prior to continuing migration to their seasonal destinations (City of Goleta 2004). Ellwood Mesa Open Space, including the Devereux Creek riparian corridor within the Coverage Area, is also part of the Goleta Coast Important Bird Area, designated by the National Audubon Society. It is considered to be globally important due to its location on the Pacific Flyway.

Jurisdictional Drainages and Wetlands

As described in Policy CE 3.1 in the City's General Plan, wetlands are any area that meets the definition of a wetland as defined by the California Coastal Commission, CDFW, and the USFWS using presence of a single indicator (hydrophytic vegetation, hydric soils, or wetland hydrology). Drainages and wetlands occur in the Coverage Area, and have been mapped during previous biological studies. Based on those studies, potentially jurisdictional areas in the Coverage Area consist of Devereux Creek, which crosses the Coverage Area from east the west, its tributaries, and associated riparian vegetation. Additionally, the limited vernal pools that have been previously mapped in the Coverage Area are likely wetlands as defined by the City. These features are illustrated on Figure 7.

Local Policies

Policies in the Conservation Element of the City's General Plan reinforce State and federal regulations that protect aquatic habitats and listed species, and apply additional local restrictions to identify, preserve, and protect the City's biological resources. Protected resources include ESHAs, creeks and riparian Stream Protection Areas, wetlands, monarch butterfly aggregation habitat, certain terrestrial habitat areas, marine habitat areas, beach and shoreline habitats, special-status species, native woodlands, and the urban forest, among others. Below is a discussion of the biological resource policies in the Conservation Element that apply to the MBHMP.

ENVIRONMENTALLY SENSITIVE HABITAT AREA

The objective of General Plan Policy CE 1: Environmentally Sensitive Habitat Area Designations and Policy, is to "identify, preserve, and protect the city's natural heritage by preventing disturbance of ESHAs." Policy CE 1.2 designates ESHA in the City of Goleta, which are shown on Figure 4-1 of the General Plan and include the following located in the Coverage Area (Figure 6): creek and riparian areas; wetland, such as vernal pools; coastal bluff scrub; coastal sage scrub; native grassland; monarch butterfly aggregation sites; and nesting and roosting sites of various species of raptors. Policy 1.6 establishes restrictions for development in ESHAs and their buffers. The policy restricts all development inside ESHA with a number of exceptions including resource protection and enhancement projects. Lastly, Policy CE 1.10, prohibits the use of insecticides, herbicides, artificial fertilizers, and other toxic substances in an ESHA except where necessary to protect or enhance the ESHA itself.

As illustrated in Figure 6, a large portion of the Coverage Area is designated as ESHA for monarch butterfly aggregation. In addition, native grassland, vernal pool, bluff scrub, and riparian EHSAs are in the Coverage Area.

RIPARIAN/WETLANDS/VERNAL POOLS

The objective of General Plan Policy CE 2: Protection of Creeks and Riparian Areas is to "Enhance, maintain, and restore the biological integrity of creek courses and their associated wetlands and riparian habitats as important natural features of Goleta's landscape." Policy CE 2.1 designates certain creeks in Goleta, including the portion of Devereux Creek in the Coverage Area, as an ESHA. Policy CE 2.2 establishes a 100-foot wide Streamside Protection Area around all creeks, although the width can be reduced to 25 feet on a case-by-case basis, if certain criteria are met. Policy CE 2.3 establishes a list of allowable uses and activities in streamside protection areas, including fencing, existing roads, driveways, utilities, structures, drainage improvements, foot trails, resource restoration and enhancement, low impact interpretive and public access signage, and nature education and research activities. Policy CE 2.6 specifies restoration activities for improving degraded creek resources. Policy CE2.6(d) specifically states "restoration of native riparian vegetation and removal of exotic plant species shall be implemented, unless such plants provide critical habitat for monarch butterflies, raptors, or other protected animals".

The objective of General Plan Policy CE 3: Protection of Wetlands is to "preserve, protect, and enhance the functions and values of Goleta's wetlands." Policy CE 3.2 designates all wetlands as ESHA and Policy 3.4 sets protection standards for wetlands prohibiting filling, diking, and dredging unless certain criteria can be demonstrated and sets a wetland buffer of 100 ft. which can be reduced to 50 ft. in certain circumstances. Policy 3.8 states that vernal pools shall be protected and preserved.

MONARCH BUTTERFLIES

General Plan Policy CE 4: Protection of Monarch Butterfly Habitat Areas is intended to "preserve, protect, and enhance habitats for monarch butterflies in Goleta, including existing and historical autumnal and winter roost or aggregation sites, and promote the long-term stability of over-wintering butterfly populations." Policy CE 4.2 designates monarch butterfly ESHAs, which include the eucalyptus groves in the Coverage Area (referred to as the "Ellwood Complex" in the General Plan). Policy CE 4.4 restricts development in monarch butterfly ESHA, sets forth development standards adjacent to monarch butterfly ESHA. Subsection "c" of Policy CE 4.4 specifically states "removal of vegetation within monarch ESHAs shall be prohibited, except for minor pruning of trees or removal of dead trees and debris that are a threat to public safety." Policy CE 4.5 defines a protective buffer (100 feet wide in most cases) around active and historic aggregation sites, and restricts the activities that may occur in the butterfly ESHA buffer.

PROTECTED TREES

The City of Goleta does not have a specific tree protection plan or ordinance, but the General Plan Conservation Element and the GUFMP (City of Goleta 2017b), regulate protection of trees in the city. The objective of General Plan Policy CE 9: Protection of Native Woodlands is "to maintain and protect existing native trees and woodlands as a valuable resource needed to support wildlife and provide visual amenities." Protected trees for areas of new development are defined (Policy CE 9.1) as native oaks (*Quercus* spp.), walnut (*Juglans californica*), sycamore (*Platanus racemosa*),

cottonwood (*Populus* spp.), willows (*Salix* spp.), or other native trees not otherwise protected in ESHAs.

The objective of General Plan Policy CE 14: Preservation and Enhancement of Urban Forest is to "protect, preserve, and enhance Goleta's urban forest for its aesthetic, visual, and environmental benefits to the community." Trees on public lands are considered valuable resources to be conserved as part of the Goleta urban forest. Policy CE 14.7 identifies a City effort to consider an Urban Forest Ordinance. The GUFMP refers to open spaces as potential planting sites for trees, but does not specifically discuss management of the Ellwood eucalyptus groves.

In 2017, a tree inventory in the eucalyptus groves was completed to investigate safety concerns over the catastrophic die off of eucalyptus trees in the Coverage Area. The survey identified over 1,200 trees in the eucalyptus groves which are dead, with hundreds more that were highly degraded and dying (Althouse and Meade, Inc. 2017). Following this study in 2017, 27 trees which posed a public safety risk were removed, and two were pruned, under an emergency permit from the California Coastal Commission. However, the majority of the dead trees were not addressed or abated, and remain on site.

The MBHMP Coverage Area is focused on eucalyptus groves dominated by three species of non-native tree: blue gum (*Eucalyptus globulus*), red gum (*Eucalyptus camaldulensis*), and red iron bark (*Eucalyptus sideroxylon*), and these areas have a low percentage of native vegetation. However, limited numbers of native trees are also present in the Coverage Area, including coast live oak (*Quercus agrifolia*), black cottonwood (*Populus trichocarpa*), sycamore (*Platanus racemosa*), and willow (*Salix* spp.). Native trees occur outside the eucalyptus groves, primarily in riparian areas, and have not been inventoried fully.

Habitat Conservation Plans

The Coverage Area is not subject to any approved federal, State, or local Habitat Conservation Plan.

Thresholds of Significance

A significant impact on biological resources would be expected to occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. Additionally, per the City's Environmental Thresholds and Guidelines Manual (City of Goleta 2003), a project would pose a significant environmental impact(s) on biological resources if any of the following would result:

a. A conflict with adopted environmental plans and goals of the community in which it is located
b. Substantial effect on a rare or endangered plant or animal species
c. Substantial interference with the movement of any migratory or resident fish or wildlife species
d. Substantial diminishment of habitat for fish, wildlife, or plants

Project-Specific Impacts

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Special-status Plants

The majority of plant species documented in the Coverage Area are non-native, and those native species that do occur are mostly common and located in areas outside of eucalyptus groves, as reported in the tree inventory as well as in field observations made during a February 2018 reconnaissance-level site survey. However, as described above, some special-status plants have potential to occur in suitable habitat in the Coverage Area, outside the eucalyptus groves.

Impacts to special-status plant species could occur if their habitats are altered or individuals are removed during implementation of the MBHMP. Implementation of the MBHMP would occur primarily in eucalyptus groves and outside suitable habitat for special-status plants. However, activities could occur outside existing eucalyptus groves and in suitable habitat for special-status plant species including Santa Barbara honeysuckle (known to be present), Douglas' fiddleneck, Catalina mariposa lily, southern tarplant, Contra Costa goldfields, Coulter's goldfields, pale-yellow layia, Sonoran maiden fern, Coulter's saltbush, and Brewer's calandrinia, all of which have a moderate or high potential to occur in the Coverage Area.

Taking down dead or dying eucalyptus trees could involve the staging or placement of debris piles, equipment, or personnel in areas where special-status plant species have a potential to occur and would impact these species, if present. Impacts could occur to special-status plant species if the installation of physical structures or features, such as irrigation, interpretive signs, and fencing, occurred in habitats where special-status plant species were present. Further, the Habitat Enhancement and Restoration Program includes plantings of native species to enhance habitat values in portions of the Coverage Area outside the eucalyptus groves, and these activities could occur in native grasslands or coastal scrub habitat. Personnel, equipment, and ground disturbance in these areas could impact special-status plant species during the revegetation process. Supplemental irrigation and changes in overall plant density in restoration areas could indirectly impact special-status plants, if present.

Special-status plant species in the Coverage Area could be impacted by implementation of the MBHMP if covered activities occur in habitats such as native grasslands, coastal scrub, bluff scrub, wetlands, arroyo thickets, or vernal pools. Because the covered activities would primarily occur in eucalyptus groves, impacts to special-status plant species would be minor. Nonetheless, these impacts could be potentially significant absent mitigation, considering that the proposed activities would occur over a long period of time and that one of the potentially occurring plants is an endangered species. Impacts would be reduced to a less than significant level with implementation of mitigation measure BIO-4, which requires periodic surveys for rare plants during the course of the MBHMP's implementation and avoidance of all special status plants detected. In addition, mitigation measures BIO-1, BIO-2, and BIO-3 would further reduce impacts by ensuring site housekeeping, presence of a biological monitor, and worker environmental awareness.

In addition, given that the MBHMP is a long-term program implemented for the purpose of enhancing habitat, it is reasonable to expect that in the long term, the Habitat Enhancement and Restoration Program would improve habitat in the Coverage Area and could create additional

suitable habitat for special-status plant species. Special-status plants could recruit in the future to native habitats in the Coverage Area, consistent with the MBHMP's objective of increasing biological diversity outside the eucalyptus groves.

Special-status Wildlife Species

Special-status wildlife species with the potential to occur or known to be present in the Coverage Area, include monarch butterfly, nesting white-tailed kite, nesting Cooper's hawk, and California red-legged frog. Other raptor and turkey vulture nest sites are documented in the Coverage Area (City of Goleta 2017a; CNDDB 2018).

Monarch Butterfly

Monarch butterflies aggregate in the on-site eucalyptus groves during winter months to "overwinter" or pass the winter season. The Coverage Area includes five monarch butterfly aggregation areas, referred to as the Ellwood North, Ellwood West, Ellwood Main, Sandpiper, and Ocean Meadows aggregation sites (see Figure 4). Historically, tens of thousands of monarch butterflies have converged on Ellwood Mesa, making this area one of the most important sites for monarch butterflies in California. The overwintering population at Ellwood Mesa between 2013 and 2019 has shown the lowest recorded population numbers for six consecutive years since 1989. In addition, 2018 was the lowest recorded population at 230. However, these aggregation sites remain important for the western population of the monarch butterfly and accordingly, management of the eucalyptus trees that support the butterflies is paramount to continued overwintering by the species.

The MBHMP Natural Resources Program identifies programs with goals, policies, and actions to sustain and enhance suitable habitat for monarch butterflies. The MBHMP also includes Administrative Programs, Outreach Programs, and Monitoring, Research, and Adaptive Management Programs. These include actions that could impact monarch butterfly habitat or individuals, if they are present in the Coverage Area. Examples include dead tree removals, trail management, fencing installation, irrigation and interpretive sign implementation, and revegetation and non-native species eradication that creates ground disturbance. A list of the goals, policies, and actions for the Coverage Area can be found in Table 2.

Implementation of the MBHMP could create short-term impacts to monarch butterfly through disturbance of suitable habitat through actions such as tree trimming and removal; application of pesticides, herbicides, and insecticides; and disturbance created by restoration activities and trail management. Unless authorized by a qualified biologist, Action 10-4.1 of the Monarch Butterfly Management Program requires all potentially invasive activities to be conducted during April 1 to September 30 of each year which would ensure there are no direct impacts to monarch butterfly by the covered activities as they would not be present during this time. In addition, mitigation measure HWQ-2, Chemical Application Control Plan, found in Section 9, *Hydrology and Water Quality*, would place restrictions on chemical applications in the Coverage Area which would further reduce potential impacts to monarch butterflies. Less than significant indirect impacts could occur to monarch butterflies if their habitat is altered in a manner that decreases its suitability for the species. However, implementation of the Natural Resource Program in the MBHMP would maintain and enhance suitable habitat for the monarch butterfly. Replanting habitats where dead or dying eucalyptus trees are removed will help sustain the long-term viability of the eucalyptus groves as monarch butterfly habitat. Planting native species and eradication of non-native species (excluding eucalyptus), along with integrated pest management to reduce pests that stress monarch butterflies

or their habitat, would further enhance suitable habitat for the species in the Coverage Area. Therefore, the MBHMP would have a beneficial impact for the species over the long term. Impact to monarch butterfly would be less than significant, and would be further reduced through implementation of the pesticide restrictions in mitigation measure HWQ-2 and the site housekeeping, biological monitoring, and worker awareness provided by Mitigation Measures BIO-1, BIO-2, and BIO-3. No additional mitigation measures would be required.

California Red-legged Frog

CRLF is known to occur in drainages to the northwest and west of the Coverage Area and could occur in the riparian and wetland areas associated with Devereux Creek. This species could be impacted by vegetation management, if conducted adjacent to riparian and wetland vegetation. Impacts to CRLF would less than significant with implementation of mitigation measure BIO-1, BIO-2, BIO-3, and BIO-5, which would avoid take of CRLF by requiring work be performed when CRLF are not present or requiring an on-site biological monitor to ensure CRLF are avoided during work.

White-tailed Kite and Other Raptors

White-tailed kites are fully protected and proposed habitat management actions could result in significant impacts to white-tailed kites. Impacts could occur directly, if a nest site is impacted by tree pruning or removal, regardless of time of year; or indirectly, by altering grove conditions or disturbing active nests through management actions taken on surrounding vegetation. Kites typically select nest sites that are hidden from view by dense foliage, and removal of vegetation around the nest tree that results in substantially reduced cover for the nest could impact re-use of existing nest sites. However, the MHBMP does not call for the removal of healthy trees, and removing standing dead eucalyptus trees (which lack leaves) is not likely to reduce visual screening of nests.

Cooper's hawks typically occur as a wintering species throughout Santa Barbara County but occasional nests are reported, including one in the Ellwood Open Space adjacent to Sandpiper Golf Course (City of Goleta 2017a). This species prefers wooded habitats such as oak, riparian, and urban woodlands for foraging and roosting purposes. Other raptors documented to nest on or near the Coverage Area include red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*). A turkey vulture roost is known in the Ellwood East grove. If conducted near nesting sites in the nesting season, covered activities could disrupt existing nesting activities in the Coverage Area or in the vicinity and cause nesting raptor pairs to abandon their nests. In addition, the removal of standing dead trees could reduce the availability of nesting and roosting sites for raptors. However, this effect would be minor because the forest in the Coverage Area contains several thousand trees, and removal of dead trees on a large scale over a short time period is not proposed. Further, removed trees would be replaced through the MBHMP's restoration and habitat enhancement efforts.

Because of the potential to cause nest abandonment, impacts on raptor nesting activity would be considered potentially significant absent mitigation. However, Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-6 would reduce impacts to a less-than-significant level by requiring pre-activity surveys and nest avoidance, biological monitoring, and worker education.

Other Nesting Birds

The Coverage Area contains suitable habitat for other nesting birds, including ground-nesting and shrub-nesting species. Covered activities including dead tree removal, trimming or other

disturbance to trees and woody vegetation may affect bird species during the typical nesting season from March 15 to August 15. Additionally, other covered activities such as mowing could affect nesting birds if present on the ground or in non-native herbaceous vegetation. The MBHMP clarifies these activities should be avoided during the nesting bird season to the maximum extent feasible.

As covered activities could occur during the nesting bird season, the covered activities could result in potentially significant impacts to nesting birds. These impacts would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-6, which require pre-activity surveys and nest avoidance, biological monitoring, and worker education.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c. Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Sensitive vegetation types and ESHAs occur in the Coverage Area. These include native grassland, riparian/wetland habitats, vernal pools, coastal scrub, and bluff scrub. Habitat management activities would focus primarily on existing eucalyptus groves. These groves are mapped as an ESHA in the General Plan due to documented use of these groves as monarch aggregation/raptor roost and nest sites. The MBHMP identifies threats to the eucalyptus groves and offers actions in response, including removing dead and dying trees, removing downed trees and debris, watering, planting eucalyptus trees and understory plants, and pruning trees. The MBMHP calls for the replacement of the removed trees and enhancement of the groves with planting of eucalyptus in the historical grove footprint only, and the planting of native species in other portions of the Coverage Area. No expansion of eucalyptus groves beyond historical footprints would occur under the MBHMP, although gaps or reductions in the grove caused by tree die off would be replenished. Proposed habitat management activities, if successful, would have a beneficial impact on monarch butterfly ESHA by maintaining and enhancing suitable aggregation habitat. Mitigation measure BIO-7 would ensure the long-term success replacement trees and the viability of the designated ESHA.

Negative effects to native grasslands, coastal scrub, riparian/wetland areas or vernal pools could occur if temporary stockpiling or staging dead trees, tree trimmings, other brush material, vegetation maintenance equipment, or other MBHMP materials were to occur in these sensitive habitats. These impacts would be less than significant with mitigation measure BIO-8, which requires MBHMP activities such as staging and stockpiling avoid sensitive habitats.

Program 14, Habitat Enhancement and Management, would include activities outside of the eucalyptus groves including planting of native species, eradiation of non-native herbaceous cover, and restoration of riparian areas along Devereux Creek. These activities would have a beneficial impact on the sensitive communities through habitat enhancement and restoration.

The General Plan and the 2004 Open Space Plan (City of Goleta et al., 2004) identify riparian and marsh habitat associated with some portions of Devereux Creek. A reconnaissance-level biological survey conducted in February of 2018 (Rincon Consultants, Inc.) verified the presence of wetland vegetation in the bed and on lower banks of Devereux Creek in portions of the Coverage Area. Mexican rush (*Juncus mexicanus*), alkali heath (*Frankenia salina*), and salt grass (*Distichlis spicata*) were common, and spikerush (*Eleocharis* sp.) was present. Bed and bank of the creek also

supported willow, occasional cottonwood, and sycamore riparian vegetation. Some of these areas are expected to meet all three criteria of the U.S. Army Corps of Engineers' jurisdictional wetland definition (hydric soil, wetland hydrology, and wetland vegetation), and would meet the Central Coast RWQCB, CDFW, California Coastal Commission, and City of Goleta criteria for wetlands, because at least one of the parameters was present.

Habitat management activities proposed under the MBHMP would not require significant placement of fill or permanent removal of vegetation in riparian or wetland areas, though trimming, mowing, and non-native invasive plant removal activities may occur for restoration purposes. However, if any dead eucalyptus trees are identified in riparian areas and therefore removed, they would be replaced in the same place they were removed from. In addition, covered activities in the Trail Management Program include "Construct and maintain crossings over drainages and other sensitive features." Impacts to jurisdictional areas would occur if the footprint of such activities were located in riparian areas, in the bed and bank of Devereux Creek, or in another jurisdictional area such as a wetland. Additionally, riparian and wetland vegetation associated with Devereux Creek could be impacted by vegetation management or through removal and replanting of dead or dying trees as described above. Thus, activities proposed under the MBHMP could have a potentially significant impact on wetland and riparian vegetation. Impacts would be less than significant with incorporation of mitigation measure BIO-9, which requires the City to avoid impacts to streams and wetlands where feasible, secure all applicable resource agency permits prior to conducting regulated activities in a jurisdictional stream or wetland, and adhere to all permit conditions, including any required compensatory mitigation.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Implementation of the covered activities in the MBHMP would not interfere with wildlife movement. The Coverage Area is located in the Ellwood Open Space Mesa with is an important wildlife open space area. The MBHMP would not place any new structures or features, such as buildings, walls, or other permanent structures that would limit the travel of wildlife through the site. Fencing would be placed in the Coverage Area as part of the Aesthetic Resources Management Program, but would be constructed in a manner that would not restrict the movement of wildlife. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

ESHA

ESHAs are designated throughout the Coverage Area. The primary activities to occur under the MBHMP would involve the restoration and enhancement of eucalyptus groves; these are allowed under General Plan Policy CE 1. Restoration and habitat enhancement may occur in other designated ESHA areas, such as native grasslands, also consistent with General Plan Policy CE 1. Other covered activities in the MBHMP include the installation of interpretive signs, fencing, and trail management. General Plan Policy CE 1 prohibits development in the ESHA but makes exceptions for public trails, limited fencing, and signage as these uses are resource-dependent uses

that may be located in or adjacent to ESHA. Policy CE 1 restricts the use of insecticides, herbicides or other chemical in ESHA. The use of these substances is included in the Integrated Pest Management Program with the objective of protecting ESHA from pests contributing to the die off of the eucalyptus groves. Therefore, implementation of the MBHMP would not conflict with the General Plan ESHA policies and no impact would occur.

Riparian/Wetlands/Vernal Pools

Implementation of the covered activities in the MBHMP would include restoration and habitat enhancement and could occur in riparian, wetland or vernal pool habitats present in the Coverage Area. General Plan Policy CE 2, restricts activities than can occur in Streamside Protection Areas. The covered activities included in the MBHMP, such as fencing, foot trails, resource enhancement and restoration, signage, and nature education and research activities, are allowable uses in these areas. Further, dead or dying eucalyptus trees which are removed and replaced could occur in riparian areas along Devereux Creek. While General Plan Policy CE 2 generally prohibits the planting of non-native species in riparian areas, non-natives species are allowed to occur where they provide critical habitat for monarch butterflies, raptors, or other protected animals. As the eucalyptus groves are critically important aggregation sites for monarch butterflies and designated as ESHA, the planting of eucalyptus trees would be consistent with Policy CE 2. In addition, eucalyptus trees are not located in vernal pools or wetlands in the Coverage Area and therefore would not be replanted in these locations. The proposed MBHMP would restore monarch butterfly ESHA in areas historically occupied by monarch butterfly ESHA, and other ESHA types in areas either historically occupied by those types or occupied by non-ESHA. The MBHMP would not convert one type of ESHA to another, or replace ESHA with any other vegetation or use.

If equipment or downed trees were stored or staged in ESHA or signage was installed in a vernal pool or other sensitive habitat, implementation of the MBHMP would conflict with General Plan Conservation Element policies. However, this sort of conduct would be prevented by mitigation measures BIO-2, BIO-3, BIO-8 and BIO-9, which would ensure only appropriate activities are allowed in riparian areas, and would reduce this potential impact to a less than significant level.

Monarch Butterflies

General Plan Policy CE 4 prohibits the removal of vegetation in monarch ESHA, with the exception of dead trees and debris that are a threat to public safety. Aside from habitat restoration activities, trees removed or pruned under implementation of the MBHMP would only include dead or dying trees that pose a public safety risk. In addition, these trees would be replaced with the objective of monarch butterfly habitat restoration and enhancement. Therefore, implementation of the MBHMP would not conflict with General Plan Policy CE 4.

Protected Trees

The City of Goleta does not have a specific tree protection plan or ordinance. The General Plan Conservation Element and the GUFMP regulate tree protection in Goleta (City of Goleta 2017a). The GUFMP provides a five-year policy framework for how trees in public areas will be managed (City of Goleta 2011b). Section 4.12 of the GUFMP contains guidelines regarding tree risk management and removal. The risk management program in the GUFMP ensures proper management of trees to allow for healthy attractive communities while reducing risks. Implementation of the MBHMP would result in the removal of eucalyptus trees that pose an unacceptable risk to residents and recreational users ~~on~~ within and adjacent to the Coverage Area. The GUFMP Guideline 4.12.4 states

that tree removal may be necessary at the City Staff's discretion for the protection, public health, and safety of citizens in considering if trees are dead, dying, or hazardous.

The MBHMP includes tree protection programs and policies including Program 12, specific to tree management. The MBHMP identifies threats to the eucalyptus trees and offers responses, including removing dead and dying trees, removing downed trees and debris, watering, planting eucalyptus trees and understory plants, and pruning trees. The Tree Assessment Survey (Althouse & Meade, Inc. 2017) found over 1,200 dead and dying eucalyptus trees in the forest on Ellwood Mesa. These trees may be determined to threaten the well-being and health of living trees or to be a hazard to recreational users in the forest and may be recommended for removal by the City during implementation of the MBHMP.

The MBHMP allows replacement and habitat enhancement plantings to be eucalyptus in the historical grove footprint only, and requires native species to be used in other parts of the Coverage Area. No expansion of eucalyptus groves beyond historical footprints would occur under the MBHMP. All other trees in the Coverage Area would be preserved under the MBHMP unless in the future they are determined to be hazardous to the public. The removal and replacement of dead and dying trees would result in a long-term benefit to the health of the forest and the continued use of the groves by monarch butterflies and other wildlife species. The MBHMP would not conflict with the GUFMP, as it would result in an increase in forested area in the City.

Considering the information presented above, the MBHMP would not conflict with any local policies or implementing ordinances and there would be no impact.

NO IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans applicable to the Coverage Area. Other approved local, regional, or State habitat conservation plans relevant to the area include the Coronado Butterfly Preserve Management & Enhancement Plan (2000) and Open Space Plan (2004). The MBHMP would build on many of the recommendations in the 2004 Open Space Plan. The MBHMP identifies actions to implement recommendations of the need to resolve conflicts between the needs of special-status and common native species and habitat types through balanced management. As such, implementation of the MBHMP would not conflict with existing local conservation plans in place in the area. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Mitigation Measures

BIO-1 General Housekeeping

General requirements that shall be followed by all personnel are listed below.

- MBHMP-related vehicles shall observe a 5-mile-per-hour speed limit in the Coverage Area at all times
- MBHMP-related vehicles and equipment shall restrict off-road travel to approved routes, which shall be sited by the City to minimize environmental impacts

- All food-related trash items, such as wrappers, cans, bottles, and food scraps, generated during implementation of the MBHMP shall be removed from the site daily
- No deliberate feeding of wildlife shall be allowed
- No pets shall be allowed on in the Coverage Area
- No firearms shall be allowed in the Coverage Area
- If vehicle or equipment maintenance is necessary including refueling of equipment, it shall be performed outside the buffers of ESHAs, bird nests, and monarch aggregation sites
- Any worker who inadvertently injures or kills a special status species or finds one dead, injured, or entrapped shall immediately report the incident to the biological monitor. The monitor shall immediately notify City of Goleta staff. The City of Goleta shall follow up with written notification to USFWS and CDFW as appropriate, depending on the species. The biological monitor shall also independently notify USFWS of any unanticipated harm to any federally listed endangered species associated with implementation of the MBHMP. All observations of federally or State-listed threatened or endangered species shall be recorded on CNDDB field sheets and sent to CDFW by City of Goleta or the biological monitor.

BIO-2 Qualified Biological Monitor

A qualified biological monitor shall be present during all vegetation removal and ground disturbing activities to ensure compliance with all mitigation measures, applicable permit conditions, and any conditions required by federal and State agencies. The monitor shall be responsible for:

- Ensuring that procedures for verifying compliance with environmental mitigation measures are followed.
- Lines of communication and reporting methods.
- Daily and weekly reporting of compliance.
- MBHMP crew training regarding environmentally sensitive areas.
- Authority to stop work.
- Action to be taken in the event of non-compliance.

BIO-3 Biological Resources Awareness Training

Before any ground-disturbing work or vegetation removal/trimming occurs in the Coverage Area, a qualified biologist shall conduct a mandatory biological resources awareness training for all MBHMP personnel about federally and State listed species that could occur on site. The training shall include the natural history, representative photographs, and legal status of each federally listed species. Proof of personnel attendance shall be kept on file. If new MBHMP personnel are added to the crew, the contractor shall ensure that the new personnel receive the mandatory training before starting work. The subsequent training of personnel can include videotape of the initial training and/or the use of written materials rather than in-person training by a biologist.

BIO-4 Special-status Plants

To avoid impacts to special-status plants, periodic rare plant surveys the Coverage Area must occur at least once every five years during a normal rainfall year, following current standard practice for botanical surveys (CDFW 2018), which may require multiple passes to detect or rule out all potential species. If special-status plants remain absent from work areas, no further action is required. If special-status plants are detected in work areas, locations must be mapped and the plants must be

avoided during MBHMP activities. A pre-work training must be provided to the contractor(s) conducting vegetation maintenance activities that identifies special-status plants in and near the work area and locations to be avoided. If weed control is required in areas supporting special-status plants, this work must be conducted with hand tools. Vegetation control in these areas must emphasize control of non-native species, avoid flowering and fruiting seasons of the identified special-status plants to the maximum extent possible, and ensure that activities do not remove special-status plant individuals.

BIO-5 California Red-legged Frog

Any ground disturbing activities in riparian and wetland habitats shall be conducted when the channel is dry to the maximum extent feasible. Additionally, within seven days prior to start of work, a biologist must conduct a survey prior to any ground disturbance to verify that riparian and wetland areas do not contain ponded water and that no California red-legged frogs are present. If ponded water is present, no work may occur within 50 feet of pools. If suitable resident frog habitat is present or frogs are noted during the surveys, a biological monitor must be present during vegetation clearing and removal activities in riparian and wetland habitats. The biologist will have the authority to stop work and identify areas that must be avoided. Listed species must be fully avoided unless take permits are obtained from the USFWS and/or CDFW. Only handheld tools shall be used. Removal of native vegetation shall be limited to dead, damaged, and diseased material.

BIO-6 Nesting Bird Survey

To the maximum extent feasible, tree trimming activities must occur in September to ensure that raptor nests and monarchs are not active in the work area. Surveys for nesting birds and raptors are required prior to any ground disturbance or vegetation removal work conducted in the nesting season, defined to be February 1 to September 15.

If ground-disturbing or vegetation removal work does occur during the nesting season, then not more than three (3) days before ground disturbance and/or vegetation removal commences, a bird and raptor survey must be conducted by a City-approved biologist in the disturbance footprint plus a 300-foot buffer, as feasible. If the MBHMP activity is phased, a subsequent nesting bird and raptor survey is required in the Coverage Area before each phase of the activity. If no raptor or other bird nests are observed no further mitigation is required.

Nesting bird and raptor surveys must be conducted during the time of day when bird species are active and be of sufficient duration to reliably conclude presence/absence of nesting birds and raptors in the 300-foot buffer.

If active nests of species protected by CFG Code 3503 or the MBTA Migratory Bird Treaty Act are found within 300 feet of the Coverage Area, their locations must be flagged and then mapped onto an aerial photograph of the Coverage Area at a scale no less than 1”=200’ and/or recorded with the use of a GPS unit. If active raptor nests are detected, the map will include topographic lines, parcel boundaries, adjacent roads, known historical nests for protected nesting species, and known roosting or foraging areas, as required by Conservation Element Policy 8.3 of the Goleta General Plan. If feasible, the buffer must be 300 feet in compliance with Conservation Element Policy CE 8.4 of the Goleta General Plan. If the 300-foot buffer is infeasible, the City approved biologist may reduce the buffer distance as appropriate, dependent on the species and the proposed work activities. If any active *non-raptor* bird nests are found, a suitable buffer area (varying from 25-300 feet), depending on the species, must be established by the City-approved biologist. No ground disturbance can occur in the buffer until the City-approved biologist confirms that the

breeding/nesting is completed and all the young have fledged. Alternately, a City-approved biologist must monitor the active nest full-time during MBHMP activities in the buffer to ensure MBHMP activities are not indirectly impacting protected nesting birds and raptors.

BIO-7 Tree Replacement

All replacement trees planted in the Coverage Area must be monitored annually for a minimum period of 5 years. At the end of the 5-year monitoring period, replacement trees shall be inspected by a City approved arborist to determine the successful establishment of the trees. The arborist may extend the monitoring period as deemed necessary. If a replacement tree dies during the monitoring period, it shall be replaced and monitored as required by this mitigation measure.

BIO-8 Native Habitats

Staging and stockpiling of debris associated with covered activities shall be temporary in nature, the duration of which shall be specified in the annual Implementation Plan prior to commencement of the covered activity. All staging and temporary stockpiling shall be limited to areas outside of riparian habitats, wetlands, vernal pools, native grasslands, and active nest buffers on site. Absolutely no staging and/or stockpiling of any materials shall be allowed in these buffers at any time. Locations to be avoided must be clearly identified with fencing, flagging, rope, or other conspicuous material, and the contractor(s) conducting vegetation maintenance activities must be trained on the limits of work prior to commencing work. Placement of chipped woody materials must avoid impacting native grasslands, riparian, and wetland vegetation. The biological monitor would ensure avoidance for the duration of activities near these areas.

BIO-9 Riparian/Wetland Areas

Impacts to vernal pools, wetlands, and streambeds shall be avoided to the maximum extent practicable, unless they are affected for the purpose of habitat enhancement. If avoidance is not feasible, the City shall acquire and comply with regulatory permits for any vegetation trimming, removal, or ground disturbing activities to be completed in potentially jurisdictional areas including in the vicinity of Devereux Creek or other riparian/wetland habitats in the Coverage Area. The CDFW shall be notified and a Streambed Alteration Agreement shall be obtained for any activities that will result in impacts to a streambed or riparian vegetation. In addition, authorizations from the U.S. Army Corps of Engineers and Central Coast Regional Water Quality Control Board (RWCB) will be secured for any activities involving discharges of fill material into a wetland or streambed.

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	■	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

Existing Setting

The Goleta area is situated in the traditional tribal territory of the Chumash. The Goleta Valley changed during the Mission Period of the late 1700s when oak forests were cut down for cattle grazing and farming to support the Santa Barbara Mission and Presidio. The area remained primarily under agricultural production until the construction of US 101 in 1947 and the relocation of UCSB to Goleta Point in 1950 (City of Goleta 2006a). In the 1870s, Ellwood Cooper introduced eucalyptus trees to Ellwood Mesa and by the mid-1870s had successfully planted approximately 50,000 trees of more than 50 varieties. The groves have matured and become useful for windbreaks. Today the eucalyptus groves present on Ellwood Mesa are a remnant of Cooper's early attempt at eucalyptus forestry. The Coverage Area is undeveloped open space previously used for oil development. Remnants of the oil facilities are still present on site. There are no known locally significant historic buildings or structures present in the Coverage Area (see Figure 3.5-1 of the General Plan Final Environmental Impact Report, City of Goleta 2006b).

Rincon conducted a records search of the Ellwood Mesa Open Space and a 0.5-mile radius. The records search was conducted at the Central Coast Information Center (CCIC) on January 16, 2019. The records search identified a total of 16 cultural resources (2 historic archaeological sites and 14 prehistoric archaeological sites) within the search radius. Of those resources, two are located directly in the Ellwood Mesa Open Space (SBA-1321 and SBA-38644). Resource SBA-1321 is located along the bluff above the beach and was recorded in 1974. It consists of a shell midden and ground stone artifact scatter. The site was substantially disturbed by oil infrastructure. In 1997, archaeological testing on a portion of the site recommended it ineligible for listing in the California Register of Historical Resources due to a lack of integrity (Onken 1997).

Resource SBA-38644 is an isolated biface fragment recorded on the southern edge of the Coverage Area. The isolate was identified during archaeological monitoring conducted for the remediation of Devereux Creek. No other artifacts were identified with the isolate at the time of monitoring. However, the isolate was identified in the vicinity of resource LRW-90-53, a site that was not

formally recorded but is described in report SR-04937 on file with the CCIC. Site LRW-90-53 was subject to archaeological testing in 1997 on the southern border of the Coverage Area on the banks of Devereux Creek.

In addition to the resources in the Ellwood Mesa Open Space, a total of four previously recorded resources are located directly adjacent to the eastern border of the open space and Coverage Area. The results of the records search indicate a high archaeological sensitivity for the Coverage Area and vicinity.

Thresholds of Significance

A significant impact to cultural resources would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. Additional thresholds are contained in the City's Environmental Thresholds and Guidelines Manual. The City's adopted thresholds indicate that a project would result in a significant impact to a cultural resource if it results in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a cultural resource would be materially impaired.

Project-Specific Impacts

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

No known significant historic buildings or structures are located on the Coverage Area. Implementation of the MBHMP would not involve construction of any structures, and therefore, would not require substantial excavation. However, the Coverage Area is in an area known to be archaeologically sensitive. Minimal grading may occur in association with development of new trails or trail maintenance that may uncover archaeological resources. Additionally, tree removal under the Catastrophic Event Response Program or Tree Management Program would result in ground disturbance with the potential to unearth unknown archaeological resources. With implementation of Mitigation Measure CUL-1 during ground disturbance, potential impacts to archaeological or historic resources would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

The discovery of human remains could potentially occur during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner would notify the Native American Heritage Commission, which would determine and notify the most likely descendant. The most likely descendant must complete the inspection of the discovery and provide recommendations for

treatment to the landowner within 48 hours of being granted access. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Mitigation Measures

CUL-1 Archaeological and Native American Monitoring

Ground-disturbing activities associated with the MBHMP, including but not limited to trail modification and vegetation and tree removal, shall be observed by a qualified archaeological monitor under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology (National Park Service 1983) and a local Native American monitor. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find evaluated for significance. Archaeological and/or Native American monitoring may be reduced or halted at the discretion of the monitors as warranted by conditions including, but not limited to, negative findings during the first 60 percent of ground disturbance. If monitoring is reduced to spot-checking, spot-checking shall occur when ground-disturbing activities occur in a new location in the Coverage Area or when ground disturbance would extend to depths not previously reached (unless those depths are within bedrock).

If archaeological resources are identified during ground disturbance, they shall be left in place and avoided when feasible. If avoidance is infeasible, a Phase II testing and evaluation program shall be implemented. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific measures shall be identified in the Phase II evaluation. These measures may include, but would not be limited to, a Phase III data recovery program, capping, or other appropriate actions to be determined by a qualified archaeologist in consultation with the Native American monitor.

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	■
b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

Existing Setting

California consumed 7,830 trillion British thermal units (Btu) of energy in 2016. While the state ranked second in the nation for total energy consumption, this is due almost entirely to the state's large population. At 199 Btu per person, the state's per capita energy consumption ranks 48th in the nation. Transportation is the largest consumer of energy in the state, accounting for approximately 39.8 percent of all energy consumption (United States Energy Information Administration 2018).

Energy production in California totaled 2,431 trillion Btu in 2016 (United States Energy Information Administration 2018). According to the California Energy Commission (CEC), total in-state electricity generation in 2017 was 206,328 gigawatt hours (GWh) (CEC 2018). Electricity consumption in Santa Barbara County totaled 2,799 GWh in 2017, with residential consumption accounting for approximately 27.6 percent (CEC n.d.). Statewide, natural gas accounted for more electricity generation than any other fuel type at 43.4 percent (CEC 2018).

California's Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill (SB) 1078 and sets power generation mix goals for the state. Specifically, the RPS specifies minimum renewable energy-sourced power generation goals, with a goal of 100 percent carbon-free energy generation by 2045. Interim RPS goals include a 33 percent renewable standard by 2020, and 60 percent by 2030 (California Public Utilities Commission 2019, CEC 2019).

On July 15, 2014, the City of Goleta adopted a Climate Action Plan (CAP). While targeted toward reducing citywide greenhouse gas (GHG) emissions, the CAP includes energy efficiency measures to reach emissions reduction targets. Energy-related measures described in the CAP include building energy efficiency strategies, conducting outreach programs to encourage renewable energy installation, and encouraging the use of alternatively fueled construction and landscape equipment (City of Goleta 2014a).

The nearest energy infrastructure facility to the Coverage Area is NRG California South LP's Ellwood natural gas power plant, approximately 0.7 mile west of the Coverage Area.

Thresholds of Significance

A significant energy impact would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual does not contain City-specific energy thresholds.

Project-Specific Impacts

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The Coverage Area is currently recreational open space area and, as a result, consumes minimal energy. The MBHMP would not involve construction of structures, installation of lighting, or otherwise increase operational energy consumption associated with land uses in the Coverage Area.

Covered activities, including, but not limited to, tree pruning, removals, and maintenance; trail maintenance; habitat restoration; and drainage clearing following flood events may require the use of hand tools, trucks, or construction equipment. It is reasonable to assume the City or City-authorized contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during covered activities to reduce costs of MBHMP activities. Should the use of heavy equipment be necessary, the City or City-authorized contractor would comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation, which imposes limits on idling and restricts the use of older vehicles. Such compliance would reduce fuel consumption and lead to the use of fuel-efficient vehicles during covered activities. Equipment would be maintained to applicable standards, and associated fuel consumption and energy use would be temporary. Therefore, the MBHMP would not involve the inefficient, wasteful, and unnecessary use of energy during implementation, and no impact would occur.

NO IMPACT

b. Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

As previously discussed, the City's CAP contains emissions-reduction measures the City may implement, several of which are energy-related in nature. The CAP is a voluntary planning study undertaken by the City to quantify emissions through an inventory analysis and forecast and to generate possible measures the City could take in the future. However, the CAP does not contain any mandatory measures or amendments to the City's General Plan or Municipal Code (City of Goleta 2014b). Therefore, the measures contained in the CAP are voluntary by nature and have not been formally adopted as City policy.

The MBHMP would not include construction of any buildings, structures, or facilities, nor would it substantially increase visitors to the Coverage Area. As a result, CAP measures related to building energy efficiency, renewable energy programs for new development, and on-road vehicles are not relevant to the MBHMP. Measure OR-1, Encourage Alternatively Fueled Construction and Landscape Equipment, from the CAP would be relevant to covered activities under the MBHMP. Measure OR-1 encourages the City to provide information to the public regarding financial incentives available to electrify off-road vehicles and equipment. As discussed in Section 3, Air Quality, covered activities would generally not require diesel-powered equipment. Implementation of the MBHMP would not

conflict with or obstruct implementation of this voluntary outreach measure described in the City's CAP. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
2. Strong seismic ground shaking?	☐	☐	☐	■
3. Seismic-related ground failure, including liquefaction?	☐	☐	☐	■
4. Landslides?	☐	☐	☐	■
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	■
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	■
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

Existing Setting

Goleta occupies a portion of the eight-mile long and three-mile wide flat alluvial plain known as the Goleta Valley (City of Goleta 2006a). The Goleta Valley is bordered on the south by the bluffs of the Pacific coastline and on the north by foothills and terraces of the foreland of the Santa Ynez Mountain Range.

The Coverage Area is generally characterized by gentle slopes and terraces. Similar to much of California, the Coverage Area is located in a seismically active region. The Transverse Ranges are characterized by east-west trending structural features in contrast to the dominant northwest-southeast structural trend of California. According to Figure 5-1 of the General Plan Safety Element, the More Ranch Fault runs through the Coverage Area (City of Goleta 2006a). However, this fault is not considered active by the State Division of Mines and Geology nor is it subject to an Alquist-Priolo Special Studies Zone (City of Goleta 2006a; California Department of Conservation 2018b). However, the More Ranch Fault is considered active by the Santa Barbara County Seismic and Safety Element due to geologically recent movement suggested by a north-facing scarp near the coast at the west end of the fault (County of Santa Barbara 2015). The nearest confirmed seismically active fault to the Coverage Area is the North Channel Slope Fault located four miles offshore. The closest Alquist-Priolo mapped earthquake fault is over 20 miles to the southeast (Pitas Point/Red Mountain Faults).

In addition, according to Figure 5-1 of the General Plan Safety Element, the portion of the Coverage Area that contains bluffs adjacent to the Pacific Ocean is identified as having a high landslide potential (City of Goleta 2006a). The remainder of the Coverage Area is not identified as having any landslide potential.

Prominent geological features are present on the Coverage Area. There are quaternary older alluvial geological formations on the western portion of Goleta, including the Coverage Area, and Pliocene Sisquoc and Miocene Monterey formations present on the Ellwood Mesa area (see Table 3.5-1 of the General Plan Final Environmental Impact Report, City of Goleta 2006b). These geologic formations have the potential for paleontological resources to be present.

Thresholds of Significance

A significant impact on geology/soils would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual assumes that a project would result in a potentially significant impact on geological processes if the project and/or implementation of required mitigation measures could result in increased erosion, landslides, soil creep, mudslides, and/or unstable slopes. In addition, impacts are considered significant if a project would expose people and/or structures to major geological hazards such as earthquakes, seismic-related ground failure, or expansive soils capable of creating a significant risk to life and property.

Project-Specific Impacts

a.1. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

a.2. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a.3. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a.4. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving landslides?

No Alquist-Priolo mapped earthquake faults or fault zones occur in Goleta. The More Ranch Fault traverses the Coverage Area and may be potentially active. However, implementation of the MBHMP would not involve construction of any buildings or structures or change in land use that would expose people or structures to fault rupture, ground shaking, ground failure, or landslides. No impact would occur.

NO IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The MBHMP includes habitat restoration activities involving removal of non-native plant species and planting of native species. Additionally, the Tree Management Program of the MBHMP includes selective removal of downed, dead, dying, or hazardous trees and debris to ensure public safety and manage the risk of wildfire. The program would also allow for recontouring or grading of drainage channels following flood events to protect trees. These activities would involve the movement of soil and potential loss of topsoil. The Tree Management Program would use the removed downed or hazardous trees to provide slope stability and erosion control, where feasible, and would require soil contours and disturbed plantings to be replaced following management actions. Implementation of the MBHMP would not involve construction of any new facilities exposing soils or leading to erosion. A component of the Trail Management Program involves implementation of stormwater Best Management Practices (BMP) to reduce erosion and sedimentation from trails and viewing areas. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Implementation of the MBHMP would not involve construction of any structures. Therefore, the soil and geologic conditions in the Coverage Area would not become unstable as a result of the MBHMP or result in off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. No habitable structures are proposed as part of the MBHMP. No impact would occur.

NO IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No habitable structures are proposed as part of the MBHMP. No impact related to expansive soils would occur.

NO IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The MBHMP would not involve the construction of a septic system or alternative wastewater disposal systems. Therefore, no impact would occur.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Implementation of the MBHMP would not involve construction of any structures, and therefore, would not require excavation. Minimal grading may occur in association with development of new trails or trail maintenance that may uncover previously unidentified paleontological resources. Additionally, tree removal under the Catastrophic Event Response Program or Tree Management Program would result in ground disturbance that has the potential to unearth and potentially destroy unknown paleontological resources. With incorporation of Mitigation Measure GEO-1 during ground disturbance, potential impacts to paleontological resources would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

Mitigation Measures

GEO-1 Unanticipated Discovery of Paleontological Resources

In the event of an unanticipated discovery of a paleontological resource during ground disturbance from the implementation of the MBHMP, work in the immediate area shall be temporarily halted and a qualified paleontologist (per Society of Vertebrate Paleontology standards 2010) shall be contacted to evaluate the find. If the discovery proves to be significant and cannot be avoided, additional work, such as salvage excavation, may be required to address any significant impacts.

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases?	☐	☐	■	☐

Existing Setting

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Project implementation would generate GHG emissions through the burning of fossil fuels or other emissions of GHGs, thus potentially contributing to cumulative impacts related to climate change. In response to an increase in human-made GHG concentrations over the past 150 years, California has implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 codifies the Statewide goal of reducing emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide GHG emissions. Furthermore, on September 8, 2016, the governor signed SB 32 into law, which requires the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030. SB 32 extends AB 32, directing the CARB to ensure that GHG emissions are reduced to 40 percent below the 1990 level by 2030.

On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) of carbon dioxide equivalent (CO_2e) by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because these goals include all emissions sectors in the State.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a

project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

As discussed in Section 6, *Energy*, the City adopted a CAP on July 15, 2014. The CAP contains an emissions inventory and forecast, as well as voluntary measures to improve building energy efficiency, reduce vehicle miles traveled, reduce water consumption, improve equipment efficiency, and reduce solid waste transport to serve as tools for the community (City of Goleta 2014a, 2014b). The CAP is a planning study and does not adopt any policy or contain any mandatory measures or amendments to the City's General Plan and/or Municipal Code. Because the CAP contains only voluntary measures and does not contain City policies, the City's CAP is not a qualified CAP for purposes of CEQA analysis.

Thresholds of Significance

A significant impact with regard to GHG emissions could occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. In addition, on June 10, 2010, the County of Santa Barbara Planning & Development Department produced a memorandum titled *Support for Use of Bay Area Air Quality Management District Greenhouse Gas Emissions Standards*, which states, "While Santa Barbara County land use patterns differ from those in the Bay Area as a whole, Santa Barbara County is similar to certain Bay Area counties (in particular, Sonoma, Solano, and Marin) in terms of population growth, land use patterns, General Plan policies, and average commute patterns and times. Because of these similarities, the methodology used by [the Bay Area Air Quality Management District (BAAQMD)] to develop its GHG emission significance thresholds, as well as the thresholds themselves, have applicability to Santa Barbara County and represent the best available interim standards for Santa Barbara County" (County of Santa Barbara 2010). In accordance with CEQA Guidelines §§15064.4(b)(2) and 15064.7(c), the City has consistently relied upon the County of Santa Barbara's *Support for Use of Bay Area Air Quality Management District Greenhouse Gas Emissions Standards* as the expert-recommended threshold for establishing GHG impacts of a project. In addition, the City relies upon the SBCAPCD as a commenting agency to review the GHG analysis, and these thresholds represent a consistent approach and facilitate uniformity for impact determinations for City and County projects under the SBCAPCD's review.

The BAAQMD's GHG emissions thresholds are summarized in Table 6. This analysis uses the BAAQMD/Santa Barbara County Interim Thresholds of Significance to determine the significance of operational GHG emissions related to the MBHMP, based on the 1,100 MT CO_2e per year or 4.6 MT CO_2e per service population per year threshold for commercial and residential land uses (BAAQMD 2017). There is no BAAQMD threshold of significance for construction emissions.

Table 6 BAAQMD/Santa Barbara County Interim Thresholds of Significance

GHG Emission Source Category	Operational Emissions
Commercial and Residential (land use projects)	1,100 MT of CO_2e per year or 4.6 MT CO_2e per SP per yr[1]
Stationary Sources[2]	10,000 MT of CO_2e per year

MT = metric tons

CO_2e = carbon dioxide equivalent

[1] SP = Service Population (residents + employees)

[2] Stationary Sources include stationary combustion sources (industrial-type uses) regulated by the APCD.

Source: Santa Barbara County Planning & Development Department, Support for Use of Bay Area Air Quality Management District Greenhouse Gas Emissions Standards. Interim GHG Emissions – Evidentiary Support, June 10, 2010

Project-Specific Impacts

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Temporary GHG emissions associated with implementation of the MBHMP would be minimal, as the MBHMP would not involve construction of any new structures or facilities. Most covered activities, such as those associated with waste reduction and pest management programs, would not require the use of heavy equipment. Some covered activities, such as tree removal and pruning, trail maintenance, drainage clearing, invasive species eradication, and planting of native species, would generally be conducted using hand tools but may occasionally require the use of heavy diesel equipment. Consequently, these activities could result in temporary GHG emissions.

While covered activities under the MBHMP may result in minimal temporary GHG emissions, implementation of the MBHMP would also result in substantial GHG reductions. Tree removals conducted under the MBHMP would be limited to dead or dying trees which pose a threat to public safety. These trees function as carbon sources, releasing carbon to the atmosphere as they decay. Covered activities would remove these trees and replace them with living eucalyptus trees, native species, or fire-resistant understory species, in turn increasing the carbon sequestration potential of the Coverage Area. Additionally, covered activities like removal of dead or dying trees and planting of fire-resistant understory species would reduce wildfire risk in the Coverage Area, minimizing the potential for landscape-level carbon emissions associated with a wildfire event. Such impacts would be beneficial.

The trail improvement and educational programs associated with the MBHMP would improve the quality of the experience for visitors to the butterfly habitat, but would not directly increase the number of visitors to the Coverage Area. Furthermore, the MBHMP would not involve expansion of facilities to accommodate or encourage increased vehicle trips, such as additional parking lots or site access points. Therefore, the MBHMP would not substantially increase operational GHG emissions associated with vehicle trips to and from the Coverage Area.

The MBHMP would not involve any change in land use or construction of any structures. Therefore, it would not result in emissions exceeding the BAAQMD thresholds shown in Table 6 or conflict with a plan adopted for the purpose of reducing GHG emissions. Given that the MBHMP would result in

minimal temporary GHG emissions associated with covered activities, no substantial increase in operational GHG emissions associated with vehicle trips, and beneficial impacts by increasing sequestration and reducing wildfire potential in the Coverage Area, overall impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Mitigation Measures

No mitigation is recommended or required.

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	■	☐
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	■

Existing Setting

In the 1970s-1980s, the Ellwood Mesa area was used for oil production activities. The Coverage Area contains three closed State Water Resources Control Board (SWRCB) GeoTracker sites (SWRCB 2015a, SWRCB 2015b, SWRCB 2015c).

The Coverage Area is subject to fire risk. Some species of eucalyptus trees found in the Coverage Area have deciduous bark, which is shed annually and presents a fire hazard. The bark catches fire readily and streamers from the loose bark tend to carry fire into the canopy and cast firebrands ahead of the main fire front. The leaf litter, which is the accumulation of dead, dry, and oily leaves, is also a fire hazard as it is extremely flammable. Additionally, the dead eucalyptus trees in the Coverage Area pose an exacerbated fire risk.

Thresholds of Significance

A significant impact with regard to hazards and hazardous materials would be expected to occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. In addition, the City's Environmental Thresholds and Guidelines Manual addresses public safety impacts resulting from involuntary exposure to hazardous materials. These thresholds focus on activities involving the installation of or modification to facilities that handle hazardous materials, transportation of hazardous materials, or non-hazardous land uses in proximity to hazardous facilities. Since the MBHMP would not include a hazardous materials facility, the City's risk-based thresholds are not applicable.

Project-Specific Impacts

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The MBHMP includes an Integrated Pest Management Program to control plant, animal, fungal, and other pests affecting monarch butterflies or their habitat. The MBHMP recommends the use of biological control methods such as birds, lady beetles, spiders, and other predators, as the use of chemical control such as pesticides and herbicides may be dangerous to butterflies. Nevertheless, application, handling, and transport of chemical pesticides, herbicides, and fertilizers may be necessary to ensure the long-term viability of new plantings or eradication of invasive species. Chemical applications have the potential to create the unintended release of a hazardous material.

Application of chemicals would be required to follow all local, State, and federal regulations to reduce the potential for creation of hazardous conditions and would be administered per manufacturer's specifications by a person certified for application. Therefore, implementation of the MBHMP would not create a significant hazard due to routine transport, use, or disposal of hazardous materials or pose a significant potential for the accidental release of hazardous materials into the environment. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The school closest to the Coverage Area is Ellwood Elementary School, located immediately north of the Coverage Area across Hollister Avenue. Covered activities under the MBHMP would generally not involve hazardous emissions or use of hazardous materials. However, application, handling, and transport of chemical pesticides, herbicides, and fertilizers may occur. The use of chemicals in this area would have the potential to affect students and staff present at the school during application. Application of chemicals would be required to follow all local, State, and federal regulations, including regulations pertaining to pesticide application near schools, to reduce the potential for creation of hazardous conditions and would be administered per manufacturer's specifications by a person certified for application. With adherence to existing regulations, potential impacts on the school resulting from emissions of hazardous chemicals and/or materials in the Coverage Area would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The following databases were checked, pursuant to Government Code Section 65962.5, on December 21, 2018 for known hazardous materials contamination in the vicinity of the Coverage Area:

- **USEPA**
  - Comprehensive Environmental Response, Compensation, and Liability Information System/ Superfund Enterprise Management System/Envirofacts database search
- **SWRCB**
  - GeoTracker search for leaking underground storage tanks and other cleanup sites
- **California Department of Toxic Substances Control**
  - EnviroStor search for hazardous facilities or known contamination sites
  - Cortese List of Hazardous Waste and Substances Sites
  - Cleanup Site and Hazardous Waste Facilities Database

The Coverage Area is not included on a list compiled pursuant to Section 65962.5 of the Government Code. A search of the GeoTracker database identified three closed sites in the Coverage Area: Ali d'Oro Lot 67, Southwest Diversified Property, and S.B. Shores County Park/Arco; all three sites were closed by 2014 (SWRCB 2015a; SWRCB 2015b, SWRCB 2015c).

Given the closed status of the listings and the fact that the MBHMP would not involve construction of any new buildings or structures, the MBHMP would not create a significant hazard to the public or the environment due to the presence of a listed hazardous materials site. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The Coverage Area is not located near a private airstrip but is located approximately two miles from the Santa Barbara Municipal Airport. The Coverage Area is not located in any of the airport's approach or clear zones and is not subject to review by the Airport Land Use Commission. In addition, the MBHMP would not involve construction of any buildings or other occupied facilities. Therefore, the MBHMP would not create any significant airport safety hazards and no impact would occur.

NO IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Implementation of the MBHMP would involve fuel management activities under the Community Wildfire Protection Program. These activities would not involve construction of any new facilities or change in land use that would interfere with an adopted emergency response plan. No impact would occur.

NO IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The MBHMP includes the Community Wildfire Protection Program to be consistent with the intent of the City's CWPP and ensure fire safety and habitat protection are balanced. This program includes actions supporting the implementation of the CWPP's 100-foot-wide fire buffer around homes and structures in the Ellwood Mesa eucalyptus groves. The Program would also coordinate with City-approved wildland fire experts during the planning and implementation of any fuel treatments. The Tree Management Program would reduce fire hazard, improve public safety, and eliminate trees that are threatening the sustainability of the butterfly aggregation sites, including dead, diseased, and dying trees. Removal of hazardous trees, in combination with the maintenance of fire buffers and understory clearing, would reduce the risk of fire in the Coverage Area. Therefore, implementation of the MBHMP would have the beneficial effect of reducing exposure of people or structures to risk of loss, injury, or death involving wildland fires. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	■	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	■

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	■	☐	☐

Existing Setting

Devereux Creek and a tributary run through the Coverage Area, and portions of the Coverage Area overlay the western portion of the Goleta Groundwater Basin (Basin 3-016). The Coverage Area includes areas in the 100-year flood zone, as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FEMA 2018). Portions of the Coverage Area are also in the Potential Tsunami Runup Area as shown in Figure 5-2 of the General Plan Safety Element (City of Goleta 2006a).

Thresholds of Significance

A significant impact on hydrology and water quality would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. In addition, the City's Environmental Thresholds and Guidelines Manual assumes a significant impact on hydrology and water resources would occur if the MBHMP would:

- Be located in an urbanized area of Santa Barbara County and the project construction or redevelopment individually or as a part of a larger common plan of development or sale would disturb one or more acres of land
- Increase the amount of impervious surfaces on the project site by 25 percent or more
- Result in channelization or relocation of a natural drainage channel
- Result in removal or reduction of riparian vegetation or other vegetation (excluding non-native vegetation removed for restoration projects) from the buffer zone of any streams, creeks, or wetlands
- Be an industrial facility that falls under one or more categories of industrial facility regulated under the National Pollutant Discharge Elimination System (NPDES) Phase I industrial storm water regulations
- Discharge pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the Central Coast RWQCB Basin Plan, or otherwise impair the beneficial uses of a receiving waterbody
- Result in a discharge of pollutants into an "impaired" waterbody that has been designated as such by the SWRCB or the Central Coast RWQCB under Section 303 (d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act)
- Result in a discharge of pollutants of concern to a receiving waterbody as identified in by the Central Coast RWQCB

Project-Specific Impacts

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Surface Water

The Coverage Area is under the jurisdiction of the Central Coast RWQCB. The Central Coast RWQCB released an update to the Water Quality Control Plan for the Central Coast Basin on September 27, 2017 (2017 Basin Plan; Central Coast RWQCB 2017). The 2017 Basin Plan describes beneficial uses and water quality objectives for surface waters in the basin, monitoring and assessment protocols and policies, and management principles relating to the protection and improvement of surface water quality.

Devereux Creek runs through the Coverage Area. Per the 2017 Basin Plan, Devereux Creek has designated beneficial uses of Municipal and Domestic Supply, Groundwater Recharge, Freshwater Replenishment, Water Contact Recreation, Non-Contact Water Recreation, Commercial and Sport Fishing, Warm Freshwater Habitat, and Wildlife Habitat (Central Coast RWQCB 2017). Devereux Creek is listed as impaired on the SWRCB's 2014-2016 303(d) list due to high levels of fecal coliform and low dissolved oxygen concentrations (SWRCB 2018). Implementation of the MBHMP would not involve construction of new facilities that could substantially degrade water quality and would not increase impervious surface cover generating increased polluted runoff. Covered activities under the MBHMP could involve limited ground disturbance in the Coverage Area, in turn generating temporary runoff of sediment and other pollutants to nearby waterbodies, including Devereux Creek. Application of herbicides, pesticides, and fertilizers associated with native planting, eucalyptus restoration, and invasive species eradication activities could result in runoff of chemical pollutants into adjacent waterbodies.

Ground-disturbing activities greater than one acre are subject to the requirements of the NPDES Construction General Permit (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). Pursuant to the requirements of the NPDES Construction General Permit, these activities would prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to minimize construction-related pollutant discharge. Common BMPs required in SWPPPs include installation of silt fences, post-grading revegetation, and regular stormwater quality monitoring. However, given the nature of covered activities under the MBHMP, most, if not all, activities would be smaller in scale and involve less than one acre of ground disturbance. Such activities include adjustments to trail locations, installation of culverts or water bars, construction of drainage crossings, installation of irrigation systems, or small-scale drainage channel clearing following flood events. These activities would have the potential to result in temporary sediment erosion and water quality impacts. Individually, these covered activities would not be subject to the requirements of the NPDES Construction General Permit. Furthermore, application of fertilizers, herbicides, and pesticides could result in runoff into nearby waterbodies, including the impaired Devereux Creek. Increased nutrient loading associated with fertilizer runoff to Devereux Creek could increase eutrophication, ultimately reducing dissolved oxygen and exacerbating the waterbody's existing impairment. These impacts would be potentially significant unless mitigation is incorporated.

Groundwater

Portions of the Coverage Area overlie the western portion of the Goleta Groundwater Basin. In May 2010, GWD and La Cumbre Mutual Water Company published the Final Groundwater Management Plan for the Goleta Groundwater Basin (GWD and La Cumbre Mutual Water Company 2010). The plan contains basin management objectives, basin yield and storage, and recommended future strategies. As the basin is adjudicated under the 1989 Wright Judgment, it has a "Very Low" basin priority under the California Department of Water Resources Final 2018 Basin Prioritization (California Department of Water Resources 2019) and is not required to prepare a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act.

The MBHMP would not include any groundwater pumping or injection which would conflict with the Groundwater Management Plan for the Goleta Groundwater Basin. Similar to surface water impacts, application of chemical fertilizers, herbicides, or pesticides associated with covered activities would have the potential to result in leaching of pollutants to underlying groundwater. This impact would be potentially significant unless mitigation is incorporated.

Overall, impacts related to surface water and groundwater quality would be potentially significant. Incorporation of Mitigation Measures HWQ-1 and HWQ-2 would reduce water quality impacts to a less than significant level by minimizing erosion during ground-disturbing activities and reducing application and migration of chemical fertilizers, pesticides, and herbicides used during covered activities. These mitigation measures would minimize the potential for degradation of surface water or groundwater resources, and therefore, would ensure the MBHMP would not conflict with or obstruct implementation of a water quality plan or sustainable groundwater management plan. As a result, impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No impervious surfaces are proposed under the MBHMP, and the majority of the Coverage Area includes pervious surfaces allowing for groundwater infiltration. The MBHMP would not involve on-site pumping of groundwater. Irrigation may occur in the Coverage Area to support native plantings or eucalyptus restoration. Irrigation water would provide additional recharge benefits to the underlying aquifer, with water supplied from reclaimed water or existing potable supplies. Any potable water would be provided by GWD, which has adjudicated, appropriative groundwater extraction rights based on the Goleta Groundwater Basin's safe yield. GWD does not pump water from the West sub-basin of the Goleta Groundwater Basin, which the Coverage Area overlies. Therefore, the MBHMP would not deplete groundwater supplies or interfere with groundwater recharge. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or situation on- or off-site?

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would impede or redirect flood flows?

The MBHMP would not involve construction of any new facilities or change in land use that would substantially alter drainage patterns of the area. No new impervious surfaces are proposed, and therefore, runoff patterns would not be substantially altered, nor would any conditions contributing to an exceedance of the area stormwater drainage system be created. The natural drainage of the Coverage Area would result in passive detention and natural filtration of stormwater runoff. The MBHMP would not result in flooding, erosion, or siltation.

Clearing and re-contouring of drainage ways may occur as covered activities under the Tree Management Program. Such activities would repair drainage ways following flood events to protect trees. Impacts associated with alteration of the Coverage Area's drainage pattern would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

According to Figure 5.20 of the 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan, the Coverage Area is not located in a dam inundation zone (County of Santa Barbara 2017). Portions of the Coverage Area along Devereux Creek are in a FEMA-designated flood hazard zone and other portions of the Coverage Area are subject to flooding by a tsunami. Implementation of the MBHMP would not involve construction or installation of any structures or facilities that would use, process, or store pollutants that could be released in the event of inundation. Therefore, no impact would occur.

NO IMPACT

Mitigation Measures

HWQ-1 Erosion Control Best Management Practices

Prior to commencement of any ground-disturbing activities not covered by a SWPPP prepared in compliance with the requirements of the NPDES Construction General Permit, the City or City-authorized contractor shall implement the following erosion control BMPs:

- Ground-disturbing activities shall occur between April 1 and September 30 to coincide with the dry season and avoid impacts to overwintering monarch butterflies.
- Silt fencing, straw bales composed of rice straw (that are certified to be free of weed seed), fiber rolls, gravel bags, mulching erosion control blankets, soil stabilizers, and storm drain filters shall be used, in conjunction with other methods, to prevent erosion throughout the Coverage Area and siltation of stream channels and detention basins.
- Temporary berms and sediment basins shall be constructed to avoid unnecessary siltation into local waterways during ground-disturbing activities.
- Erosion controls which protect and stabilize exposed soils shall be used to prevent movement of materials. Potential erosion control devices include plastic sheeting held down with rocks or sandbags over exposed soils and use of silt fences or berms of hay bales.
- Frequency of sediment removal from detention basins, locations and types of erosion and sediment control structures, and materials that would be used in the Coverage Area during MBHMP activities shall be specified.
- All exposed soils present in and around the disturbed area shall be stabilized within seven days of ground disturbance using mulch, geotextile binding fabrics, and/or native, drought-tolerant revegetation, as necessary.

HWQ-2 Chemical Application Control Plan

Prior to commencement of native planting, eucalyptus grove restoration, invasive species eradication, and pest control activities, the City shall prepare and implement a Chemical Application Control Plan to be approved by the City Biologist. The plan shall identify thresholds to determine when fertilizer, herbicide, or pesticide application is necessary, the chemical to be used, and the rate, timing, and placement of application. Pesticides or insecticides shall be used only when necessary to cure a problem and in positively identified pre-emergent situations, not as a preventive measure or as a regular, periodic application.

When pesticide or herbicide application is deemed necessary, use of chemical forms that are the least toxic to non-target organisms shall be employed. Only slow release organic fertilizers shall be used in the Coverage Area to minimize the potential for eutrophication in Devereux Creek. The application of fertilizers, herbicides, or pesticides shall be minimized during winter months when the greatest precipitation is likely to occur.

11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■

Existing Setting

The Coverage Area is an undeveloped area zoned Recreation (Rec) and with a General Plan land use designation of Open Space/Passive Recreation.

Thresholds of Significance

A significant land use and planning impact would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual does not contain City-specific land use and planning thresholds.

Project-Specific Impacts

a. Would the project physically divide an established community?

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Implementation of the MBHMP would not divide an established community because the MBHMP would not change the existing land use or result in any new structures in the Coverage Area. Therefore, implementation of the MBHMP would not conflict with the City's Zoning Ordinance or General Plan. The covered activities are allowed under the City's Zoning Ordinance and General Plan for open space and passive recreation because the MBHMP would preserve habitat for butterflies and promote visitors at the preserve through the outreach programs. The Open Space Element of the City's General Plan includes several goals, policies, and actions intended to achieve the City's vision for open space, parks, and recreation facilities that are accessible to all members of the community. The MBHMP would be consistent with several guiding principles of the Open Space Element, including:

- Provide and maintain, in coordination with other agencies, a system of parks, open spaces, and recreation facilities that are accessible to and will meet the needs of present and future users of all age groups.
- Manage, operate, and maintain park, recreation, and open space facilities (including trails) in a manner that is responsive to the site and adjacent neighborhoods and balances the needs of the community with available funding.
- Preserve Goleta's existing open space areas, including its beaches and Pacific shoreline, sensitive habitat areas, and agricultural lands, and increase the amount of permanently protected open space as opportunities for acquisition arise.
- Provide for convenient public access to Goleta's beach and shoreline areas and protect these areas for coastal-dependent and coastal-related recreation use.
- Manage open space areas in a manner that provides for public access, passive and active recreational use, and enjoyment, consistent with protection of natural and scenic resource values.
- Provide and maintain a system of trails that will connect major parks and open space areas with each other, neighborhoods, the regional trail system, and Los Padres National Forest.

Additionally, the MBHMP would be consistent goals and supporting policies contained in the Open Space Plan, particularly those related to monarch butterfly and habitat protection, including the following (City of Goleta 2004):

- Protect, enhance, and, where feasible, restore ESHAs in the Open Space Plan Area.
  - Focus high priority habitat enhancement and restoration initial improvements and opportunities on invasive exotic species control in wetlands, enhancement and restoration of riparian and non-riparian wetlands, ensuring the long-term vitality of the monarch groves, and enhancement and restoration of native habitats that are under-represented in the Open Space Plan Area.
- Protect and maintain existing monarch butterfly populations in the Open Space Plan Area, and manage the habitats to be self-sustaining.
  - Manage public access to protect butterflies and their habitat, while promoting public enjoyment, education, and scientific research.
  - Conduct scientifically sound studies using appropriate and cautious methods to maintain and improve habitat conditions to ensure long-term viability of the population.

Figure 3-2, Park and Recreation Plan Map, of the Open Space Element shows the Coverage Area is classified as Regional Open Space. This designation in the General Plan indicates the area is contiguous to or encompasses significant natural resources and may include areas of historical, environmental, or ecological value. These areas may contain special amenities or features that attract people from throughout Goleta and the surrounding region. The MBHMP, including its goals and programs, is consistent with the preservation and protection of natural values and passive recreation in the Regional Open Space designation in the General Plan.

The MBHMP would also implement Policy OS-5 of the General Plan by protecting and enhancing the Coverage Area's ESHAs. The Coverage Area is not included in any adopted Habitat Conservation Plans or natural community conservation plans. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■
c. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

Existing Setting

Although oil extraction activities took place on Ellwood Mesa in the 1970s-1980s, according to the mineral yearbook produced by the California Geological Survey and the USGS (2003), no major nonfuel mineral–producing areas are located in Goleta. In addition, the mineral land classification maps for Santa Barbara County (California Division of Mines and Geology 1989) show no known areas of significant aggregate resources in Goleta. According to the General Plan, most of Goleta is mapped as containing mineral deposits of unknown significance, and a small portion of the city is mapped as having no significant deposits (City of Goleta 2006a).

Thresholds of Significance

A significant impact on mineral resources would occur if the MBHMP resulted in any of the impacts noted in the checklist above, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual does not contain City-specific mineral resources thresholds.

Project-Specific Impacts

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The MBHMP would not result in the loss of availability of any known mineral resource or identified mineral resource recovery site. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	■	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	■	☐

Noise Background

Noise is unwanted sound resulting in a disturbance of human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels using the A-weighted sound pressure level (dBA). Because of the way the human ear interprets sound level, a sound must be approximately 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1 to 2 dBA changes are typically not perceived. Quiet suburban areas generally have noise levels in the range of 40 to 50 dBA, while arterial streets are in the 50 to 60+ dBA range. Normal conversational levels are in the 60 to 65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (or drop off) at a rate of approximately 6 dBA per doubling of distance from point sources (such as construction equipment). Noise from lightly traveled roads typically attenuates at a rate of approximately 4.5 dBA per doubling of distance, while noise from heavily traveled roads typically attenuates at approximately 3 dBA per doubling of distance. Noise levels may also be reduced by intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by approximately 5 dBA, while a solid wall or berm breaking the line-of-sight reduces noise levels by 5 to 10 dBA (Federal Transit Administration 2018). The manner in which homes in California are constructed generally provides a

reduction of exterior-to-interior noise levels of about 20 to 35 dBA with closed windows (Federal Highway Administration 2011).

In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds occurring over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. The equivalent noise level (Leq) is one of the most frequently used noise metrics and considers both duration and sound power level. The Leq is defined as the single steady A-weighted level equal to the same amount of energy contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. The highest root mean squared (RMS) sound pressure level in the measuring period is the Lmax. The lowest RMS sound pressure level in the measuring period is the Lmin.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than during the day. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.), or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a 10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. Noise levels described by Ldn and CNEL usually do not differ by more than 1 dBA. In practice, CNEL and Ldn are used interchangeably.

Vibration Background

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by human-made activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB).

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources inside buildings such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads.

Coverage Area Setting

The Coverage Area is an open space preserve; therefore, dominant noise levels in the Coverage Area are from conversations of recreational users and visitors. A small portion of the northern boundary of the Coverage Area adjacent to Hollister Avenue is in the roadway's existing and future 60 dBA CNEL noise contour (see Figures 9-1 and 9-3, General Plan Noise Element, City of Goleta 2006a). The Coverage Area is not in the existing or future 60 dBA CNEL noise contour for the Santa Barbara Municipal Airport (Figures 9-2 and 9-4, General Plan Noise Element, City of Goleta 2006a). Sensitive receptors closest to the Coverage Area include residences adjacent to the northern and western boundaries of the Coverage Area, as well as Ellwood Elementary School and the Mariposa at Ellwood Shores assisted living facility north of the Coverage Area across Hollister Avenue.

Regulatory Setting

City of Goleta General Plan/Coastal Land Use Plan Noise Element

The General Plan Noise Element identifies noise sources in Goleta and land use compatibility standards for proposed development to minimize exposure of residents to excessive noise levels (City of Goleta 2006a). Additionally, the Noise Element contains policies and programs pertaining to noise generation and exposure in Goleta that are relevant to the MBHMP:

POLICY NE 6.2 ENFORCEMENT OF RESTRICTIONS IN OPEN SPACE AREAS

The City shall enforce restrictions or prohibitions on motorized vehicles in City-owned open-space areas unless such operation is allowed by permit. Signage stating such restrictions or prohibitions shall be provided and maintained in good order, and the need for additional signage shall be considered periodically.

POLICY NE 6.4 RESTRICTIONS ON CONSTRUCTION HOURS

The City shall require, as a condition of approval for any land use permit or other planning permit, restrictions on construction hours. Noise-generating construction activities for projects near or adjacent to residential buildings and neighborhoods or other sensitive receptors shall be limited to Monday through Friday, 8:00 a.m. to 5:00 p.m. Construction in nonresidential areas away from sensitive receivers shall be limited to Monday through Friday, 7:00 a.m. to 4:00 p.m. Construction shall generally not be allowed on weekends and State holidays. Exceptions to these restrictions may be made in extenuating circumstances (in the event of an emergency, for example) on a case by case basis at the discretion of the Director of Planning and Environmental Services. All construction sites subject to such restrictions shall post the allowed hours of operation near the entrance to the site, so that workers on site are aware of this limitation. City staff shall closely monitor compliance with restrictions on construction hours, and shall promptly investigate and respond to all noncompliance complaints.

POLICY NE 6.5 OTHER MEASURES TO REDUCE CONSTRUCTION NOISE

The following measures shall be incorporated into grading and building plan specifications to reduce the impact of construction noise:

- All construction equipment shall have properly maintained sound-control devices, and no equipment shall have an unmuffled exhaust system.
- Contractors shall implement appropriate additional noise mitigation measures including but not limited to changing the location of stationary construction equipment, shutting off idling equipment, and installing acoustic barriers around significant sources of stationary construction noise.
- To the extent practicable, adequate buffers shall be maintained between noise-generating machinery or equipment and any sensitive receivers. The buffer should ensure that noise at the receiver site does not exceed 65 dBA CNEL. For equipment that produces a noise level of 95 dBA at 50 feet, a buffer of 1,600 feet is required for attenuation of sound levels to 65 dBA.

City of Goleta Municipal Code

Chapter 9.09 of the Goleta Municipal Code contains the City's noise ordinance. The ordinance broadly prohibits any unnecessary noises or sounds that are physically annoying to persons of ordinary sensitiveness or which are harsh, prolonged, unnatural, or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of Goleta. The ordinance also restricts loud or unreasonable noise, music, percussion, or other sounds amplified by any musical instrument, drum, radio, loudspeaker, or other sound amplifying device during specified hours.

Thresholds of Significance

A significant noise impact would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. Additional thresholds are contained in the City's Environmental Thresholds and Guidelines Manual. The City's adopted thresholds state that exterior CNEL noise levels in excess of 65 dBA would result in a significant noise impact on sensitive receptors. Additionally, noise from grading and construction activity within 1,600 feet of sensitive receptors would be presumed to result in a potentially significant impact. The manual recommends mitigating such impacts by limiting construction within 1,600 feet of sensitive receptors to weekdays between 8:00 a.m. and 5:00 p.m.

Project-Specific Impacts

a. Would the project result generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Existing noise sources in the Coverage Area include cars in the parking area and conversations from people walking through the Coverage Area. Motorized transportation is limited to the parking area adjacent to Hollister Avenue. As shown in Table 9-1 of the General Plan, existing ambient noise level at the residences near the Coverage Area is approximately 58 dBA Leq. Therefore, ambient noise levels are below the City's adopted threshold for residential uses of 65 dBA CNEL.

Permanent Noise Impacts

While trail improvements and educational programs may improve the visitor experience at the Coverage Area, implementation of the MBHMP would not involve construction of new uses in the Coverage Area or expand the existing parking lot facilities, and therefore, would not substantially increase the number of visitors. Accordingly, the MBHMP would not result in a permanent increase in ambient noises above the City's standards.

Temporary Noise Impacts

Implementation of the MBHMP would involve habitat restoration, trail maintenance, and other activities under the Natural Resources Management Programs. These types of activities would mostly involve hand tools, but may involve mowers or other mechanical equipment, such as chainsaws. Tree removals and pruning may require the use of trucks and lifts. Additionally, culvert installation, drainage clearing following flood events, and trail maintenance activities may require occasional use of heavy construction equipment, including backhoes and bulldozers. Table 7 summarizes typical noise levels associated with construction equipment that may be used during covered activities.

Table 7 Typical Construction Equipment Noise Levels

Equipment On-site	Typical Level (dBA) 25 Feet from the Source	Typical Level (dBA) 50 Feet from the Source	Typical Level (dBA) 100 Feet from the Source
Backhoe	86	80	74
Dozer	91	85	79
Loader	86	80	74
Saw	82	76	70
Shovel	88	82	76
Truck	90	84	78

Noise levels assume a noise attenuation rate of 6 dBA per doubling of distance.

Source: Federal Transit Administration 2018.

While temporary in nature, covered activities—including tree removal and pruning, trail maintenance, and drainage clearing—would occur within 1,600 feet of residences located adjacent to the Coverage Area. Given the proximity of these activities to sensitive receptors, they would be presumed to result in a potentially significant impact unless mitigation is incorporated, according to the City's Environmental Thresholds and Guidelines Manual.

Mitigation Measure N-1 restricts noise-generating MBHMP activities to hours recommended in the City's Environmental Thresholds and Guidelines Manual. The measure would further reduce potential construction noise associated with covered activities by requiring sound-control devices on construction equipment, consistent with Policy NE 6.5 of the General Plan Noise Element. Because the MBHMP would implement the City's recommended construction noise mitigation and would further reduce construction noise through installation of sound-control devices, impacts related to temporary noise associated with MBHMP activities would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Implementation of the MBHMP would not involve construction of new facilities, and therefore, use of heavy construction equipment would be limited. During implementation of the Natural Resources Management Programs, trail and tree maintenance activities would involve equipment such as chainsaws and hand tools. However, these types of equipment are not associated with high vibration levels. Drainage clearing and re-contouring, trail relocation, and culvert installation activities may require the occasional use of heavy equipment. Such activities would not require pile-driving or other construction methods capable of generating substantial ground-borne vibration. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

There are no private airports or airstrips in the vicinity of the Coverage Area. The Coverage Area is approximately 1.7 miles west of the Santa Barbara Municipal Airport but outside the Santa Barbara Municipal Airport's 60 dBA noise contour. Although there may be occasional aircraft overflights, these would occur at high altitudes where noise generation would be expected to be less than 60 dBA. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Mitigation Measures

N-1 Noise Management

Consistent with mitigation recommended in the City's Environmental Thresholds and Guidelines Manual, all noise-generating MBHMP activities, including, but not limited to, tree removal, pruning, trail maintenance, and riparian restoration, shall be limited to between 8:00 a.m. and 5:00 p.m. on weekdays. Noise-generating MBHMP activities shall not occur on weekends or State holidays.

If diesel-powered construction equipment is necessary, all such equipment shall have properly maintained sound-control devices, and no equipment shall have an unmuffled exhaust system. Equipment shall not be left to idle while not in use.

14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	■
b. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

Existing Setting

According to the California Department of Finance (DOF), Goleta's population is 31,949 people (DOF 2018). The estimated average household size is 2.78 persons and there are 12,021 housing units (DOF 2018). Upon buildout of the General Plan (anticipated to occur by the year 2030), Goleta's population is expected to reach 38,100 (City of Goleta 2006a).

The Coverage Area is undeveloped and does not include any dwelling units.

Thresholds of Significance

A significant impact on population and housing would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual does not contain City-specific population and housing thresholds.

Project-Specific Impacts

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Implementation of the MBHMP would not involve construction of any residential units which would increase Goleta's population. The MBHMP would occur at Ellwood Mesa, and therefore, would not displace any existing housing or require the displacement of any people, as no housing is present in the Coverage Area. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1 Fire protection?	☐	☐	☐	■
2 Police protection?	☐	☐	☐	■
3 Schools?	☐	☐	☐	■
4 Parks?	☐	☐	☐	■
5 Other public facilities?	☐	☐	☐	■

Existing Setting

Fire protection/Emergency services for the Coverage Area are provided by the Santa Barbara County Fire Department. The fire station closest to the Coverage Area is Station #11 located at 6901 Frey Way, just off of Storke Road and south of Hollister Avenue and the Camino Real Marketplace (approximately two miles driving distance). During long-term implementation of the MBHMP, Fire Station #10, which has been approved by the City but not yet constructed, will provide additional coverage. This station will be located on the north side of Hollister Avenue west of Cathedral Oaks Road, approximately 0.5 mile from the Ellwood Mesa parking lot. The City's General Plan identifies three standards with respect to the provision of fire protection services, which include:

- A firefighter-to-population ratio of one firefighter on duty 24 hours a day for every 2,000 persons is the ideal goal, however, one firefighter for every 4,000 persons is the absolute maximum population that can be adequately served
- A ratio of one engine company per 16,000 persons, assuming four firefighters per station, represents the maximum population that the Santa Barbara County Fire Department determined can be adequately served by a four-person crew
- A five-minute response time in urban areas

Police services are provided by the County Sheriff's Department under contract to the City. Law enforcement services include 24-hour police patrol for traffic enforcement, accident investigation, vehicle abatement, and parking control, as well as detective services for special investigations. Specialized functions through the Santa Barbara County Sheriff's Department are provided as needed. Services are also available for special events and/or natural disaster response.

Public schools in the vicinity of the project site include the Ellwood Elementary School, located north of the Coverage Area across Hollister Avenue.

The project site includes the Ellwood Mesa Open Space, which is considered a "regional open space" according to the City's General Plan (see Figure 3-2 and Table 3-1 of the Open Space Element).

Thresholds of Significance

A significant impact on public services would occur if the MBHMP would resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. In addition, the City's Environmental Thresholds and Guidelines Manual includes thresholds of significance for potential impacts on area schools. Specifically, under these thresholds any project that would generate enough students to generate the need for an additional classroom using current State standards, would result in a significant impact on area schools. Current State standards for classroom size are as follows:

- Grades K – 2: 20 students/classroom
- Grades 3 – 8: 29 students/classroom
- Grades 9 – 12: 28 students/classroom

Project-Specific Impacts

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.5. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered

governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

The MBHMP includes the Community Wildfire Protection Program, which provides practices to manage the eucalyptus groves and ensure consistency with the City's CWPP to reduce the ignitability of homes and structures. The risk of potential wildfires in the Coverage Area would be reduced by the CWPP and its policies and actions, as well as the Tree Management Program. The Tree Management Program would reduce fire hazards, improve public safety, and eliminate trees threatening the sustainability of the eucalyptus groves. The MBHMP would not involve construction of new residential uses; therefore, the MBHMP would not increase population nor increase demand for fire protection, police protection, schools, parks, or other facilities. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

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16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	■	☐

Existing Setting

Goleta has ~~six City~~16 public parks, 4 private parks, and ~~eight~~18 public open spaces, totaling approximately ~~482~~526 acres (City of Goleta 2006~~18~~a). This equates to approximately ~~15~~16.4 acres per 1,000 residents (based on a current [2018] population of 31,949 [DOF 2018]). Approximately 40 percent of Goleta's two-mile Pacific shoreline is held in City ownership (City of Goleta 2017a). The City's parks and open space areas provide many opportunities for passive recreation and enjoyment of natural areas. Areas specifically developed for active recreational uses are less abundant, with approximately three acres of developed park land per 1,000 residents.

The Coverage Area encompasses the Sperling Preserve/Ellwood Mesa, a City-owned regional open space preserve. The preserve includes opportunities for recreation with extensive trails linking to a series of regional trails and access to Ellwood Beach. Following the July 2017 field study, which indicated over 1,200 trees in the eucalyptus forest were dead and hundreds more degraded or dying, numerous trails through the Coverage Area were closed indefinitely due to public safety hazards posed by the possibility of dead or dying trees falling.

Thresholds of Significance

A significant impact on recreation would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual does not contain City-specific recreation thresholds.

Project-Specific Impacts

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Coverage Area is located in Ellwood Mesa Open Space and includes passive recreation opportunities, including hiking and wildlife viewing. The MBHMP is designed to preserve and

enhance butterfly habitat with specific programs related to natural resources management and monitoring, research, and adaptive management. Implementation of the MBHMP would also improve safety by allowing for the removal of dead trees that present a risk to recreational users in the Coverage Area. These programs, combined with the MBHMP's outreach programs, would improve conditions in the Coverage Area, thereby improving the visitor experience and possibly increasing recreational use.

Recreational use of the Coverage Area has been temporarily inhibited due to the closure of trails following the discovery of over 1,200 dead trees in July 2017. Since that time, recreational use of the Coverage Area has been diminished below its historical use. Although implementation of the MBHMP may increase recreational use in the Coverage Area, this increase would not be substantial and is not expected to exceed historical use of the Coverage Area prior to trail closures. Furthermore, the MBHMP would not expand the capacity of the Coverage Area because it would not accommodate additional vehicle trips to the area through additional parking or site access. Implementation of the MBHMP would not involve construction of any new residences and would not result in a population increase that would increase demand for recreational facilities.

The Trail Management Program would maintain and enhance the quality and safety of trails in the Coverage Area, thereby avoiding potential long-term degradation and trail closures. Maintaining the quality of and access to passive recreation opportunities in the Coverage Area would ensure that the Ellwood Mesa Open Space, including the Coverage Area, would continue to accommodate existing visitors. If these trails were not maintained, recreational users may choose to visit alternative facilities, resulting in increased demand at the City's other recreational facilities. Therefore, implementation of the MBHMP would have the beneficial impact of preventing increased demand at other recreational facilities by improving and maintaining amenities in the Coverage Area. Given that implementation of the MBHMP would not increase demand for recreational facilities or substantially increase the use of existing neighborhood and regional parks, it would not result in substantial physical deterioration of existing neighborhood and regional parks or other recreational facilities. Therefore, no impact would occur.

NO IMPACT

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Various trail management activities, including but not limited to removal of safety hazards, installation of trail boundary posts, and trail relocations, are covered activities under the MBHMP's Trail Management Program. These covered activities could result in adverse physical effects on the environment, which are documented throughout this IS-MND. All impacts associated with implementation of the MBHMP, including trail management activities, would be less than significant or less than significant with incorporation of applicable mitigation measures contained in this document. As a result, impacts related to recreational facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Mitigation Measures

No mitigation is required or recommended.

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	■	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	☐	■
d. Result in inadequate emergency access?	☐	☐	☐	■

Existing Setting

The major highways and arterial streets that serve the Coverage Area include US 101 and Hollister Avenue. US 101, located north of the Coverage Area, is a multi-lane interstate freeway serving the Pacific Coast between Los Angeles and the state of Washington. The freeway is the principal route between Goleta and the cities of Santa Barbara, Carpinteria, and Ventura to the south as well as the cities of Buellton and Santa Maria to the north. Access to US 101 from the Coverage Area is via Hollister Avenue to Storke Road to the east or Cathedral Oaks Road to the west.

Hollister Avenue, located immediately north of the Coverage Area, is an arterial roadway which serves as the primary east-west surface street through Goleta south of the freeway. Hollister Avenue is a four-lane, divided arterial with on-street bike lanes. Improvements to the Hollister Road corridor completed in 2018 include separate, off-street bike and pedestrian lanes along the portion of Hollister Avenue north of the Coverage Area and the adjacent residential neighborhood to the east.

Thresholds of Significance

A significant, project-generated traffic impact would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. Additional thresholds of significance are set forth in the City's Environmental Thresholds and Guidelines Manual. According to the manual, a potentially significant traffic impact would occur if:

1. The addition of project traffic to an intersection increases the volume to capacity ratio or number of trips by the values provided below.

Level of Services (including the project)	Increase in Volume to Capacity Ratio (greater than)
A	0.20
B	0.15
C	0.10
Or the addition of:	**Number of Trips**
D	15
E	10
F	5

2. Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal.
3. The project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with a substantial increase in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will result in potential safety problems with the addition of project or cumulative traffic.
4. Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (volume to capacity ration of 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

Project-Specific Impacts

a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

While trail maintenance and outreach programs may improve the visitor experience, implementation of the MBHMP would not involve construction of new facilities, expansion of existing facilities, or a change in land use in the Coverage Area. As a result, the MBHMP would not substantially increase the number of visitors to the Coverage Area. Therefore, the number of trips to and from the Coverage Area would remain similar to historical conditions and would not contribute to an exceedance of intersection capacity at nearby intersections.

Covered activities, such as tree removal and pruning, revegetation, habitat restoration, and trail maintenance, may require occasional truck trips to the Coverage Area. Additionally, drainage clearing, trail maintenance, and culvert installation activities would require truck trips by maintenance workers performing these activities. These activities would not require large quantities of soil import or export generating substantial truck trips. Trips associated with covered activities would be temporary and intermittent, adding a nominal number of trips to area roadways. This impact would be less than significant.

The Coverage Area is accessible via the Santa Barbara Metropolitan Transit District bus lines 25, 2630, 2660, and 2740, which stop on Hollister Avenue. The MBHMP would not substantially increase the number of visitors to the Coverage Area or otherwise affect public transit.

The Coverage Area is accessible and would remain accessible via bicycle and pedestrian facilities along Hollister Avenue. Tree removal and pruning, revegetation, trail maintenance, and habitat restoration activities may require temporary closure of trails in the Coverage Area. Many trails in the Coverage Area have been closed indefinitely since July 2017 due to safety hazards posed by dead or dying trees. Implementation of the MBHMP would remove these hazards, in turn restoring access to trails and improving active transportation opportunities and safety in the Coverage Area. Therefore, no impact would occur.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state that vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. As discussed above, the MBHMP would not substantially increase visitors to the Coverage Area and would not involve construction or expansion of facilities to accommodate additional vehicle trips (e.g., expanded parking facilities). Furthermore, the MBHMP would enhance active transportation opportunities by improving the quality and safety of trails in the Coverage Area.

According to Section 15064.3(b)(1) of the CEQA Guidelines, land use projects within 0.5 mile of either an existing major transit stop or a stop along an existing high-quality transit corridor are presumed to have a less than significant impact with respect to transportation. The Coverage Area is located less than 0.1 mile from the Hollister/Viajero bus stop, served by the 25, 2660, and 2740 bus lines. These lines connect to the Hollister Avenue Transit Corridor, which begins east of the Coverage Area at Pacific Oaks Road. Because the MBHMP would not substantially increase visitors to the Coverage Area, the Coverage Area is served by existing transit and active transportation facilities, and the MBHMP would enhance active transportation opportunities in the Coverage Area, implementation of the MBHMP would not substantially increase vehicle miles traveled. The MBHMP would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The Coverage Area is accessed by vehicle via Hollister Avenue and residential streets to the north. Implementation of the MBHMP would not change access to the Coverage Area. These roadways do not have design features or receive uses that would be incompatible with the nominal number of truck trips that would occur in conjunction with covered activities under the MBHMP. The MBHMP would not install any driveways along a major or arterial roadway, and does not involve any other features that would create or increase hazards. No impact would occur.

NO IMPACT

d. Would the project result in inadequate emergency access?

Implementation of the MBHMP does not involve construction of any new structures impeding emergency access. The MBHMP includes the Trail Management Program, which would involve trail maintenance improving trails and access in the Coverage Area. No impact would occur.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	■
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	☐	☐	☐	■

Existing Setting

As of July 1, 2015, Assembly Bill 52 (AB 52) of 2014 was enacted and expanded CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code [PRC] Section 21084.2). It further states the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document may be adopted or certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1?

Tribal cultural resources are defined in PRC Section 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources
- Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1

To date, no tribal cultural resources have been identified in the Coverage Area and no tribal representatives have requested consultation regarding potential resources in the Coverage Area. The City prepared and mailed letters to local Native Americans on December 21, 2018. Under AB 52, tribes have 30 days to respond and request consultation, giving tribes until January 21, 2019 to provide a response. As of the date of this draft document, the 30-day response period has ended and no tribal representatives requested formal consultation with the City.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	■	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

Existing Setting

Wastewater Treatment

The Goleta West Sanitary District (GWSD) provides sewer service in the project area via its system of sewer mains which ultimately connect to the Goleta Sanitary District's (GSD) main treatment plant at 1 William Moffett Place adjacent to the Santa Barbara Municipal Airport. Treatment of wastewater collected by GWSD is provided through a contract with GSD. The GSD treatment plant has a capacity of 9.7 million gallons per day (based on average daily flow), but is currently limited to a permitted discharge of 7.64 million gallons per day pursuant to a NPDES permit issued by the USEPA in concurrence with the State's Central Coast RWQCB. The GWSD is allocated 40.78 percent

of the capacity at the sewage treatment plant, which equates to about 3.12 million gallons per day (City of Goleta 2006a).

Water Supply

GWD is the water purveyor for Goleta. GWD operates under the *Wright Judgment,* which prohibits overdrafting of the Goleta Groundwater Basin. GWD draws its water supply from surface water from Lake Cachuma, groundwater from the Goleta Groundwater Basin, recycled water from GSD, and imported water from the State Water Project. In December 2015 GWD acquired 2,500 acre feet of supplemental water from another State Water Project contractor through the Central Coast Water Authority Supplemental Water Purchase Program to augment existing supplies in response to a fourth consecutive year of drought. In the last 10 years, GWD has obtained approximately 60 percent of its water supplies from Lake Cachuma, 15 percent from the State Water Project, 7 percent from recycled water, 17 percent from groundwater, and 1 percent from supplemental water purchases (GWD 2017a).

Landfill Capacity and Solid Waste

All nonhazardous solid waste in Goleta is handled at the Tajiguas Landfill and South Coast Recycling and Transfer Station, both of which are owned and operated by the Santa Barbara County Public Works Department. The management of solid waste by the Santa Barbara County Public Works Department includes collection, recycling, disposal, and mitigation for illegal dumping. Marborg Industries provides collection services in Goleta. Waste generated in Goleta is handled at the South Coast Recycling and Transfer Station where recyclable and organic materials are sorted for recycling and composting. The remaining solid waste is transported to and disposed of at the Tajiguas Landfill. Santa Barbara County Environmental Health Services permits Tajiguas to accept up to 1,500 tons of municipal solid waste and yard waste per day. Tajiguas has a remaining capacity of approximately 4.3 million cubic yards as of March 2016. The South Coast Recycling and Transfer Station processes 550 tons of waste per day and has a maximum permitted capacity of 595 tons per day (City of Goleta 2006a; CalRecycle 2018).

Electrical Service

Electrical service to Goleta and the South Coast region is provided by Southern California Edison Company. Southern California Edison Company maintains substations in Goleta, including the Hollister Avenue and Glen Annie substations, as well as electrical distribution lines (City of Goleta 2004).

Natural Gas

SoCalGas provides natural gas service to approximately six million residential and business customers across 20,000 square miles of southern California, including Goleta (SoCalGas 2019a). Goleta, including the Coverage Area, is located in SoCalGas' Coastal Zone. SoCalGas operates the La Goleta Natural Gas Storage Field, a naturally occurring underground storage reservoir in the porous sandstone of the Vaqueros Formation located approximately 3.4 miles east of the Coverage Area (SoCalGas 2019b). La Goleta is one of four SoCalGas storage facilities in southern California, interconnected by regional transmission lines.

Thresholds of Significance

A significant impact on utilities and service systems would occur if the MBHMP would result in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. In addition, under the City's Environmental Thresholds and Guidelines Manual, a project generating 196 tons of solid waste/year, after receiving a 50 percent credit for source reduction, recycling, and composting, would result in a project-specific, significant impact on Goleta's solid waste stream. Any project generating 40 tons/year, after receiving a 50 percent credit for source reduction, recycling, and composting, would make an adverse contribution to cumulative impacts to Goleta's solid waste stream.

Project-Specific Impacts

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The Coverage Area includes existing restroom facilities at the parking lot along Hollister Avenue and would not involve construction of any new restroom facilities. Implementation of the MBHMP would not result in a substantial increase in the number of visitors to the Coverage Area. Therefore, implementation of the MBHMP would not increase wastewater generation.

Trail improvements and new trails developed under the MBHMP would be unpaved. Therefore, the MBHMP would not increase the extent of impervious surface cover in the Coverage Area. Consequently, the MBHMP would not increase stormwater runoff or result in the need for new or expanded storm water drainage control facilities. No new electric power, natural gas, or telecommunications facilities would be constructed to serve the Coverage Area.

The MBHMP would not involve new development or an increase in population requiring expansion of water treatment or distribution facilities. However, installation of irrigation drip lines and storage tanks is a covered activity under the Tree Management Program. This covered activity may require limited soil disturbance and vegetation removal. Storage tanks would be located above ground to avoid existing eucalyptus trees, and drip lines would be installed a maximum of six inches below ground surface. Following installation of driplines, soil would be replaced to existing contours and irrigation would support new and existing vegetation in the Coverage Area. Other potential environmental impacts of MBHMP covered activities, including installation of irrigation facilities, are assessed throughout this document and were found not to cause any significant environmental effects. Therefore, this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Implementation of the MBHMP would not involve any change in land use or new development that would increase water demand. The MBHMP would not result in construction of new or expanded facilities but would maintain existing facilities in the Coverage Area. Irrigation in the Coverage Area is a covered activity under the Tree Management Program. Irrigation water would be provided via water trucks or on-site water tanks as needed using existing potable or reclaimed water supplies. Assuming an average water tank size of 3,600 gallons (McLellan Industries 2014) and twice weekly

filling of the tank to accommodate water application during the region's approximately 26-week dry season, irrigation water application would total approximately 0.6 acre feet per year. According to the GWD 2015 Urban Water Management Plan, this amounts to less than 0.01 percent of GWD's projected 2020 water supply (GWD 2017b). As discussed in Section 10, *Hydrology and Water Quality*, irrigation water would also provide additional recharge benefits to the underlying aquifer if supplied from reclaimed water. This impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As discussed under threshold a, the MBHMP would involve no increase in wastewater generation. No impact would occur.

NO IMPACT

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Implementation of the MBHMP would not involve any change in land use or expansion of the open space area which would lead to a permanent increase in solid waste generation. Additionally, implementation of the MBHMP would not result in a substantial influx of additional visitors to the Coverage Area. The MBHMP includes a Waste Management Program to remove waste from the Coverage Area. The Waste Management Program includes posting signs to prevent dumping in the butterfly habitat areas and educate visitors about the importance of removing trash from the butterfly habitat. Finally, the program would place trash cans in the parking lot for waste disposal. Therefore, the MBHMP would reduce illegal dumping and disposal of waste.

Tree removals and pruning may generate greenwaste, such as leaf litter and woody biomass. Downed trees would generally remain onsite, either in place in the groves or repurposed along trails as barriers or benches. Downed trees and other greenwaste may occasionally require off-site disposal, particularly tree trunks that cannot be mulched. Greenwaste generated by covered activities would be transported to the South Coast Recycling and Transfer Station, approximately 7.3 miles east of the Coverage Area. The South Coast Recycling and Transfer Station has a permitted capacity of 550 tons per day (County of Santa Barbara 2018). Assuming a eucalyptus tree is 150 feet tall with an average diameter of 3 feet, it would have a mass of approximately 27 tons (Meier 2019). This amount of material would amount to approximately five percent of the facility's daily permitted capacity. Given that off-site disposal of greenwaste would occur infrequently and only when on-site repurposing of downed trees is infeasible, the MBHMP would not generate waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Additionally, the MBHMP would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Mitigation Measures

No mitigation is required or recommended.

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

Existing Setting

The entire South Coast region, including Goleta, is prone to large wildfires due to its hot, dry climate and expansive coverage of ignitable vegetation. During the summer and autumn months, strong off-shore “sundowner” winds can create fast-moving fires that spread rapidly from the sparsely-populated Santa Ynez Mountains downslope to developed communities along the coast. Recent wildfires in the vicinity of the Coverage Area include the 1990 Painted Cave Fire, 1997 Eagle Canyon Fire, 2008 Gap Fire, 2009 Jesusita Fire, 2016 Sherpa Fire, 2017 Whittier Fire, and 2017/2018 Thomas Fire.

While a natural ecological process in coastal chaparral systems, wildfire return intervals have decreased throughout southern California, resulting in more frequent ecological disturbance, loss of biodiversity, and colonization by non-native grass species (USFS 2018). Furthermore, post-fire conditions leave exposed mountain slopes and hillsides vulnerable to surface erosion and runoff. Debris flows during post-fire rainy seasons can pose a risk to life and property and occur with little

warning. In southern California, as little as 0.3 inch of rain in 30 minutes can produce debris flows on post-fire landscapes (USGS 2018).

In March 2012, the City adopted the CWPP, which identifies key hazard treatments which are in balance with sustainable ecological management and fiscal resources (City of Goleta 2012). Treatments described in the CWPP serve as general prescriptions intended to guide site-specific fuel reduction strategies.

Given the region's susceptibility to large wildfires, the City of Goleta and County of Santa Barbara have developed "reverse 911" emergency notification systems to deliver fire-related updates, including weather forecasts and evacuation orders. The Santa Barbara County Sheriff's Office's Aware and Prepare notification system alerts residents via text message to impending emergency situations throughout the county. In summer of 2008, the City implemented the Goleta City Alert system, capable of sending two million 60-second voice messages or hundreds of thousands of e-mails and text messages in an hour during fire or other emergency situations (City of Goleta 2019).

Thresholds of Significance

A significant wildfire impact would occur if the MBHMP resulted in any of the impacts noted in the above checklist, pursuant to Appendix G of the CEQA Guidelines. The City's Environmental Thresholds and Guidelines Manual does not contain City-specific wildfire significance thresholds.

Project-Specific Impacts

a. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

b. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

c. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

d. *If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

According to the Santa Barbara County Fire Hazard Severity Zone Map, the Coverage Area is located entirely within a moderate fire hazard severity zone (California Department of Forestry and Fire Protection [CAL FIRE] 2012). The nearest very high fire hazard severity zone is located northwest of the Cathedral Oaks Road/US-101 interchange, approximately 0.5 mile from the Coverage Area. The MBHMP pledges support for the policies and activities contained in the CWPP, which includes policies intended to reduce fire hazards from fuel loads in the Coverage Area. The MBHMP also supports these efforts by calling for the maintenance and revegetation of the understory in and around aggregation sites with fire-resistant, native plant species. Furthermore, covered activities under the Tree Management Program and Catastrophic Event Response Program, including tree

removals, would reduce wildfire risk in the Coverage Area by removing dead or dying trees that would serve as fuel, thereby providing a beneficial effect. Mitigation measure BIO-8 would require any stockpiling of potentially ignitable debris or greenwaste to be temporary in nature, with the duration of debris stockpiling specified in the annual Implementation Plan prior to commencement of covered activities. Removed dead or dying trees would be replaced with healthy trees, which are less fire-prone, and which, pursuant to mitigation measure BIO-7, would be monitored annually for a period of five years to ensure they remain healthy. Both of these measures would further address community concerns about wildfire impacts associated with implementation of the MBHMP. No expansion of the existing eucalyptus groves would occur.

The MBHMP does not propose construction or maintenance of any new infrastructure which may pose a fire risk. The Coverage Area contains existing power lines owned and operated by SCE. SCE has previously conducted vegetation removal efforts to reduce fuel loads and hazardous trees in the vicinity of these lines. These vegetation removal efforts would continue, subject to SCE's own permits and easement rights.

The MBHMP would not involve construction of any structures, and therefore would not expose any additional people or structures to risk of wildfire. As noted in Section 9, *Hazards and Hazardous Materials*, the project would not interfere with an adopted emergency response or evacuation plan. Given its gentle sloping topography, the Coverage Area would not be susceptible to post-fire flooding, landslides, or slope instability. There would be no impact.

NO IMPACT

Mitigation Measures

No mitigation is required or recommended.

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21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	■	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 4, *Biological Resources*, impacts to special-status species would be less than significant with implementation of Mitigation Measures BIO-1 through BIO-9 and HWQ-2. With adherence to these measures, the MBHMP would not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

As discussed in Section 5, *Cultural Resources*, the Coverage Area is located in an area known to be archaeologically sensitive and, therefore, ground-disturbing activities would have the potential to unearth artifacts exemplifying major periods of California history or pre-history, if present. Mitigation Measure CUL-1 would reduce this impact such that it would be less than significant. Overall, impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Cumulative impacts could occur as a result of planned and pending development in the vicinity of the Coverage Area in combination with MBHMP activities. Certain environmental impacts are generally site-specific, such as impacts related to cultural resources, geology and soils, and hazards and hazardous materials. Consequently, planned and pending projects in the vicinity of the Coverage Area in combination with MBHMP activities are unlikely to result in cumulative impacts related to these resource areas.

Other environmental impacts, such air quality, GHG emissions, biological resources, hydrology and water quality, noise, and transportation, are cumulative in nature. Planned, pending, and approved projects in the City of Goleta within two miles of the Coverage Area include the Old Line 96 Abandonment project, Arco Habitat Restoration project, Citrus Village residential project, NRG Battery Storage project, Rancho Estates Mobile Home Park Fire Improvements, Pacific Beverage warehouse at Cabrillo Business Park project, the Cortona Apartments project, and the Fire Station 10 project. In total, these projects would add approximately 186 residential units, 98,780 square feet of warehouse/office space, an 11,600-square foot fire station, and a 500 KW battery storage facility (City of Goleta 2018b). Cumulative impacts as a result of construction and operation of these projects in concert with implementation of the MBHMP could be potentially significant.

As described in the discussion of environmental checklist Sections 1 through 20, with respect to all environmental issues, the MBHMP would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated. Additionally, the Coverage Area is adjacent to the existing 9.3-acre Coronado Butterfly Preserve, owned and maintained by the Land Trust for Santa Barbara County. As a result, implementation of the MBHMP would result in potentially beneficial cumulative impacts by restoring and enhancing monarch habitat near an existing preserve. Based on the minor and temporary nature of the activities that would occur under the MBHMP, with incorporated mitigation measures, and considering the impacts associated with other past, current, or probable future development in the area, the potential contribution to cumulative impacts for all issue areas would not be cumulatively considerable. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Effects to human beings are generally associated with impacts related to air quality, hazards, and noise. Short-term air-quality impacts would be minimal and less than significant with implementation of AQ-1 to reduce fugitive dust generation during covered activities. As discussed in

Section 9, *Hazards and Hazardous Materials*, the MBHMP would result in a less than significant impact related to hazards and hazardous materials. Adverse effects on human beings would result mainly from noise generated during fuel management activities such as vegetation clearing and tree trimming near the adjacent residences. However, as stated in the Section 12, *Noise*, this impact would be less than significant with adherence to Mitigation Measure N-1. Implementation of the MBHMP would have the beneficial impact to humans of reducing the risk of falling trees, trail hazards, and wildfires in the Coverage Area. Overall, this impact would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

Mitigation Measures

Mitigation Measures AQ-1, BIO-1 through BIO-9, CUL-1, HWQ-2, and N-1 would apply to this environmental resource area.

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Draft
Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan

January 2019

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EXECUTIVE SUMMARY

This Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan (MBHMP) outlines the programmatic approach and methods for the City of Goleta (City) to manage and improve the Ellwood Mesa eucalyptus forest for the benefit of the overwintering behavior of the monarch butterfly (*Danaus plexippus*), other wildlife, and the public's use and enjoyment.

Two key local policy documents drive the protection of the monarch butterfly: the Goleta General Plan/Coastal Land Use Plan (General Plan; City of Goleta 2006) and The Ellwood-Devereux Coast Open Space and Habitat Management Plan (Open Space Plan; City of Goleta et al. 2004). The Coastal Land Use Plan is not yet certified. These policy documents provide an important context for this MBHMP.

The 22 programs detailed in this MBHMP organize and integrate the many diverse aspects of habitat management into an overall plan that can be implemented in a clear and concise manner. Each specific program identifies individual goals, policies, and actions to establish a well-organized and efficient process leading to a management strategy for the sustainability of monarch habitat at Ellwood Mesa. The programs are followed by implementation priorities, schedules, needs, and contacts for those responsible for the implementation.

The 22 programs are organized into four categories: Administrative Programs; Natural Resources Management Programs; Outreach Programs; and Monitoring, Research, and Adaptive Management Programs.

- The nine Administrative Programs are designed to assist the City with and inform the many MBHMP stakeholders of the details regarding implementation of the MBHMP.
- The seven Natural Resources Management Programs articulate the goals, policies, and actions necessary to maintain and improve the many important natural resources, including biological diversity and ecosystem functions associated with the Ellwood Mesa eucalyptus groves and the monarch butterfly aggregation sites they support.
- The three Outreach Programs are designed to provide information for visitors, educators, and students to help develop a broad appreciation for natural resources and local natural heritage, with a focus on monarch butterflies.
- The three Monitoring, Research, and Adaptive Management Programs provide a mechanism for assessing environmental conditions and conducting original studies to help understand the ecology of monarch butterflies, particularly at Ellwood Mesa. Information obtained from these programs and other sources can be used to adapt the MBHMP in response to additional information or changing conditions.

With adoption and implementation of this MBHMP, the City will fulfill a major commitment to the natural resources of Ellwood Mesa and its residents, and to all those committed to the conservation of monarch butterflies.

Funding for implementation of the MBHMP will be drawn from a variety of sources, which may include grants, donations, mitigation fees, and City funds. An implementation budget estimate is included in Appendix 1. On June 29, 2018, the California state budget for the 2018–2019 fiscal year was approved and included a provision allocating 3.9 million dollars to the City for management and restoration of the monarch butterfly habitats on Ellwood Mesa. The state funds will be maintained in an account separate from other City funds and will be used only for actions to restore, enhance, manage, and monitor butterfly habitats on Ellwood Mesa. In the near-term, this funding will be instrumental in getting the MBHMP's programs operational and in addressing some of the imminent habitat issues that presently face the grove.

INTRODUCTION

BACKGROUND

Monarch butterfly (*Danaus plexippus*) use of the eucalyptus groves on Ellwood Mesa in the City of Goleta (City), California has inspired many residents and visitors over the years to help in the preservation and conservation of this important natural phenomenon. These eucalyptus groves occur in the City-owned Ellwood Mesa/Sperling Preserve Open Space (Ellwood Mesa Open Space or Ellwood Mesa) (Figure 1).

Over-wintering monarch butterfly aggregations in Ellwood Mesa groves have numbered in the tens of thousands during some years, making Ellwood Mesa one of the most important sites for monarch butterflies in California (Pelton et al. 2016). Each fall, monarch butterflies in the western United States migrate to the coast of California from various locations throughout western North America. The butterflies arrive at Ellwood Mesa in mid-September and, as winter approaches, cluster into aggregation roosts, often called overwintering or wintering colonies. The butterflies remain until about mid-February, when they generally disperse inland.

The eucalyptus groves at Ellwood Mesa are called the Ellwood Complex. As shown on Figure 2, six monarch butterfly over-wintering sites occur in the complex: Sandpiper, Ellwood North, Ellwood West, Ellwood Main, Ellwood East, and Ocean Meadows. The Ellwood East site is on private property and not within the Ellwood Mesa Open Space and is therefore outside the scope of this Monarch Butterfly Habitat Management Plan (MBHMP); however, it is included for context. The Ellwood Main site is located along Devereux Creek and is the primary aggregation site for over-wintering butterflies in Ellwood Mesa.

Information and data regarding the condition of the butterfly population and groves—as well as trends in butterfly health, number, and behavior—were compiled over the last several years through a collaborative effort between City staff and the City's consultants—Althouse and Meade, Rincon Consultants, and Agri-Turf Supplies. Tracking butterfly numbers at Ellwood aggregation sites has been an ongoing effort that began in 1989 and has been maintained by the City since the City's incorporation in 2002. A Habitat Assessment was completed for Ellwood Mesa in 2013 to document the habitat conditions and health of the eucalyptus groves on the mesa (Althouse and Meade, Inc. 2013). In 2017, during the 5-year drought, the condition of the eucalyptus trees was assessed at the aggregation sites, and tree mortality was determined throughout Ellwood Mesa. The development of management priorities was an expanded effort between City staff, the consultant team, the City's monarch butterfly docents, and members of the public.

The monarch butterfly populations at Ellwood Mesa and in California statewide have declined at least 74% since the 1990's (Pelton et al. 2016). The monarch butterfly is listed on the California Department of Fish and Wildlife's (CDFW) Special Animals List with overwintering roosts designated as imperiled to vulnerable in the state (CDFW 2017). Currently, the species is under federal review for potential listing under the Endangered Species Act (ESA), and the U.S. Fish and Wildlife Service (USFWS) plans to make its determination of whether this species warrants ESA listing by June 30, 2019.

Figure 1. Vicinity Map

Figure 2. Monarch Butterfly Aggregation Sites

Photo 1. Monarch Butterfly (*Danaus plexippus*) Aggregation on Blue Gum (*Eucalyptus globulus*)

POLICY

Two key local policy documents drive the protection of the monarch butterfly: the Goleta General Plan/Coastal Land Use Plan (General Plan; City of Goleta 2006) and The Ellwood-Devereux Coast Open Space and Habitat Management Plan (Open Space Plan; City of Goleta et al. 2004). These policy documents provide an important context for this MBHMP. Additionally, the City's Community Wildfire Protection Plan (CWPP) was used as a key reference. The Goleta Urban Forest Management Plan (as amended and approved February 21, 2017) was also used to guide management recommendations. A summary of related policies and/or actions is provided below.

Goleta General Plan/Coastal Land Use Plan – Conservation Element

Monarch butterfly overwintering sites are considered Environmentally Sensitive Habitat Areas (ESHAs) under the Coastal Act because the occupied groves meet the definition of an ESHA in Section 30107.5 of the California Coastal Act. An ESHA is defined as follows:

> Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

As such, autumnal and overwintering sites are protected by the Coastal Act and the General Plan. Specifically, the General Plan protects monarch butterflies and associated habitat via General Plan Conservation Element Policy 4, Protection of Monarch Butterfly Habitat Areas. The objective of the policy is as follows:

> To preserve, protect, and enhance habitats for monarch butterflies in Goleta, including existing and historical autumnal and winter roost or aggregation sites, and promote the long-term stability of over-wintering butterfly populations.

The definition of butterfly habitat is stated in subpolicy CE 4.1, Definition of Habitat Area, as follows:

> Sites that provide the key elements essential for successful monarch butterfly aggregation areas and are locations where monarchs have been historically present shall be considered ESHAs. These elements include stands of eucalyptus or other suitable trees that offer shelter from strong winds and storms, provide a microclimate with adequate sunlight, are situated near a source of water or moisture, and that provide a source of nectar to nourish the butterflies.

Additional subpolicies pertaining to the protection of this important local resource are provided in Policy CE 4 of the General Plan Conservation Element and were used to guide the preparation of this MBHMP.

Ellwood Mesa Open Space Plan

The 230-acre Ellwood Mesa is part of a 652-acre contiguous open space along the Ellwood-Devereux Coast that is managed by the City, the County of Santa Barbara, and the University of California, Santa Barbara (UCSB). In March 2004, these three agencies released The Ellwood-Devereux Coast Open Space and Habitat Management Plan (City of Goleta et al. 2004). The sections of the plan applying to the Goleta properties (referred to as the Ellwood Mesa Open Space Plan) were adopted by the Goleta City Council on June 24, 2004.

The Ellwood Mesa Open Space Plan establishes the following goal and policies that guide the management actions related to the monarch butterfly and supporting habitat:

> **Monarch Goal 1.** Protect and maintain existing monarch butterfly populations in the Open Space Plan Area, and manage the habitats to be self-sustaining.
>
> > **Monarch Policy 1.** Manage public access to protect butterflies and their habitat, while promoting public enjoyment, education, and scientific research.
> >
> > **Monarch Policy 2.** Conduct scientifically sound studies using appropriate and cautious methods to maintain and improve habitat conditions to ensure long-term viability of the population.
> >
> > **Monarch Policy 3.** Implement phased habitat improvements using pilot programs, small-scale projects, and adaptive management.

Additional overarching management goals and policies are provided in the Ellwood Mesa Open Space Plan and were used to guide the preparation of this MBHMP.

Community Wildfire Protection Plan

The City's CWPP was adopted by the City Council on March 20, 2012. The purpose of the CWPP is to enhance community wildfire protection by identifying fire hazard treatments that are in balance with sustainable ecological management and fiscal resources. The CWPP presents design standard recommendations for fuel treatments specific to areas near butterfly aggregation sites that are intended to minimize adverse effects on adjacent habitat while reducing hazardous fuels. Key recommendations focus on the coordination between butterfly and wildland fire experts during planning and implementation of fuel treatment strategy prescriptions. The CWPP was used during the preparation of this MBHMP, and this MBHMP is intended to support implementation of the CWPP, which is further discussed in detail in Program 4 (City of Goleta 2012).

Goleta Urban Forest Management Plan

The Goleta Urban Forest Management Plan (GUFMP) (as amended and approved February 21, 2017) was also used to guide management recommendations. The GUFMP provides a guide for the long-term preservation and enhancement of the urban forest within the City's jurisdiction. The urban forest is defined as all public and private trees including the street tree system, trees in parks and other public lands, and trees on private properties throughout the City. The vision statement of the GUFMP is:

> Goleta's urban forest is a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all of its citizens as an essential environmental, economic and community benefit.

The GUFMP Section 4.7 Very Mature Tree Care calls to establish a regular maintenance program for trees located in parks, open spaces, and median islands to ensure very mature tree health. Mulching, fertilization, and pruning are three major practices used to tend to mature trees. The MBHMP fulfills this section for a tree maintenance program for Ellwood Mesa eucalyptus groves.

PURPOSE

The purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation. The intent of the management approach is to maintain and improve habitat conditions to ensure long-term viability of the monarch butterfly population, while allowing for coastal access, education and compatible recreational opportunities. The 22 programs detailed in this MBHMP organize and integrate the many diverse aspects of habitat management into an overall plan that can be implemented in a clear and concise manner.

METHODS

This MBHMP is the result of careful consideration of existing information, site surveys, inventory, and assessment of tree health within the groves, consultation with a broad array of professionals and interested public, and discussions with City staff. The City collaborated with Althouse and Meade, Inc. and Rincon Consultants, Inc. in the preparation of this MBHMP. This MBHMP is composed of 22 programs, each of which contains a goal, one or more policies, and one or more actions associated with each policy. Information on program status, needs, and contacts are also included, as well as general priority and schedule information and an annual cost estimate (Appendix 1). A main focus of each program is to establish an implementation structure with targets and actions to achieve present and future goals. . The scope of this MBHMP includes monarch butterfly habitat in the City's Ellwood Mesa Open Space, including aggregation sites, forest areas, and nectaring locations (refer to Figure 1 for a vicinity map and Figure 2 for a map of the butterfly aggregation sites and Habitat Management Area).

For the purposes of this MBHMP, the following definitions apply:

Program: a planned series of activities.

Goal: a broad statement of program intentions.

Policy: a set of plans or actions agreed upon by the interested parties.

Action: the process of doing something to achieve a goal.

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THE HABITAT MANAGEMENT PLAN

This MBHMP for the Ellwood Mesa Open Space is organized into four categories: Administrative Programs; Natural Resource Management Programs; Outreach Programs; and Monitoring, Research, and Adaptive Management Programs. These programs—including their goals, policies, actions, implementation priorities, and schedules—are described in the sections that follow.

A. ADMINISTRATIVE PROGRAMS

Administrative programs are designed to assist the City and inform the many MBHMP stakeholders of the details regarding implementation of the MBHMP. Identifying specific programs and their goals, policies, and actions enables a well-organized and efficient process to be established that leads to a management strategy for the sustainability of monarch habitat at Ellwood Mesa.

It is the City's intent that the goals and policies of this MBHMP should be considered and incorporated into future land use planning and policy documents, such as General Plan amendments and a Local Coastal Program, as appropriate, as these documents are developed.

1. Municipal Management Program

Overview: This program focuses on the role of the City as manager of the Ellwood Mesa Open Space and, in particular, the role of the City in the implementation of this MBHMP. Habitats included in this MBHMP include primarily the eucalyptus groves and windrows used by monarch butterflies for winter aggregations at Ellwood Mesa, covering approximately 230 acres from Hollister Avenue south to the ocean bluffs and from UCSB west to the Sandpiper Golf Course. The eucalyptus groves and windrows occur in the context of coastal mesa grasslands, coastal scrub, riparian habitats, and residential development. Therefore, they are part of a larger coastal ecosystem and neighborhood, with management priorities for which the MBHMP is designed to be compatible.

Goal 1. To implement the MBHMP, with the City providing the administrative structure to oversee the programs and scheduling, and to interface with the community at large.

Policy 1-1. The City shall review, and revise as necessary, the MBHMP to reflect current data, butterfly conservation science, and management techniques that apply to the local monarch population.

Action 1-1.1. Conduct a public workshop to inform the community regarding the content and implementation of this MBHMP.

Action 1-1.2. Conduct environmental review of this MBHMP, including a public hearing.

Action 1-1.3. Prepare any necessary revisions to this MBHMP to resolve any issues identified during public review.

Action 1-1.4. Submit this MBHMP to the Goleta City Council for review and discussion, followed by adoption and implementation.

Policy 1-2. During implementation of the programs, goals, policies, and actions described in this MBHMP, and during the planning and implementation of other projects that may affect monarch butterfly habitat within the Ellwood Mesa Open Space, protection of the environment and specifically of monarch butterfly habitat shall be given the utmost consideration.

Action 1-2.1. Whenever vegetation removal, ground disturbance, construction, or other activities with the potential to significantly disrupt habitat values are proposed within the MBHMP coverage area by the City or any other agency or utility, environmental protection measures shall be implemented. These measures shall be determined in coordination with a qualified biologist, and ~~should normally~~ shall include at a minimum pre-activity surveys for nesting birds or other wildlife, pre-activity surveys for monarch butterfly aggregations, presence of an environmental monitor during construction, and other protections, as deemed appropriate. The City will monitor these activities to ensure that environmental protection measures are used and that activities are limited to those permitted.

Policy 1-3. Because many of the MBHMP actions are related to trail improvements, tree work, and related project implementation monitoring and reporting, the City's Public Works Department shall oversee the implementation of this MBHMP. Public Works personnel overseeing implementation will have specific knowledge and experience to properly follow directives of this MBHMP.

Action 1-3.1. The City's Public Works Department, Neighborhood Services and Public Safety Department, and Planning and Environmental Review Department will coordinate regularly regarding MBHMP implementation.

Policy 1-4. The MBHMP is an overarching, long-term conservation strategy, setting forth the broad objectives, desired outcomes, and management policies for the Ellwood Mesa monarch butterfly habitat. Periodic Implementation Plans shall identify and describe short-term actions needed to further the goals and objectives of the MBHMP, taking into consideration current conditions and funding levels at the time each Implementation Plan is prepared.

Action 1-4.1. On an annual basis, or as warranted based on habitat conditions as determined by the City's Public Works Department, prepare an Implementation Plan identifying the actions planned to implement the MBHMP's programs, goals, policies, and actions during the coming year.

Action 1-4.2. The City's Public Works Department ~~staff~~ shall present each annual Implementation Plan at a public hearing for stakeholder input and City Council approval.

Program Status: This MBHMP has been completed and is in the process of undergoing environmental review.

Program Needs: A public workshop, MBHMP review and revision as needed, and a public hearing—followed by adoption by City Council—are to be achieved.

Program Contact: Public Works Department

2. Fiscal Program

Overview: Successful implementation of this MBHMP and related conservation of the Ellwood Mesa Open Space depend in part on the ability to provide funding for the various programs contained in this MBHMP. Funding will come from a variety of sources as identified herein.

Goal 2. To provide short-term (annual), long-term (endowment), and special project (grant) funding for the implementation of this MBHMP.

Policy 2-1. The City shall consider providing annual funding to support MBHMP implementation.

Action 2-1.1. Consider appropriating General Fund, Special Revenue Fund, or Grant Fund monies, as available, during the bi-annual and mid-cycle budget processes.

Action 2-1.2. Consider including the implementation of MBHMP as a project sheet in the Capital Improvement Program annual budget.

Action 2-1.3. Develop an annual needs list from which the annual operating budget can be determined. This list should be included in the annual Implementation Plan (see Policy 1-3).

Policy 2-2. The City shall manage and use the City's Ellwood Mesa Butterfly Fund (Butterfly Fund) (226-5-9800-706) to pay for the implementation of the MBHMP and special projects consistent with the requirements of the fund. The Butterfly Fund shall be supplemented by grant funds and compensatory mitigation fees, as available.

Action 2-2.1. Manage the Butterfly Fund such that the fund may serve as an implementation funding source. Continue to identify grant funds to supplement the Butterfly Fund. Accept donations specific to the Butterfly Fund.

Action 2-2.2. Allow payments of compensatory mitigation fees into the Butterfly Fund, as deemed appropriate during CEQA analysis for projects with limited impacts on monarch butterfly habitat.

Program Status: The City provides annual funds in support of planning initiatives and general management needs at the Ellwood Mesa Open Space. With adoption of this MBHMP, funds can be

earmarked annually for implementation of programs and specific actions within this MBHMP. Furthermore, grants and other fundraising opportunities will exist for which City funds can be used as a local match to new funds raised from external sources. In the near term, the $3.9 million allocated in the State Budget will provide a vital funding source.

Program Needs: Adoption of this MBHMP so the Fiscal Program can be implemented.

Program Contact: Public Works Department

3. Interagency Cooperative Program

Overview: In today's complex regulatory environment, important sites for natural resource conservation can be subject to conflicting regulatory goals at the federal, state, county, and municipal levels. Management of threatened or endangered species that may occur in the future—and rare species and sensitive habitats at Ellwood Mesa—require careful coordination among regulatory partners so that conflicts are minimized.

Goal 3. To develop cooperative relationships with federal, state, county, and municipal agencies toward the implementation of integrated management practices favorable to the conservation of the monarch butterfly habitats at Ellwood Mesa Open Space.

Policy 3-1. The City shall pursue cooperative relationships with other agencies regarding regulatory goals and policies that the partners have in common concerning the Ellwood Mesa Open Space, in particular, goals and policies that have an impact on the management of the monarch butterfly aggregation sites.

Action 3-1.1. As appropriate and productive, pursue cooperative relationships with federal agencies such as the USFWS and the U.S. Army Corps of Engineers to obtain potential permits, identify funding opportunities, and identify/pursue other potentially shared interests regarding the natural resources at Ellwood Mesa, with a focus on sustaining monarch butterfly aggregation sites.

Action 3-1.2. As appropriate and productive, pursue cooperative relationships with state entities such as the CDFW, Regional Water Quality Control Board (RWQCB), UCSB, and California Coastal Commission (CCC) to obtain potential permits, identify funding opportunities, and identify/pursue other potentially shared interests regarding the natural resources at Ellwood Mesa, with a focus on sustaining monarch butterfly aggregation sites.

Action 3-1.3. As appropriate and productive, pursue cooperative relationships with Santa Barbara County departments (such as Agricultural Commissioner, Fire, Parks, Planning and Development, Flood Control, and Public Works) to obtain potential permits, identify funding opportunities, solve problems, and identify/pursue other potentially shared interests regarding the natural resources at Ellwood Mesa and adjacent properties, with a focus on sustaining monarch butterfly aggregation sites.

Program Status: City staff regularly coordinates with the County of Santa Barbara and UCSB. Additionally, City staff has formed a functioning interdepartmental working relationship among the Public Works Department, Neighborhood Services and Public Safety Department, and Planning and Environmental Review Department regarding the management of Ellwood Mesa. Many additional productive relationships can be pursued related to the conservation of monarch and other butterflies.

Program Needs: Adoption of this MBHMP and implementation of its programs.

Program Contacts: Public Works Department, Neighborhood Services and Public Safety Department, and Planning and Environmental Review Department

4. Community Wildfire Protection Program

Overview: One of the most important efforts regarding coordination of potentially competing management goals is the identification and resolution of conflicts between the actions to protect the adjacent communities from the threat of wildfires while also providing protection of the habitats for seasonal aggregation of monarch butterflies at the Ellwood Mesa Open Space. The groves and windrows, composed primarily of blue gum eucalyptus (*Eucalyptus globulus*), are fire-prone and can present a threat to residential communities adjacent to the butterfly habitats. The CWPP was produced in coordination with this MBHMP to provide management practices compatible with monarch butterfly aggregation site protection. The City's adopted CWPP provides important context for the management of these resources.

Ellwood North, Main, and West sites are the aggregation locations within the groves on Ellwood Mesa that are directly adjacent to residences along eucalyptus grove boundaries (Figure 2). The Sandpiper site is not directly adjacent to structures, but it is adjacent to the Sandpiper Golf Course (Figure 2). In habitat areas that are not adjacent to structures, fuel treatments consist of mowing along the outside edge of the grove.

The Monarch Butterfly Aggregation Area Treatment Strategy section of the CWPP states that fuel treatments in areas near human developments are critical measures in the wildfire protection strategy for both residences and butterfly aggregations and habitat. Trees along grove edges provide wind and weather protection for aggregation sites. Therefore, it is important to maintain adequate tree density inside these edges (The Xerces Society 2017). Larger trees are not the primary fuel of concern in the spread of wildfire; rather, the greater hazard and threat are understory vegetation, dead/downed trees, and fuels that could create fire ladders. The CWPP describes the prescription guidance for butterfly aggregation areas adjacent to structures and outlines approved actions to be taken within 100 ft. of structures to reduce the ignitability of those structures. Figure 3 shows the CWPP fuel reduction zones within the MBHMP area.

In butterfly aggregation areas within 100 ft. of homes, the fuel treatment strategy prescribed by the CWPP includes removal of understory, ladder fuel, and dead/downed fuel. Careful thinning of smaller or unhealthy trees within 30 feet of the grove edge is recommended while considering the wind buffering needs of the aggregation site. Fuel reduction implementation and subsequent monitoring should involve input by City-approved monarch butterfly and wildfire professionals.

Goal 4. To provide management practices within the eucalyptus groves and windrows that support healthy monarch butterfly habitat and are compatible with the City's CWPP.

Policy 4-1. The goals, policies, and actions of this MBHMP shall be consistent with the intent of the CWPP to reduce the ignitability of homes and structures.

Figure 3. CWPP-related fuel reduction zones within the MBHMP area

Action 4-1.1. Support implementation of Goleta's CWPP in the 100-ft. buffer from homes and structures as the 100 ft. extends into the Ellwood Mesa eucalyptus groves with actions outlined in below in Table 1 (as seen in Table 14 of the CWPP).

Table 1. CWPP Prescription Guidance for Butterfly Aggregation Areas Adjacent to Structures

Location	Primary Defense Zone (A)*** (0 – 30')	Fuel Reduction Zone (B*** (30' – 100')
Fuel Type	Based on Defensible Space PRC – 4291 and Firefighter Safety	
Grass/ Forbs	Reduce fuel depth to 4 inches; methods include mowing, masticating, weed-whacking, biological browsing	Same treatment as (A); longer grass in isolated open areas is acceptable.
Surface dead/ down material	Clear dead/down flammable materials; methods include raking, hand-piling/ removal, masticating chipping/ dispersal on site	Reduce dead/down flammable material to < 3" depth; methods same as (A).
Brush/ Shrub fuel	Remove to a spacing (between edges of brush) generally 2x brush height on <20% slopes; methods include masticating or hand-cutting, biological browsing	Same Treatment as (A); a pocket or clump of brush can be treated as one large shrub in more open site conditions.
Trees Overstory without brush understory	Trim or thin only trees that do not provide protection to monarch butterfly aggregation sites* Thin smaller or unhealthy trees at 10 – 20 ft crown spacing (as determined by slope, tree size and type); Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches 6-15 ft up, or lower 1/3 of tree height on trees smaller than 18 ft.	Trim or thin only trees that do not provide protection to monarch butterfly aggregation sites* Thin smaller or unhealthy trees at approximately 10 ft crown spacing (as determined by slope, tree size and type);. Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches approximately 6 ft up, or lower 1/3 of tree height on trees smaller than 18 ft.

Location	Primary Defense Zone (A)*** (0 – 30')	Fuel Reduction Zone (B*** (30' – 100')
Fuel Type	Based on Defensible Space PRC – 4291 and Firefighter Safety	
Trees Overstory with brush understory	Trim or thin only vegetation that does not provide protection to monarch butterfly aggregation sites* Thin small or unhealthy trees at 10-20 ft crown spacing (based on slope, tree size and type). Leave larger trees at 10 ft. crown spacing unless toppling hazard.**(Reduce ladder fuels by pruning lower branches 6-15 ft up, or lower 1/3 of tree height on smaller trees In understory: remove brush ladder fuel. Methods include masticating or hand-cutting.	Trim or thin only vegetation that does not provide protection to monarch butterfly aggregation sites* Thin small or unhealthy trees to approximately 10 ft. crown spacing. Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches approximately 6 ft up, or lower 1/3 of tree height on smaller trees. In understory remove brush ladder fuel. In non-canopied areas, non-continuous patches of shrubs or small trees in openings is acceptable. Methods include masticating or hand-cutting.

*As determined by the Goleta City Project Manager overseeing mitigation work in consultation with a City-approved monarch butterfly specialist and a City-approved wildland fire specialist.
**As determined by the Goleta City Project Manager and Goleta City arborist.
***For further information specific to homeowner/structure mitigation measures see CWPP Section 6.2.1.

Action 4-1.2. Support implementation of Goleta's CWPP, specifically in regard to guidelines that are not in potential conflict with the management of the groves that support monarch butterfly aggregation sites, as noted below.

Action 4-1.3. Maintain and revegetate moderate cover of understory in and around aggregation sites with fire-resistant, native plant species (The Xerces Society 2017) (Appendix 3).

Action 4-1.4. Conduct all wildfire protection work within 300 feet of butterfly aggregations areas between April 1 and September 15, outside of monarch butterfly overwintering season.

Action 4-1.5. Coordinate with City-approved butterfly and wildland fire experts during planning and implementation of any fuel treatments since conditions within groves can change and aggregation locations may shift.

Action 4-1.6. Install a large, bilingual "NO PARKING-FIRE LANE" sign at Santa Barbara Shores access gate.

Policy 4-2. Trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to ensure their health and longevity in the context of a high fire hazard environment.

Action 4-2.1. Implement Program 12, Tree Management Program, to reduce fire hazard, improve public safety, and eliminate trees that are threatening the sustainability of the aggregation sites, including dead, diseased, and dying trees.

Photo 2. Evidence of Wildfire (Charred Trunks) at Main Grove – East, Ellwood Mesa Open Space

Program Status: The CWPP was adopted with the passage of Resolution No. 12-21 by the Goleta City Council on March 20, 2012. ~~The Ellwood Mesa Implementation Plan is in environmental review.~~

Program Needs: Adoption and implementation of CWPP and the MBHMP will result in a reduction of wildfire hazards associated with eucalyptus groves.

Program Contact: Public Works Department

5. Trail Management Program

Overview: Public access trails are located through or adjacent to most of the monarch butterfly aggregation sites on Ellwood Mesa. These localized trails link together a series of regional trails, adjacent residential neighborhoods, and other preserves, such as the Coronado Butterfly Preserve managed by the Santa Barbara Land Trust and open space lands managed by the University of California system. Public access, including organized field trips to see the seasonal aggregations of monarch butterflies, is an important part of the Ellwood Mesa experience. However, repeated and increasing access along the semi-formal trails can result in negative impacts on the habitats and overall site aesthetics. Additionally, the trees constituting the butterfly habitat do occasionally die, fall, and shed limbs, creating hazardous conditions for recreationalists at certain locations.

Goal 5. To develop and maintain public access trails that provide a safe and meaningful experience for visitors while also limiting impacts on habitats and wildlife, in particular, monarch butterflies and their seasonal aggregation sites.

Policy 5-1. The City shall maintain existing public access trails that provide a safe experience for visitors to the eucalyptus groves supporting seasonal monarch butterfly aggregation sites.

Action 5-1.1. Maintain existing public access trails through the eucalyptus groves supporting monarch butterfly aggregation sites by reducing threats of trips, slips, and falls. May use Trails Council and CCC to help with maintenance.

Action 5-1.2. Implement Program 12, Tree Management Program, to reduce the threats from falling tree limbs and trunks.

Action 5-1.3. Repair damage to trial boundary ropes and posts, as needed.

Action 5-1.4. Prevent damage to seasonal monarch habitat by installing additional trail boundary posts, ropes, and signs, as necessary, consistent with those at the Ellwood Main monarch aggregation area.

Action 5-1.5. Use wood chips on trails to reduce soil compaction and decrease erosion during wet months.

Action 5-1.6. Retain and maintain Ellwood Main visitor viewing area boundary signs and rails.

Action 5-1.7. Review locations of trail and viewing area delineations and adjust if needed to protect trees or butterflies, annually.

Action 5-1.8. Review trail conditions on an annual basis and provide recommendations on improvements and modifications regarding human safety, trail maintenance, and ecosystem health, including conservation of monarch butterfly habitat in relationship to location,

condition, use of trails, and number of visitors. Include recommendations for any tree trimming, removal recommendations, or other tree safety issues in the annual Implementation Plan.

Action 5-1.9. Long-term closure of official trails is undesirable and should not be used as a management approach. It is preferable to remedy trail hazards promptly, or to allow trails to remain open with appropriate signage alerting users to the risks present.

Policy 5-2. Maintain and improve existing links between trails associated with eucalyptus groves that support monarch butterfly aggregation sites at Ellwood Mesa with the adjacent Coronado Butterfly Preserve.

Action 5-2.1. Coordinate trail improvement activities with the Santa Barbara Land Trust and UCSB staff to ensure that improvements are compatible.

Action 5-2.2. Coordinate trail improvements with proposals for the Coastal and Juan Bautista De Anza trails that traverse Ellwood Mesa, which also link to trails within the eucalyptus groves that support monarch butterfly aggregation sites, to ensure protection measures are addressed for the aggregation sites.

Program Status: Public access trails already exist within the majority of the aggregation sites, but human safety issues exist because of the poor condition of many eucalyptus trees along the trails and eroded trail conditions. Impacts on eucalyptus groves supporting monarch butterfly aggregation sites also exist as a result of public access.

Program Needs: Dead and dying trees along trails and viewing areas present a public safety risk and risk to habitat stability. The Implementation Plan should detail work to be accomplished on an annual basis to maintain access and protect the public and sensitive habitat. Eroded trail conditions and overhanging trees can be public safety issues as well as tree health issues, necessitating trail improvements.

Program Contact: Public Works Department

6. Waste Management Program

Overview: Although the City's Public Works Department staff conducts inspections and removes easily visible waste and trash, unauthorized off-trail use, homeless encampments, and related trash dumping periodically occur in the Ellwood Mesa's eucalyptus groves. The City's butterfly docents also remove trash and alert the Public Works Department staff when there are new accumulations of trash and/or other debris that are too large or abundant for hand removal.

Goal 6. To maintain a waste-, trash-, and debris-free butterfly habitat management area.

Policy 6-1. The City shall collect, remove, and appropriately dispose of all waste, trash, and debris that accumulate in habitat on Ellwood Mesa.

Action 6-1.1. Continue to remove existing accumulations of waste, trash, and debris from monarch butterfly habitat and dispose of them in an appropriate manner. Coordinate with Sheriff's Office for removal of homeless encampments, if necessary.

Policy 6-2. The City shall inform visitors of the monarch butterfly habitat of rules relating to trash and debris policies associated with monarch butterfly habitat.

Action 6-2.1. Post signs at appropriate locations stating open space user rules; for example, "Please take out your trash" and, "Day Use Only – Camping Prohibited."

Action 6-2.2. Educate the public through seasonal, on-site presence by the City's butterfly docents about the importance of maintaining the groves free of trash.

Action 6-2.3. Place trash cans in the parking lot. Inspect annually and replace as needed.

Program Status: Despite trash removal attempts by Public Works Department staff and the City's butterfly docents, various sites throughout the monarch butterfly habitat at Ellwood Mesa accumulate trash and other debris from human activity.

Program Needs: Trash and debris should be removed, where feasible, from the Ellwood Mesa habitat that support monarch butterfly aggregation sites.

Program Contact: Public Works Department, Neighborhood Services and Public Safety Department

7. Aesthetic Resources Management Program

Overview: Portions of Ellwood Mesa eucalyptus groves suffer from grove senescence, drought, pests, disease, or lack of formal management efforts that maintain consistent aesthetic values. Fencing and signs are irregularly installed and inconsistently maintained. They also lack a consistent theme. This MBHMP would provide a consistent management structure.

Goal 7. To integrate this MBHMP's programs into an effort to improve the quality of aesthetic resources of the Ellwood Mesa, in particular, the eucalyptus groves and windrows supporting monarch butterfly aggregation sites.

Policy 7.1. The City shall provide stewardship and management oversight of the eucalyptus groves, in particular, those areas supporting monarch butterfly aggregation sites.

Action 7-1.1. Adopt and implement this MBHMP, including its 22 management programs.

Action 7-1.2. Provide integration of program goals, policies, and actions to improve the overall aesthetics of the various groves, including installation of a consistently designed

interpretive program and strategically placed fencing, as more specifically outlined in Program 18, Interpretive Program.

Policy 7.2. Signs, fencing, and restoration efforts associated with monarch butterfly habitat on Ellwood Mesa shall be aesthetically compatible with natural conditions.

Action 7-2.1. Review signage and fencing design for compatibility with the Ellwood Mesa natural areas.

Action 7-2.2. Review restoration plantings and activities for appropriate aesthetic compatibility.

Program Status: Adoption and implementation of this MBHMP will result in a more sustainable and visually pleasant user experience because of the improved aesthetic value of the Ellwood Mesa eucalyptus groves and monarch butterfly aggregation sites.

Program Needs: Adopt and implement this MBHMP.

Program Contact: Public Works Department

8. MBHMP Review, Update, and Amendment Program

Overview: Reviewing and updating key planning documents would ensure that the management goals and actions are working as intended. Updating and amending programs, when needed, would ensure that the planning document is responsive to the changing needs of the community and the resource.

Goal 8. To maintain the relevance of this MBHMP with periodic reviews, updates, and amendments.

Policy 8-1. The City shall review this MBHMP as the need for updates and amendments arises (e.g., changes in physical conditions, regulations, or expansion of habitat management knowledge or strategies) or at least every 5 years.

Action 8-1.1. Conduct internal and public review of this MBHMP, as conditions warrant.

Action 8-1.2. Update information in this MBHMP, as conditions warrant.

Action 8-1.3. Amend programs, goals, polices, and actions in this MBHMP to reflect the results of the review and update process.

Action 8-1.4. Seek public input on amendments to programs, goals, polices, and actions in this MBHMP.

Action 8-1.5. Conduct environmental review, if necessary (new or modified policies and actions pose new impacts).

Action 8-1.6. Obtain approval by the Goleta City Council and adopt amended MBHMP.

Program Status: Adoption of this MBHMP by the City will provide the mechanism for review, update, and amendment.

Program Needs: Commitment to update this MBHMP to ensure that it is meeting the demands of the existing conditions.

Program Contacts: Planning and Environmental Review Department and Public Works Department

9. Catastrophic Event Response Program

Overview: The eucalyptus groves at Ellwood Mesa are at risk of catastrophic environmental events. For example, trees falling during powerful storms could cause collapse of additional trees, excessive fuel loads can spread wildfires, and infestations of insect pests can weaken or kill trees. Because such potential catastrophic events are likely to occur within the monarch butterfly aggregation sites, Program 9, Catastrophic Event Response Program, would put in place a preliminary plan of action to address the consequences of loss of trees or entire groves containing monarch butterfly aggregation sites.

For the purpose of this MBHMP, a catastrophic environmental event is defined as an event causing great ecological distress and damage, either sudden or gradual, across a significant portion of the monarch butterfly habitat within the Ellwood Mesa plan area. This is distinct from an emergency, which may involve emergency responders such as the fire department and would involve immediate actions under their direction to protect life and property. A qualifying catastrophic event could negatively affect a large portion of the eucalyptus groves within the Ellwood Mesa, or could cause substantial damage to single monarch butterfly overwintering site.

The response actions for catastrophic events would primarily involve restoration activities, would not necessarily be funded in the annual budget for this MBHMP and would likely require supplemental funding with approval from the City Council. Funding approved by the City Council should include a finding that the condition is a qualifying catastrophic event. If such a finding is made, funding received through the State Budget or other sources may be also used to address catastrophic events.

As of this writing, the 5-year drought in Goleta from 2012 to 2016 has created dire conditions for the eucalyptus trees at Ellwood Mesa (County of Santa Barbara 2018). Arborists estimate that over 1,200 trees are dead or dying due to drought, drought stress, and infestation by pests across the Ellwood Mesa. The monarch overwintering sites are suffering from the die-back of trees with the loss of canopy and wind protection and loss of roosting branches. The last similar 5-year drought on record for the Goleta area was in 1947–1951 and was not as severe, with 58.05 consecutive rainfall inches, compared with 50.83 inches during the 2012–2016 drought years (County of Santa Barbara

2018). Timing of rainfall since 2012 has also been more concentrated than in prior years, with the annual rainfall occurring in a small number of intense storm events rather than a larger number of small or gentle events. This concentration has come with an increased rainfall intensity, which leads to increased runoff, excess erosion and sediment transport, and decreased groundwater recharge. The ultimate result has been less available water for uptake by trees.

The 5-year drought and the death of over 1,200 trees may qualify as a catastrophic event, if so determined by the City Council.

Goal 9. To prepare for possible catastrophic environmental events within the monarch butterfly aggregation sites by adopting a set of actions that potentially minimize the impacts and plan for a response should such events affect the groves in which aggregation sites are located.

Policy 9-1. The City shall adopt a set of protocols that could minimize the impacts from potential catastrophic environmental events.

Action 9-1.1. Implement Program 12, Tree Management Program, to reduce potential impacts on eucalyptus groves that support monarch butterfly aggregation sites.

Action 9-1.2. Implement Program 4, Community Wildfire Protection Program, to reduce potential impacts on monarch butterfly aggregation sites from wildfire.

Action 9-1.3. Implement Program 13, Integrated Pest Management Program, to reduce the potential impacts from pest infestations.

Policy 9-2. The City shall assess the damage of catastrophic events as they occur and respond with corrective action to restore damaged monarch butterfly habitat.

Action 9-2.1. Measure the extent and assess the magnitude of the damage to the monarch butterfly overwintering habitat.

Action 9-2.2. Design and implement a response strategy with actions to correct and restore the habitat after the catastrophic event and include them in the annual Implementation Plan (Policy 1-3), if practical. When feasible, employ phased approaches with consistent monitoring to evaluate success or need for changes in strategy or actions. Assign priorities, including sources of materials, constraints, and methods for debris management.

Steps for Response Strategy:

1. Define the extent of the damage to the monarch butterfly habitat within the plan area.
2. Divide affected area into sections for a phased approach, based on level of damage and importance of overwintering site compared to other areas.
3. Assign priorities to the divided sections of the damaged area.

4. Implement guidance from Programs 4, 12, and 13 for specifics in those areas.

Example Response Strategy for a catastrophic event that causes the die-back of 25% of the trees in the MBHMP area. The catastrophic event for this example could be fire, drought, pest, disease, wind storm, etc.

1. Consider whether the catastrophic event presents an imminent danger to the public, and install warning signage and/or closures as appropriate.
2. Assess and analyze the extent of the dead/dying trees in the forest at Ellwood Mesa in relation to the monarch butterfly aggregation areas.
3. Establish a phased approach for restoration activities, starting with the most affected areas. Tag and map the trees that are dead, dying, diseased, burnt, hazardous, or otherwise affected by the catastrophic event. Confer with arborists, biologists, and/or other relevant specialist to select trees for removal to benefit the forest on a whole and facilitate restoration. Remove selected trees in the first phase area. The removed trees may be disposed of off=site or chipped for use on site as ground cover. Install new trees and native understory species with irrigation.
4. Monitor the success of the plantings and irrigation over a set time (e.g., 1–2 years). Replace plantings, as needed.
5. Adjust restoration methods if necessary and implement phased approach at the next priority phase area for restoration.
6. Repeat steps 2 through 5 until every area has been attended to and restored.
7. Continue to monitor for the presence of monarch butterflies during the aggregation season and other wildlife.

Action 9-2.3. Request City Council approval for supplemental funding, with a finding that the condition is a catastrophic event. Use funding received from the State Budget, apply for grants, and/or accept private donations for the dedicated mission of monarch butterfly overwintering habitat restoration.

Program Status: Tree condition surveys that have been completed for Ellwood Mesa eucalyptus trees have identified the number of dead trees. Cause of tree mortality has been identified as drought and pest infestations. Ellwood Main and Ellwood North monarch butterfly aggregation sites contain many dead trees. In-depth planning for management and recovery of a living eucalyptus forest will be detailed in an annual Implementation Plan. Similar events have occurred in the past and are likely to be part of the future.

Program Needs: Development of an Implementation Plan addressing the significant die-off of eucalyptus trees on Ellwood Mesa is underway. The City should have an ongoing response program in place so that careful and measured decisions following a catastrophic event can be implemented.

Program Contact: Public Works Department

B. NATURAL RESOURCES MANAGEMENT PROGRAMS

Seven natural resources management programs are provided that articulate the goals, policies, and actions necessary to maintain and improve the many important natural resources, including biological diversity and ecosystem functions, associated with the Ellwood Mesa eucalyptus groves and the monarch butterfly aggregation sites they support.

10. Monarch Butterfly Management Program

Overview: The City's General Plan includes a policy specific to the protection of monarch butterfly habitat areas, including the habitat on Ellwood Mesa. The City's Ellwood Mesa Open Space Plan further specifies the need to protect and maintain the eucalyptus habitat to be self-sustaining and identifies the need for managed public access, scientifically sound existing conditions studies, phased habitat improvements, and adaptive management. The primary focus of the Habitat Management Plan described below is to implement the directives of the General Plan and Ellwood Mesa Open Space Plan.

Goal 10. To ensure the ongoing use of Ellwood Mesa by the monarch butterfly.

Policy 10-1. The City shall implement management strategies that facilitate the use of Ellwood Mesa by monarch butterflies.

Action 10-1.1. Implement Program 12, Tree Management Program, to help facilitate the conservation of the monarch butterfly aggregation sites.

Action 10-1.2. Implement Program 20, Biological Monitoring Program, and Program 21, Monarch Research Program, to expand the body of knowledge and further the understanding of the monarch butterflies' use of the resources at Ellwood Mesa.

Policy 10-2. Preservation of aggregation sites on Ellwood Mesa shall be the focus of management activities, as feasible, and in coordination with Program 9, Catastrophic Event Response Program.

Action 10-2.1. Should one or more catastrophic events result in impacts on the sustainability of monarch butterfly aggregation sites, consider alternative management and recovery strategies that incorporate goals for sustaining aggregation sites at Ellwood Mesa.

Policy 10-3. Ecosystem functions proposed for habitat restoration projects at Ellwood Mesa shall consider inclusion of native plant species.

Action 10-3.1. Implement Program 14, Habitat Enhancement and Restoration Program, as feasible, to improve conditions for native plants and animals and the ecosystem functions

they provide in and adjacent to the eucalyptus groves containing monarch butterfly aggregation sites.

Policy 10-4. To avoid impacts on monarch butterflies while they are present at the Ellwood aggregation sites, no maintenance or restoration work shall be conducted in the aggregation sites from October 1 through March 31 of each year, unless authorized by a qualified biologist.

Action 10-4.1. Unless authorized by a qualified biologist, conduct all site maintenance, tree trimming and removal, habitat restoration, exotic plant removal, and other potentially invasive activities between April 1 and September 30 of each year, when there would not likely be direct impacts on monarch butterflies.

Program Status: Monarch butterflies are important to the ecosystem of Ellwood Mesa and to the City's sense of community. Development and implementation of this MBHMP is an important step in the active conservation of the monarch butterflies and their habitat at Ellwood Mesa.

Program Needs: New information about monarch butterflies regularly emerges from the scientific community, and the Ellwood Main site is an important site for the sustainability of monarchs. The more monarch butterfly biology is understood, the better Ellwood Mesa can be managed.

Program Contact: Public Works Department

11. Wildlife Habitat Management Program

Overview: Eucalyptus groves supporting seasonal aggregation sites for monarch butterflies also provide habitat for other wildlife species. Examples include or have included perches for red-shouldered hawks, roosting sites for turkey vultures, and nesting sites for white-tailed kites, Cooper's hawks, great horned owls, and acorn woodpeckers. This MBHMP identifies management strategies for conserving habitat for monarch butterflies that are intended to be consistent, where feasible, with management of habitat for other wildlife species.

Goal 11. Manage eucalyptus groves at Ellwood Mesa for monarch butterflies in a manner consistent with ecosystem functions for other wildlife species that use the groves as habitat.

Policy 11-1. The eucalyptus groves at Ellwood Mesa that support monarch butterfly aggregation sites shall be managed in a manner consistent with ecosystem functions supporting other wildlife species, where feasible.

Action 11-1.1. All personnel associated with the implementation of this MBHMP will receive educational information regarding the presence of monarch butterfly and other native wildlife species and the need to protect all native wildlife species.

Action 11-1.2. Preserve some trees with cavities to provide opportunities for cavity-nesting birds, such as acorn woodpeckers.

Action 11-1.3. Avoid removal of or disturbance to trees or other woody vegetation during nesting bird season (March 15 to August 15), when feasible. If not feasible, a biological monitor will survey for nesting birds in the area of proposed vegetation removal and ensure no active nests are present prior to removal or disturbance.

Action 11-1.4. Limit vegetation removal and ground disturbance activities to the dry season. Avoid areas with open water in Devereux Creek and tributaries.

Policy 11-2. Program 14, Habitat Enhancement and Restoration Program, shall complement the Wildlife Habitat Management Program.

Action 11-2.1. Include native plant species that are important for wildlife habitat and food in enhancement and restoration projects (Appendix 3).

Action 11-2.2. Require a Planting Plan for any proposed enhancement plantings near the groves containing aggregation sites.

Action 11-2.3. Consider increasing mid-canopy and low-stature or groundcover native plant species to enhance wildlife habitat complexity and increase potential use of eucalyptus groves by a variety of wildlife species.

Action 11-2.4. Implement restoration for the Devereux Creek riparian corridor to improve functions for wildlife, consistent with the goals of this MBHMP for monarch butterflies.

Program Status: A variety of management actions have occurred in the Ellwood Mesa eucalyptus groves, including monitoring the butterfly populations, evaluating the health of the eucalyptus grove and individual trees, and educating the public regarding the sensitivity of the aggregation sites. However, a comprehensive approach to managing and educating the public as to the importance of all native wildlife species that inhabit the Ellwood Mesa eucalyptus groves will benefit both the visitors and the natural resources of the open space area.

Program Needs: Adoption and implementation of this MBHMP will include programs to improve the health of the habitats and their ecosystem functions for wildlife species in general, and monarch butterflies in particular.

Program Contact: Public Works Department

12. Tree Management Program

Overview: One of the most important aspects of this MBHMP is the set of management practices that would result in a sustainable eucalyptus forest that supports aggregation sites for monarch butterflies. Health of the individual eucalyptus trees, structure of the aggregation sites, and long-term sustainability of the groves supporting the sites are of primary importance. In response to these management needs, as well as concern for public safety within the groves and concern for wildfire

hazards, City staff continues to work with professional biologists and arborists to develop protocols for managing the eucalyptus groves supporting monarch butterfly aggregation sites. The information obtained during inventories and assessments, and coordination with the development of the CWPP, resulted in the management recommendations as presented in this MBHMP.

Goal 12. To manage the eucalyptus groves within monarch butterfly aggregation sites at Ellwood Mesa in a manner that provides for (1) healthy trees, (2) suitable aggregation site structure, (3) sustainable butterfly aggregation sites, (4) public safety while visitors are on trails within the groves, and (5) sensitivity to wildfire hazards.

Policy 12-1. Eucalyptus trees in the groves within the MBHMP coverage area ~~containing monarch butterfly aggregation sites~~ shall be managed, as feasible, to ensure tree health and longevity.

Action 12-1.1. Include guidance for necessary tree work in the annual Implementation Plan (Action 1-4.1). Tree work will take place in the month of September each year. The Implementation Plan should specify responsible parties, work locations, individual trees addressed, work to be accomplished, restoration measures, and methods and procedures for managing tree health. An annual plan is recommended but may be prepared on an as-needed basis based on conditions and progress of the previous Implementation Plan.

Action 12-1.2. Preliminarily identify potential threats to aggregation sites that may occur over time and develop a framework for mitigating the threats and maintaining/recovering suitable overwintering habitat. Threats may include, but are not limited to, the following:

- Drought
- Pests
- Disease
- Fire
- Flood/erosion
- Vandalism
- Invasion by non-native plants (not including eucalyptus)

These threats, as well as others, may arise and impair the function of Ellwood Mesa as habitat for overwintering monarch butterflies. When threats are encountered, a specific plan of action should be undertaken to address the needs of the situation. However, for planning purposes, the City should be prepared to undertake the response measures outlined in Table 2 below. Although not exhaustive, these measures represent a prudent suite of response tools to address future conditions. Measures listed below may prevent or rectify impacts from multiple types of threats, as the intent of the measures is to restore and encourage healthy habitat.

Table 2. Identified Threats and Potential Response Actions

Potential Actions/Tools for Management	Purpose/Goal/Target	Threat/Cause
Selective removal of standing dead trees	To protect the living trees from being taken out if a dead tree falls, and to provide space for growth of young trees.	Drought, disease, pests, fire
Selective removal of downed trees/debris	To open up space in the grove for younger trees to grow and replace dead trees. To reduce fuel load.	Drought, disease, pests, fire
Watering/irrigation	To prevent trees (established and newly planted) from declining in health because of insufficient water, or attempt to recover drought-stressed trees. Provide water to establish replacement trees. Use of reclaimed water should be explored.	Drought
Planting trees	To correct habitat deficiencies such as: ▪ The overstory has become too sparse. ▪ Wind speeds in the grove are too strong. ▪ A tree died, fell over, or was removed.	Death of one or more trees, insufficient canopy, or aggregation site protection.
Planting understory species	To add or create a diverse understory. To add nectar sources. To create variable edge barrier.	Non-native plants, poor/homogeneous understory
Planting nectar sources within and near groves	To make nectar sources for adult monarchs available near the overwintering sites.	Non-native plants, understory lacking nectar species
Selective pruning	To prune or remove understory plants when they reduce monarch butterfly flight space or aggregation areas. To protect/maintain the open interior of the grove.	Understory becomes too dense
Re-contouring/grading	In the case of a flood, to correct erosion and reshape the drainage channel to protect trees.	Flood/erosion
Installation of erosion control best management practices (BMPs)	To prevent future erosion and direct flows away from erosion-sensitive areas (exposed roots, etc.).	Flood/erosion

Action 12-1.3. Thresholds should be established to direct professional review and potential action to address conditions in the groves. Ultimately, it is envisioned that quantitative thresholds will be established based on the results of monitoring and scientific study within the groves (Programs 20, 21, and 22). However, until adequate reference data are available, action thresholds will be determined qualitatively by the City in consultation with a qualified monarch butterfly biologist.

Factors for Consideration:

- Did a major tree fall down in or adjacent to a known overwintering site?
- Is a butterfly expert recommending that action be taken?
- Has the butterfly overwintering population at a specific site decreased dramatically in a way that does not follow the populations at other sites in the vicinity?
- Is there erosion or threat of exposed roots of trees in or adjacent to a known overwintering site?
- Has the tree canopy decreased noticeably and dramatically?
- Has a certified arborist identified a high-risk tree that could degrade the aggregation site?

Steps for Taking Action:

1. Identify the threat (persistent or temporary, site-specific or large-scale).
2. Consult with a qualified monarch butterfly biologist, guided by the goals for a sustainable overwintering habitat.
3. Develop a plan of action.
    - If the problem is large-scale, a prescribed action may be taken in phases and the effect will be evaluated to assess success before any large-scale implementation of the action.
    - Manipulative experiments may occur in coordination with adaptive management, such as pilot studies, to inform decisions.
4. Obtain approvals. Depending on the plan of action, authorization from the City Council, CCC, and/or resource agencies may be needed. Environmental review may also be required, depending on the scope.
5. Implement the plan of action.
6. Monitor and document results.
    - Areas affected by response actions, especially major ones, should be included in the monitoring program conducted under Program 20, Biological Monitoring Program.

Action 12-1.4. Implement Program 13, Integrated Pest Management Program, to help maintain tree health and control infestation in the eucalyptus groves supporting monarch butterfly aggregation sites.

Action 12-1.5. Cut down or prune trees identified as a threat to butterfly aggregation sites because they may fall and cause injury or collapse on other trees important to sustaining aggregation sites.

Action 12-1.6. Maintain a living forest within the outline of pre-drought forest extent as determined with historic aerial photographs. Restore sections of the forest where dead zones occur due to multiple tree die-offs.

Action 12-1.7. Implement Program 14, Invasive Plant Management Program, particularly regarding non-native vines that could affect the quality of monarch butterfly habitat, following recommendations for eradication consistent with the California Invasive Plant Council (Cal-IPC) and conservation priorities of monarch butterflies and their habitat.

Action 12-1.8. Implement Program 20, Biological Monitoring Program, to provide information regarding management of eucalyptus groves to ensure their health and longevity.

Action 12-1.9. Annually, identify conditions that threaten trees at aggregation sites and include recommended actions in the Implementation Plan to reduce perceived threats.

Action 12-1.10. Plant trees as needed to maintain grove density and improve monarch butterfly habitat. Plant in locations that improve aggregation site conditions as per the best available scientific analysis, and replant areas within historic eucalyptus grove extent where gaps have occurred from drought die-back.

Action 12-1.11 Following evaluation of compatibility with existing habitat and functionality with respect to butterfly habitat, conduct a pilot planting for any eucalyptus species considered for tree restoration that is not present in the MBHMP area as of 2018.

Policy 12-2. Eucalyptus trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to provide sustainable habitat for butterfly aggregation sites.

Action 12-2.1. When considering eucalyptus or other tree replacement actions, consider tree configurations that retain open areas for monarch butterfly patrolling and monarch overwintering preferences.

Action 12-2.2. Investigate potential enhancement to monarch butterfly patrolling habitat by reducing tree tangles and fallen debris.

Action 12-2.3. Remove hazard trees as necessary to protect monarch butterfly cluster locations, as consistent with goals for public safety.

Action 12-2.4. Implement, as feasible, Program 10, Monarch Butterfly Management Program, to facilitate improvements in eucalyptus groves that help sustain aggregation sites.

Action 12-2.5. Protect blue gum saplings as necessary to encourage natural recruitment of trees in the eucalyptus forest.

Policy 12-3. Eucalyptus trees within the groves containing monarch butterfly aggregation sites shall be managed, as feasible and consistent with conservation of monarch habitat, to provide safe conditions for the visiting public.

Action 12-3.1. Prune and remove dead, dying, or particularly vulnerable tree trunks and branches that overhang trails and seating areas, or lay across trails, inside and near monarch butterfly aggregation sites to reduce the threat of injury from falling trunks and branches, debris on trails (trip hazards), or low-hanging material across trails that visitors could bump heads on.

Action 12-3.2. As recommended by the City arborist and detailed in the annual Implementation Plan, conduct work designed to protect and improve the structure of aggregation sites.

Action 12-3.3. As recommended by the City arborist and detailed in the annual Implementation Plan, remove or prune dead standing, dead suspended, dead on the ground, or thick understory trees both to improve grove tree health and monarch butterfly habitat and to correct hazard conditions for human safety along trails and at observation sites.

Action 12-3.4. Consider using downed, dead trees for seating along trails, or to add to slope stability or help control erosion, for preservation rather than removal, as feasible, considering human safety or wildfire threat.

Action 12-3.5. Remove ground debris, such as accumulations of branches and leaves, at trailheads in particular to reduce threat from wildfires, to reduce threat to human safety from obscured views, and to increase aesthetic appeal.

Action 12-3.6. In consultation with the City arborist, conduct an annual review of tree health in April and May at aggregation sites. Develop and implement an annual Implementation Plan to address issues identified during the review, including potential need for tree removal or pruning, treatment of diseases or pests, and other potential recommendations.

Policy 12-4. Eucalyptus trees within the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to provide for low wildfire hazards.

Action 12-4.1. Implement Program 4, Community Wildfire Protection Plan, to provide wildfire protection consistent with the City's adopted CWPP.

Action 12-4.2. Reduce accumulations of dead, dry, and loose organic and other flammable material within eucalyptus groves to decrease potential for ground-level fires becoming canopy fires as a result of ladder effect of fire hazard materials. Sufficient downed wood, debris, and ground cover will be left in place to provide substrate and shelter for monarchs dislodged from clusters.

Action 12-4.3. Remove accumulations of dead plant material along southern grassland margins of eucalyptus groves and at southern trailheads to reduce threat of grassland fires becoming eucalyptus grove fires as a result of fire hazards at the boundary between grasslands and groves via mowing or selective weed-whacking. Herbicides shall not be used.

Action 12-4.4. Replace removed understory plants as recommended by the City monarch butterfly biologist with fire-resistant native shrubs to restore and improve habitat structure for monarch butterflies (Appendix 3).

Action 12-4.5. Coordinate (1) butterfly habitat management, (2) public access and safety needs, (3) fire management requirements, and (4) wildlife habitat restoration proposals to ensure management priorities and implementation of procedures that provide the most compatible result for the conservation of monarch butterflies, while also respecting the goals of the other MBHMP programs, as feasible.

Program Status: Although eucalyptus trees in some groves with monarch butterfly aggregation sites are in good health (e.g., Sandpiper and Ocean Meadows, both of which are more windrow-like than grove-like), others are of average health (Ellwood West), and some are rated poor (Ellwood East, Ellwood North, and the important Ellwood Main). As of July 2017, a significant die-off of trees occurred from drought and pest infestation, resulting in over 1,200 dead trees on Ellwood Mesa.

Program Needs: Quantitative habitat condition standards based on best available science that establishes thresholds for action. With adoption of this MBHMP and implementation of the 22 programs—in particular, Program 12, Tree Management Program—the health of the eucalyptus groves supporting monarch butterfly aggregation sites is anticipated to improve and become a more sustainable resource.

Program Contact: Public Works Department

13. Integrated Pest Management Program

Overview: Eucalyptus trees are subject to a variety of pests and diseases that can injure or kill trees. When trees occur in groves, the spread of pests and disease is facilitated by proximity to infected trees, resulting in the potential of widespread loses. Current and past infestations at Ellwood Mesa of blue gum and river red gum (*Eucalyptus camaldulensis*) include lerp psyllids on leaves, tortoise beetles, longhorned borer beetles, and orange sulfur fungus. Insect pests are often present in equilibrium with their predators and do not need further control. However, new threats to trees on Ellwood Mesa may occur that require pest control measures. Invasive non-native species such as English ivy and cape ivy also can be problematic, smothering entire trees and changing or destroying wildlife habitat (Refer to Program 15, Invasive Plant Management Program). Various approaches to pest management will be necessary to try experimentally to determine which approach works best for each pest without affecting native plant and animal species, including birds, and monarch butterflies and their seasonal aggregation sites.

Goal 13. Control or eradicate, as feasible, plant, animal, fungal, and other pests that would result in detectable impacts on monarch butterflies or degrade monarch butterfly habitat.

Policy 13-1. To maintain current knowledge of pests and diseases, the City shall conduct an annual inventory of organisms negatively affecting trees in the groves at Ellwood Mesa.

Action 13-1.1. Conduct an inventory of pests and diseases throughout the groves and windrows at Ellwood Mesa.

Action 13-1.2. Conduct an inventory of pests and diseases within the monarch butterfly aggregation sites in the Ellwood North, Ellwood West, Ellwood Main, Ellwood East, Sandpiper, and Ocean Meadows groves.

Policy 13-2. The City shall consider using a variety of approaches to pest management to prevent pests and diseases from affecting eucalyptus groves, particularly those supporting seasonal aggregation sites for monarch butterflies.

Action 13-2.1. As feasible, experiment with different integrated pest management (IPM) approaches for different pests and diseases to determine which approach best suits the conditions in eucalyptus groves at Ellwood Mesa.

Action 13-2.2. Implement wise management practices in the eucalyptus groves at Ellwood Mesa that do not facilitate the spread of pests and diseases in groves.

Action 13-2.3. Identify current problems that require immediate treatment and implement appropriate treatment protocols.

Action 13-2.4. Implement a pest and disease monitoring program, as feasible, to determine success of treatments and any new infestations requiring treatment.

Program Status: Currently, no IPM approaches are implemented for eucalyptus trees at Ellwood Mesa. A tree inventory was conducted in 2017 that found over 1,200 dead eucalyptus trees on Ellwood Mesa City property. An Implementation Plan is in preparation to address tree health issues.

Program Needs: Adopt the MBHMP and implement the 22 MBHMP programs—including Program 13, Integrated Pest Management Program—to reduce the threat of impacts on tree health and sustainability and the potential for degradation of habitat supporting monarch butterfly aggregation sites.

Program Contact: Public Works Department

14. Habitat Enhancement and Restoration Program

Overview: This program focuses on the enhancement of the eucalyptus groves from a native plant and wildlife habitat perspective and on the restoration of the Devereux Creek corridor along the

northern margin of Ellwood West, Ellwood Main, and Ellwood East groves. The mid-canopy vegetation and understory of the eucalyptus groves is generally lacking or in some situations is composed of non-native invasive plant species. Enhancement of groves with native plant species would benefit native wildlife. Various native plants are present but scattered within the groves. Most of these plant species have fleshy fruits and are bird-dispersed. Restoration of portions of Devereux Creek associated with eucalyptus groves, as feasible, is consistent with the goal to restore Devereux Creek. This restoration would provide important habitat for native plant and animal species and would potentially improve water quality flowing downstream to Devereux Slough and the Pacific Ocean.

Goal 14. To provide for the enhancement of native plant and animal habitats in the context of preserving the monarch butterfly habitat associated with established eucalyptus groves.

Policy 14-1. Establishment of appropriate native plants—in particular, ground cover, shrub, and mid-canopy species—shall be encouraged in the eucalyptus groves and along the Devereux Creek corridor outside of the eucalyptus groves.

Action 14-1.1. Plant experimental plots of native ground cover species to determine which species may result in sustainable populations.

Action 14-1.2. Focus enhancement efforts on native plants existing in the eucalyptus groves, such as toyon (*Heteromeles arbutifolia*), and native plants with nectar sources for monarchs (Appendix 3).

Action 14-1.3. Coordinate with Program 13, Integrated Pest Management Program, and Program 15, Invasive Exotic Plant Management Program.

Policy 14-2. Areas between eucalyptus groves shall be considered for habitat enhancement and restoration alternatives.

Action 14.2.1. Implement priority native plant restoration activities along Devereux Creek in areas outside of eucalyptus groves.

Action 14-2.2. Eradicate non-native herbaceous cover, seedlings, and saplings (not including eucalyptus saplings) in areas between eucalyptus groves to encourage or actively plant local natives.

Policy 14.3. Restoration of Devereux Creek shall include appropriate actions to improve the habitat structure, ecological functions and processes, and native biodiversity of the existing native riparian areas.

Action 14-3.1. Restoration activities include establishment of a riparian area along the banks of Devereux Creek composed of native riparian tree species.

Action 14-3.2. Ensure that no restoration activities along Devereux Creek shall result in increased flooding.

Action 14-3.3. Coordinate to align efforts with other restoration projects under separate permits or mitigation plans for Devereux Creek.

Policy 14-4. Native plant species are considered to be local genotypes of plants occurring naturally within the Ellwood Mesa/Devereux Creek Ecosystem.

Action 14-4.1. Collect all plant materials for use in restoration projects from existing native plant populations in the Ellwood Mesa/Devereux Creek Ecosystem, where feasible.

Action 14-4.2. Collect plant material from the nearest existing populations for re-introduction of extirpated species.

Action 14-4.3. Obtain native plants for use in restoration from local nurseries or growers within the Santa Barbara area, emphasizing contract-grown material of local genotypes.

Policy 14-5. No enhancement or restoration actions shall result in negative impacts on the quality of the eucalyptus groves that provide monarch butterfly habitat.

Action 14-5.1. Coordinate with Program 10, Monarch Butterfly Management Program; Program 11, Wildlife Habitat Management Program; and Program 12, Tree Management Program.

Policy 14-6. No enhancement or restoration actions shall conflict with the goals and policies of the CWPP.

Action 14-6.1. Coordinate all enhancement and restoration activities with the guidelines and recommendations of the CWPP.

Program Status: An Implementation Plan that describes work activities to occur each year will accompany this MBHMP.

Program Needs: Adoption of this MBHMP and implementation of Program 14, Habitat Enhancement and Restoration Program, and fund-raising necessary to design, permit, implement, and maintain the projects.

Program Contacts: Public Works Department and Planning and Environmental Review Department

Photo 3. Toyon (*Heteromeles arbutifolia*), a Native Shrub or Small Tree in the Ellwood Main Grove

15. Invasive Plant Management Program

Overview: Cal-IPC has established a list of invasive, non-native plant species of concern regarding conservation of California natural heritage (www.cal-ipc.org/ip/inventory/index.php). Invasive non-native plants are defined by Cal-IPC (2006) as "plants that 1) are not native to, yet can spread into, wildland ecosystems, and that also 2) displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes." Non-native invasive plants have been given High, Moderate, or Limited ratings by Cal-IPC, depending on the severity of their potential for resulting in impacts on wildland ecosystems.

The monarch butterfly aggregation sites at Ellwood Mesa are themselves characterized and dominated by non-native and potentially invasive plants species—most importantly blue gum, given a "Moderate" rating, and to a lesser degree river red gum, given a "Limited" rating. However, these stands of introduced trees are designated as an ESHA in the General Plan because of their importance to monarch butterflies as fall and winter aggregation sites. Several other aggressively invasive non-native plant species have prominent visual and habitat impacts within the monarch aggregation sites at Ellwood Mesa. These are mostly vines that climb butterfly habitat trees, and herbaceous ground cover, which potentially endanger the character and sustainability of the

aggregation sites. Examples of these deleterious invasive species at Ellwood Mesa and their ratings are listed below:

- "High" rating:
  - Canary Islands ivy (*Hedera canariensis*)
  - English ivy (*Hedera helix*)
  - Cape ivy (*Delairea odorata*)
  - Victorian box or mock orange (*Pittosporum undulatum*)
- "Moderate" rating:
  - Panic veltgrass (*Ehrharta erecta*)
  - Myoporum (*Myoporum laetum*)
- "Limited" rating:
  - Kikuyu grass (*Pennisetum clandestinum*)
  - New Zealand spinach (*Tetragonia tetragonioides*)

Photo 4. Canary Islands Ivy (*Hedera canariensis*) along Trail and Growing up Trees at Ellwood Main

Goal 15. To eradicate existing stands of invasive non-native species and prevent or control new occurrences of invasive non-native plant species within the monarch butterfly habitat at Ellwood Mesa.

Policy 15-1. The City shall undertake an inventory and generalized mapping program to identify, locate, and prioritize for eradication or control all invasive non-native plant species within the butterfly habitat at Ellwood Mesa.

Action 15-1.1. Identify and map all invasive non-native species identified by Cal-IPC as "High" priority species.

Action 15-1.2. Identify and map all invasive non-native species identified by Cal-IPC as "Moderate" priority species.

Action 15-1.3. Identify all invasive non-native species identified by Cal-IPC as "Limited" or unrated priority species and map any medium to large populations.

Policy 15-2. The City shall control all "High," "Moderate," and "Limited" priority invasive plant species within the monarch butterfly habitat, except those species for which monarch butterflies are dependent, as feasible.

Action 15-2.1. Control all "High" priority invasive non-native invasive plant species.

Action 15-2.2. Control all "Moderate" priority, non-native invasive plant species.

Action 15-2.3. Eradicate or control all medium or large stands of "Limited" or unrated priority non-native invasive plant species.

Policy 15-3. The City shall undertake annual monitoring as feasible to identify and eradicate or control new occurrences of "High" or "Moderate" priority invasive non-native plant species.

Action 15-3.1. Implement monitoring of eradication efforts and potential new occurrences as part of Program 20, Biological Monitoring Program.

Action 15-3.2. Coordinate with other programs in this MBHMP, including Program 14, Habitat Enhancement and Restoration Program.

Program Status: Currently, no non-native invasive plants species control or detection program is in place for the eucalyptus groves at Ellwood Mesa.

Program Needs: Adoption of this MBHMP and implementation of the MBHMP programs, including Program 15, Invasive Plant Management Program.

Program Contacts: Public Works Department and Planning and Environmental Review Department

16. Ecosystem-wide Management Coordination Program

Overview: The eucalyptus groves, including those areas where seasonal monarch butterfly aggregation sites occur, do not exist as island ecosystems but in fact are part of a broader ecosystem of the Ellwood Mesa and Devereux Creek Watershed, including UCSB's North Campus Open Space (Upper Devereux Slough) and Coal Oil Point Reserve. This MBHMP primarily addresses monarch butterfly eucalyptus tree habitat in the Ellwood Mesa Open Space.

Goal 16. To manage the eucalyptus trees supporting seasonal monarch butterfly aggregation sites by coordinating among the 22 programs directed toward the management of monarch butterfly habitat and to consider management of eucalyptus groves in the context of managing the entire Ellwood Mesa Open Space.

Policy 16-1. The City shall manage eucalyptus trees in the context of all eucalyptus habitat supporting monarch butterfly aggregation sites at Ellwood Mesa.

Action 16-1.1. When considering implementation of actions for each program, consider their relationships to other actions in the same program.

Action 16-1.2. When considering implementation of actions for each program, consider their relationships to actions in related programs.

Policy 16-2. The City shall manage eucalyptus trees supporting monarch butterfly aggregation sites in the context of all eucalyptus habitat at Ellwood Mesa.

Action 16-2.1. Through results of Program 20, Biological Monitoring Program, consider potential changes in monarch butterfly use of other aggregation locations at Ellwood Mesa, impacts of pests and diseases throughout the eucalyptus groves, or other relevant factors that can potentially affect monarch butterflies and their habitats at Ellwood Mesa.

Policy 16-3. The City shall manage eucalyptus trees supporting monarch butterfly aggregation sites in the context of all habitats at Ellwood Mesa.

Action 16-3.1. When considering implementation of management actions for eucalyptus trees, consider their relationships to management actions for other habitats and programs for all of Ellwood Mesa.

Program Status: The City regularly coordinates the management of Ellwood Mesa with adjoining public agency land managers, including UCSB and Santa Barbara County. The focus of these management meetings is to ensure that trails are connected, grant applications are coordinated, and general issues such as illegal encampments and police enforcement are discussed and collectively addressed.

Program Needs: Adopt this MBHMP and implement its 22 programs considering the potential interaction of the program actions and results. Examples include eradication of exotic plant species

(Program 15, Invasive Plant Management Program) and removal of trash and debris (Program 6, Waste Management Program), followed by habitat enhancement efforts (Program 14, Habitat Enhancement and Restoration Program) within the affected sites in eucalyptus groves, in particular along affected trails (Program 5, Trail Management Program) with potential for additional erosion.

Program Contacts: Public Works Department and Planning and Environmental Review Department

C. OUTREACH PROGRAMS

Outreach programs are designed to provide information to visitors, educators, and students to help develop a broad appreciation for natural resources and local natural heritage, with a focus on monarch butterflies.

17. Community Advisory and Docent Program

Overview: The residents of Goleta have been actively involved in the protection and acquisition of Ellwood Mesa over many decades, with a focus on the conservation of the monarch butterfly aggregation sites. The long-term sustainability of the eucalyptus groves and the aggregation sites they support will depend in part on the continuing public involvement in the process.

Goal 17. To provide a formal vehicle to involve public participation, the City shall engage with the City's butterfly docents to provide recommendations to the Public Works Department.

Policy 17-1. The City shall engage with the City's butterfly docents to review MBHMP implementation work plans and make recommendations to the Public Works Department.

Action 17-1.1. Identify a point of contact with the City's butterfly docents, referred to the as the Butterfly Docent Coordinator, who will coordinate with and speak on behalf of the docents with the Public Works Department, Planning and Environmental Review Department, and Neighborhood Services and Public Safety Department.

Action 17-1.2. Set up regular meetings between the Butterfly Docent Coordinator and City staff.

Policy 17-2. As needed, the City shall continue to support the City's Butterfly Docent Program, the Butterfly Docent Coordinator, and ongoing training for the docents to ensure that educational opportunities for the public are maintained and to demonstrate the City's stewardship of the eucalyptus groves.

Action 17-2.1. Continue to support the Butterfly Docent Program and the Butterfly Docent Coordinator.

Action 17-2.2. Continue to support and update the City of Goleta's monarch butterfly website at www.goletabutterflygrove.com.

Action 17-2.3. Continue to support development of educational materials to be used by docents during scheduled public tours of the monarch butterfly aggregation sites.

Action 17-2.4. Train docents in the details of this MBHMP.

Action 17-2.5. Expand the pool of trained docents and encourage docent assistance with the implementation of this MBHMP.

Program Status: An active Butterfly Docent Program, including a Butterfly Docent Coordinator, has been in operation since 2007.

Program Needs: With adoption and implementation of this MBHMP, the existing docent program becomes part of the structure of this MBHMP. No formal volunteer program exists to assist in the implementation of this MBHMP.

Program Contacts: Neighborhood Services and Public Safety Department, Public Works Department, and Planning and Environmental Review Department.

18. Interpretive Program

Overview: Although there are a few signs identifying the Ellwood Main grove and several behavioral signs regarding trails, there are no interpretive signs that provide information regarding the biology of monarch butterflies, general aspects of Ellwood Mesa, and the importance of the aggregation sites. There is an interpretive sign program at the nearby Coronado Butterfly Preserve. City butterfly docents at Ellwood Mesa provide an important role, and the City's monarch website has important information and links to the National Geographic monarch web information. However, for the casual visitor without web access and without the presence of a docent, there is no interpretive information to assist in understanding this significant biological phenomenon.

Goal 18. To establish a useful and informative interpretive signage program at Ellwood Mesa monarch butterfly aggregation sites that is environmentally sensitive and creates a minimum of intrusion into the habitats.

Policy 18-1. The City shall design and install an interpretive signage program that provides important information on the biology of monarch butterflies, the significance of the aggregation sites, and general information on Ellwood Mesa and the eucalyptus groves, when feasible.

Action 18-1.1. Apply for grant funding to design, construct, and install the interpretive signage program.

Action 18-1.2. Design, construct, and install an interpretive signage program that is sensitive to the environment.

Action 18-1.3. Locate the interpretive signage program in key locations minimally intrusive to the sensitive habitats of Ellwood Mesa.

Policy 18-2. The Butterfly Docent Coordinator shall provide input during design, review the draft interpretive program, and make recommendations to the City's Public Works Department.

Action 18-2.1. Involve the butterfly docents, as feasible, in ~~all phases of~~ development and review of the content and design of signs for the interpretive signage program.

Photo 5. Ellwood Main Grove Entrance Sign at Trailhead along Devereux Creek

Program Status: No on-site interpretive program currently exists for the eucalyptus groves supporting monarch butterfly aggregation sites.

Program Needs: Adopt this MBHMP—including Program 18, Interpretive Program—and include links to the city's existing website and docent program.

Program Contact: Neighborhood Services and Public Safety Department and the Public Works Department.

19. Education Program

Overview: Education has always been an important part of the Ellwood Mesa monarch butterfly enthusiasm expressed by the residents of the area. Local and regional schools participate on a

regular basis, especially when monarch butterflies are using the seasonal aggregation sites. Also, the National Geographic educational information is available through the City's website: www.goletabutterflygrove.com. Therefore, it is important that education is a part of this MBHMP.

Goal 19. To provide educational experiences and information for K–12 students.

Policy 19-1. The City shall continue to work with K–12 students and their schools to explore educational experiences regarding Ellwood Mesa and the eucalyptus groves supporting monarch butterfly aggregation sites.

Action 19-1.1. Continue to support the educational opportunities provided by the Ellwood Mesa eucalyptus groves and their monarch butterfly aggregation sites.

Action 19-1.2. Create educational materials regarding biology of monarch butterflies and their habitats.

Action 19-1.3. Continue to support the position of Butterfly Docent Coordinator.

Policy 19-2. The City shall continue to support its website containing educational materials regarding monarch butterflies.

Action 19-2.1. Support, expand, and revise as necessary the City's website www.goletabutterflygrove.com.

Program Status: The City has active participation in K–12 education programs, including scheduled docent-led tours of the aggregation sites when monarchs are present and presentations at local area schools during science fairs. The City's website also includes a link to the Monarch Teachers' Network.

Program Needs: Adoption of this MBHMP—including Program 19, Education Program—will formalize the city's contributions to K–12 students as part of this MBHMP for Ellwood Mesa.

Program Contact: Neighborhood Services and Public Safety Department

D. MONITORING, RESEARCH, AND ADAPTIVE MANAGEMENT PROGRAMS

Monitoring and research programs provide the mechanism for assessing environmental conditions and conducting original studies to help understand the ecology of monarch butterflies, particularly at Ellwood Mesa. Information obtained from these programs and other sources can be used to adapt the MBHMP to improved or additional information or changing conditions.

20. Biological Monitoring Program

Overview: Background studies of monarch butterfly number, aggregation locations, environmental conditions, tree health, wildlife, botanical resources, and climate have been conducted at Ellwood Mesa over many years. However, more detailed studies are warranted regarding tree health and failure risk, aggregation site canopy cover and light intensity, wind patterns, microclimate, soil moisture and water demand, viable forest density, pest control, wildlife species, invasive non-native plants, eucalyptus tree health (including pest and diseases), enhancement and restoration projects within the groves, impacts from access trails, and other important aspects of the biological and physical resources related to monarch butterfly aggregation sites.

Goal 20: To develop and implement a monitoring program integrating various components of the biological resources and impacts related to the eucalyptus groves that support seasonal monarch butterfly aggregation sites.

Policy 20-1. The City shall maintain annual counts of the butterfly population at the various aggregation sites on Ellwood Mesa.

Action 20-1.1. Count and document monarch butterfly population number and cluster locations within the six Ellwood Mesa aggregation sites every year. The counts shall be conducted every 2 weeks through the overwintering season (October 1 through March 15) using the counting protocol established by Xerces Society, as funding allows. Where possible, record the tree tag numbers of trees with clustering monarchs to establish habitat use patterns (Althouse and Meade 2018).

Policy 20-2. The City shall conduct an annual assessment of ecosystem-wide tree and vegetation health on Ellwood Mesa, as funding allows.

Action 20-2.1. Track ecosystem-wide tree and vegetation health on Ellwood Mesa using high resolution multispectral and hyperspectral imaging and analysis, or similar appropriate means (Appendix 2).

Action 20-2.2. Coordinate results of the ecosystem-wide tree health assessment with Program 12, Tree Management Program, as feasible, to determine necessary and applicable management actions.

Policy 20-3. Create a Monitoring Report, updated annually, resulting from the information obtained during the implementation of the various policies and actions called for in this MBHMP.

Action 20-3.1. Track the implementation of this MBHMP in the form of a Monitoring Report.

Action 20-3.2. Conduct a Visitor Impact Assessment as part of the monitoring program to determine use patterns and potential impacts on trails, changes in erosion of trails, and potential impacts on aggregation sites through which trails are located.

Action 20-3.3. Coordinate results of the monitoring reports with Program 22, Adaptive Management Program, as feasible, to determine if changes in management actions are necessary.

Program Status: Various studies and butterfly counts have been gathered on a somewhat irregular basis. The City recently conducted a Tree Inventory and Health Analysis. However, no formal regular monitoring program has been developed or implemented at eucalyptus groves, in particular those areas that support monarch butterfly aggregation sites.

Program Needs: Adopt and implement this MBHMP, including Program 20, Biological Monitoring Program.

Program Contact: Public Works Department

21. Monarch Research Program

Overview: Although the City has conducted field studies as part of the preparation of this MBHMP, the City has not actively encouraged scientific studies using appropriate and cautious methods to maintain and improve habitat of the Ellwood Mesa habitats.

Goal 21. Encourage research projects and identify funding for research associated with monarch butterflies and their habitats at Ellwood Mesa.

Policy 21-1. The City shall allow for certain research projects that investigate the biology of monarch butterflies and their habitats at Ellwood Mesa and that provide information helpful to this MBHMP management programs.

Action 21-1.1. Evaluate requests for research and, where approved, issue Scientific Research Permits to regulate the research efforts.

Action 21-1.2. Ensure that scientists use non-invasive research projects at Ellwood Mesa, in particular those that focus on monarch butterflies and their habitats, and require that the

results of the research are provided to the City and posted on the City's website at www.goletabutterflygrove.com.

Action 21-1.3. Encourage research of the plants native to Santa Barbara County with regard to their ability to provide suitable monarch butterfly overwintering habitat and their applications for the restoration of the Ellwood Mesa.

Program Status: No formal, ongoing research projects are conducted at the Ellwood Mesa eucalyptus groves that support monarch butterfly aggregation sites.

Program Needs: Adopt and implement this MBHMP, including Program 21, Monarch Research Program.

Program Contact: Public Works Department

22. Adaptive Management Program

Overview: Management plans with ongoing maintenance, restoration, monitoring, and research programs generally develop an information base that helps provide insight into those portions of the implemented management plan that are performing well and those that could be performing better or differently with changing situations. In addition to the update and amendment process provided in Program 8, MBHMP Review, Update, and Amendment Program, the Adaptive Management Program provides a vehicle for the management authority to make adjustments in management approaches on an as-needed basis, especially as new information provides new opportunities for improved management practices and resource stewardship.

Goal 22. To establish an adaptive management approach to resource management at the eucalyptus groves that supports monarch butterfly aggregation sites and their surrounding environment at Ellwood Mesa.

Policy 22-1. The City shall use an adaptive management approach to resource management at the eucalyptus groves that supports monarch butterfly aggregation sites and their surrounding environment at Ellwood Mesa.

Action 22-1.1. Implement adaptive management procedures associated with all relevant programs of this MBHMP for Ellwood Mesa.

Action 22-1.2. Include a description of adaptive management actions in the Monitoring Report (Action 20.3-1).

Action 22-1.3. Conduct a review of management policies and actions every fifth year, as feasible, to determine possible patterns in change regarding monarch butterfly use of the aggregation sites and overall ecosystem health of the monarch butterfly habitat at Ellwood Mesa.

Program Status: Currently, there are no adaptive management procedures associated with the management of the eucalyptus groves at Ellwood Mesa.

Program Needs: Adopt and implement this MBHMP, including Program 22, Adaptive Management Program.

Program Contact: Public Works Department

E. CONCLUSION

This MBHMP for the Ellwood Mesa/Sperling Preserve Open Space provides a fully functional programmatic plan for the management of natural resources, focusing on habitat that supports the phenomenal occurrence of seasonal aggregations of thousands of monarch butterflies at six aggregation sites at Ellwood Mesa. With adoption and implementation of this MBHMP, the City of Goleta will fulfill a major commitment to the natural resources of Ellwood Mesa and its residents, and all those committed to the conservation of monarch butterflies.

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G. LIST OF PREPARERS

This MBHMP was collaborative effort. Consultants and City staff involved in the preparation of this plan are listed below.

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APPENDIX A. IMPLEMENTATION PRIORITIES, SCHEDULE, AND ESTIMATED COSTS

For the purposes of this MBHMP, implementation priorities, scheduling, and cost estimates are provided on a general programmatic basis. Programs are ranked as **Urgent**, **High**, and **Moderate** priority. They also are given an **Ongoing** and **Long-term** (+/- 5-year) scheduling estimate. Cost estimates are on an annual basis, with staff time listed as such and some first-year estimates in brackets.

Table A1. Implementation Priorities and Cost Estimates

	Cost ($)		City Labor Cost (hours)				
Program	**Annual**	**One-Time**	**Annual**	**One-Time**	**Priority**	**Schedule**	**Department Responsible**
A. Administrative Programs							
1. Municipal Management Program	$16,000	$13,000	$26,000 (260)	$9,600 (96)	High	ASAP	PW
2. Fiscal Program	$1,000	—	$19,600 (196)	—	High	ASAP	PW
3. Interagency Cooperative Program	$3,000	—	$9,600 (96)	—	High	ASAP	PW, NSPS, PER
4. Community Wildfire Protection Program	$8,000	—	$7,800 (78)	—	Moderate	Annually	PW
5. Trail Management Program	$10,000	$10,000	$45,600 (456)	$24,000 (240)	Moderate	Annually	PW
6. Waste Management Program	$1,500	—	$10,400 (104)	$1,600 (16)	Moderate	Annually	PW/NSPS
7. Aesthetic Resources Management Program	—	—	$7,000 (70)	—	Low	Annually	PW
8. MBHMP Review, Update, and Amendment Program	$10,000	—	$12,400 (124)	—	Moderate	Annually	PW, PER
9. Catastrophic Event Response Program	$75,000	—	$20,400 (204)	—	Moderate	Annually	PW
B Natural Resources Management Programs							
10. Monarch Butterfly Management Program	$2,000	—	$6,000 (60)	—	High	Annually	PW
11. Wildlife Habitat Management Program	$2,750	—	$5,600 (56)	—	Moderate	Annually	PW

Program	Cost ($) Annual	Cost ($) One-Time	City Labor Cost (hours) Annual	City Labor Cost (hours) One-Time	Priority	Schedule	Department Responsible
12. Tree Management Program	$49,600	—	$99,200 (992)	—	High	ASAP	PW
13. Integrated Pest Management Program	$11,500	$5,000	$11,600 (116)	—	Moderate	As funding is available	PW
14. Habitat Enhancement and Restoration Program	$30,000	$40,000	$29,600 (296)	$16,000 (160)	High	ASAP	PW, PER
15. Invasive Plant Management Program	$5,500	$27,500	$14,800 (148)	—	Moderate	As funding is available	PW, PER
16. Ecosystem-wide Management Coordination Program	—	—	$5,000 (50)	—	Low	Annually	PW, PER
C. Outreach Programs							
17. Community Advisory and Docent Program	$5,000	—	$77,200 (772)	—	High	Annually	PW, NSPS, PER
18. Interpretive Program	$500	$3,000	$8,800 (88)	$6,000 (60)	Moderate	As needed	PW, NSPS
19. Education Program	—	—	$12,400 (124)	$2,000 (20)	Moderate	Annually	NSPS
D. Monitoring, Research, and Adaptive Management Programs							
20. Biological Monitoring Program	$20,000	—	$8,000 (80)	—	High	Annually	PW
21. Monarch Research Program	$34,000	$40,000	$4,000 (40)	$4,000 (40)	Low	As needed	PW
22. Adaptive Management Program	$5,000	—	$8,000 (80)	—	Low	Every 5 years	PW
Totals	$290,350	$138,500	$449,000 (4,490)	$63,200 (632)			
Grand Total Over 5 Years	**$1,590,250**		**$2,308,200 (23,082)**		***TOTAL: $3,898,450***		

PW = Public Works Department
NSPS = Neighborhood Services and Public Safety Department
PER = Planning and Environmental Review Department

Table A2. Cost Estimates by Action

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
A. ADMINISTRATIVE PROGRAMS					
1. Municipal Management Program					
Action 1-1.1	$4,000	—	—	24	Prepare and conduct public workshop, 40 consultant hours
Action 1-1.2	—	$8,000	—	—	IS/MND
Action 1-1.3	—	$5,000	—	40	Depends on quantity and scope of revisions
Action 1-1.4	—	—	—	32	4 hours for the review by 8 people
Action 1-2.1	—	—	200	—	City coordination
Action 1-3.1	$10,000	—	40	—	Prepare annual Implementation Plan
Action 1-3.2	$2,000	—	20	—	Prepare and conduct City Council presentation, 20 consultant hours
2. Fiscal Program					
Action 2-1.1	—	—	24	—	Accounting staff, 12 hours bi-annually
Action 2-1.2	—	—	8	—	Accounting staff
Action 2-1.3	$1,000	—	8	—	Annual needs list to be included into Implementation Plan, accounting staff to determine operating budget
Action 2-2.1	—	—	136	—	8 hrs/month + 40 hours grant application coordinating
Action 2-2.2	—	—	20	—	As compensatory mitigation fees are paid
3. Interagency Cooperative Program					
Action 3-1.1	$1,000	—	24	—	2 hr/month for coordination meetings/calls with City staff and consultants
Action 3-1.2	$1,000	—	48	—	2 hr/month for coordination meetings/calls with City staff and consultants
Action 3-1.3	$1,000	—	24	—	2 hr/month for coordination meetings/calls with City staff and consultants

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
4. Community Wildfire Protection Program (CWPP)					
Action 4-1.1	—	—	12	—	CWPP
Action 4-1.2	$2,000	—	40	—	PW's site maintenance. the majority of this cost is included in Program 14
Action 4-1.3	—	—	—	—	Restrictions on timing of work
Action 4-1.4	$6,000	—	24	—	Coordination with butterfly and fire experts 2hr/mo prior to work activates. Expert time for consultation/surveys/ inspections monthly as necessary
Action 4-2.1	—	—	2	—	Cost incorporated into Program 12
5. Trail Management Program					
Action 5-1.1	—	—	192	—	2 days/month for trail maintenance
Action 5-1.2	—	—	—	—	Cost incorporated into Program 12
Action 5-1.3	$1,000	—	—	—	Staff time in Action 5-1.1
Action 5-1.4	$5,000	$10,000	96	240	Installation cost & 2 wks x 3 staff; maintenance 1 day/mo
Action 5-1.5	—	—	64	—	2 day effort x 2 staff x twice during wet season
Action 5-1.6	—	—	16	—	2 day effort once annually
Action 5-1.7	—	—	8	—	Annual review of trails boundaries
Action 5-1.8	$4,000	—	40	—	5 days x 1 staff and risk assessor, trails, arborist, butterfly biologist
Action 5-2.1	—	—	20	—	Staff coordination time and meetings
Action 5-2.2	—	—	20	—	Staff coordination time and meetings
6. Waste Management Program					
Action 6-1.1	—	—	96	—	1 day/mo
Action 6-2.1	$1,500	—	—	16	2 days staff time and signs
Action 6-2.2	—	—	4	—	Cost incorporated into Program 17

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 6-2.3	—	—	4	—	Inspection of trash cans annually
7. Aesthetic Resources Management Program					
Action 7-1.1	—	—	10	—	Read and adopt all programs
Action 7-1.2	—	—	20	—	Program 18
Action 7-2.1	—	—	20	—	Review signage and fencing. Cost included in Program 5
Action 7-2.2	—	—	20	—	Staff time to review restoration plans
8. MBHMP Review, Update and Amendment Program					
Action 8-1.1	$1,000	—	32	—	Staff and consultant time for review
Action 8-1.2	$2,000	—	24	—	City staff and consultant's' time for updates
Action 8-1.3	$2,000	—	24	—	City staff and consultants' time for updates
Action 8-1.4	$2,000	—	24	—	City staff and consultants' time for response to public comments
Action 8-1.5	$3,000	—	12	—	Update IS/MND, if necessary. Consultant time
Action 8-1.6	—	—	8	—	City Council approval/meeting
9. Catastrophic Event Response Program					
Action 9-1.1	—	—	4	—	Cost included in Program 12
Action 9-1.2	—	—	4	—	Cost included in Program 4
Action 9-1.3	—	—	4	—	Cost included in Program 13
Action 9-2.1	$25,000	—	80	—	Expert/arborist/risk/biologist consultant time, plus materials to assess
Action 9-2.2	$50,000	—	80	—	Expert/arborist/risk/biologist consultant time, plus materials to design and implement strategy
Action 9-2.3	—	—	32	—	City staff time
B. NATURAL RESOURCES MANAGEMENT PROGRAMS					
10. Monarch Butterfly Management Program					
Action 10-1.1	—	—	8	—	Program 12
Action 10-1.2	—	—	8	—	Program 20 and 21
Action 10-2.1	—	—	8	—	Program 9
Action 10-2.2	$1,000	—	20	—	Staying current with research, staff time, and consultant time to inform staff.

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 10-3.1	—	—	8	—	Program 14
Action 10-4.1	$1,000	—	8	—	Guidance to staff and education
11. Wildlife Habitat Management Program					
Action 11-1.1	$1,000	—	40	—	0.5-hr training per employee
Action 11-1.2	$750	—	8	—	Arborist/biologist as needed
Action 11-1.3	$800	—	—	—	Cost of nesting bird survey if needed, NBS biologist 1 day to confirm nests $800
Action 11-1.4	$200	—	8	—	Educate City/crew to avoid water
Action 11-2.1	—	—	—	—	Program 14
Action 11-2.2	—	—	—	—	Program 14
Action 11-2.3	—	—	—	—	Program 14
Action 11-2.4	—	—	—	—	Program 14
12. Tree Management Program					
Action 12-1.1	$4,800	—	40	—	Monarch biologist (8 hrs) and arborist (16 hrs) site visits. $2400. Implementation Plan preparation 16 hrs. $2400. = $4800. Quarterly site visits 32 hrs, IP 8 hrs
Action 12-1.2	—	—	—	—	Guidance for identifying threats
Action 12-1.3	—	—	—	—	Guidance for establishing thresholds
Action 12-1.4	—	—	—	—	Program 13
Action 12-1.5	$23,800	—	20	—	Arborist for 5 days: $4000, Butterfly biologist for 1 day to confirm tree work: $800, Wildlife biologist to monitor work for 5 days: $4000, Tree crew for 5 days: 15,000. (Total = $23,800.) City staff to check work for 5 days @4 hrs. (Total = 20 hours.)
Action 12-1.6	—	—	—	—	Would be accomplished with replanting restoration.
Action 12-1.7	—	—	—	—	Program 14
Action 12-1.8	—	—	—	—	Program 20
Action 12-1.9	$1,600	—	—	—	Biologist/arborist field visit 2 days

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 12-1.10	$5,000	—	60	—	Container trees and labor estimate, depends on # of trees planted.
Action 12-2.1	—	—	—	—	Direction for restoration design
Action 12-2.2	$800	—	32	—	Biologist 1 field day, City staff labor for 4 x 4 days
Action 12-2.3	—	—	—	—	Included in 12-1.5
Action 12-2.4	—	—	—	—	Program 10
Action 12-3.1	$8,800	—	768	—	Inspection of trails one per month (16 hr/mo=192hr/yr), maintenance crew to prune/remove hazard limbs and trucks every month for 2 days (3 crew, 2 d/mo = 576hr/yr). Est. 768 total staff time plus equipment. Arborist 5 days $4000, butterfly biologist 1 day to confirm tree work $800, wildlife biologist to monitor work 5 days $4000.
Action 12-3.2	—	—	—	—	Included in 12-1.5
Action 12-3.3	—	—	—	—	Included in 12-1.5
Action 12-3.4	—	—	—	—	Included in 12-1.5
Action 12-3.5	—	—	48	—	3 days x 2 staff
Action 12-3.6	$4,800	—	8	—	Implementation Plan. Arborist: 20 hours. Monarch biologist: 20 hours. Report prep: 8 hours. @ 100/ hr. City staff to review Implementation Plan
Action 12-4.1	—	—	0	—	Program 4
Action 12-4.2	—	—		—	Program 4
Action 12-4.3	—	—		—	Program 4
Action 12-4.4	—	—	8	—	To review programs annually
Action 12-4.5	—	—	8	—	Staff time to coordinate
13. Integrated Pest Management Program					
Action 13-1.1	—	—	—	—	Arborist pest assessment can be done during annual plan site visits, 12-3.6

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 13-1.2	—	—	—	—	Arborist pest assessment can be done during annual plan site visits, 12-3.6
Action 13-2.1	$5,000	—	40	—	Estimate for experimental techniques
Action 13-2.2	$2,000	—	20	—	Guidance
Action 13-2.3	$3,000	—	24	—	Pest inspection by specialist with recommendations; staff time to review
Action 13-2.4	$1,500	$5,000	32	—	Pest specialist to develop and maintain pest monitoring program and materials, and staff time to implement.
14. Habitat Enhancement and Restoration Program					
Action 14-1.1	$20,000	$25,000	120	80	Container plants, planting, irrigation system, water, maintenance, and monitoring; Initial experimental plots allowance. City staff maintenance: 10 hr/month.
Action 14-1.2	—	—	—	—	Guidance
Action 14-1.3	—	—	—	—	Programs 13 and 15
Action 14-2.1	$10,000	$15,000	120	80	Container plants, planting, irrigation system, water, maintenance, and monitoring; Initial experimental plots allowance. City staff maintenance: 10 hr/month.
Action 14-2.2	—	—	—	—	Program 15
Action 14-2.3	—	—	20	—	Guidance
Action 14-3.1	—	—	12	—	Coordination activities
Action 14-3.2	—	—	12	—	Coordination activities
Action 14-3.3	—	—	12	—	Coordination activities
Action 14-4.1	—	—	—	—	Direction for collection locations
Action 14-4.2	—	—	—	—	Direction for collection locations
Action 14-4.3	—	—	—	—	Direction for collection locations
Action 14-5.1	—	—	—	—	Coordinate with Program 10, 11, 12

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 14-6.1	—	—	—	—	Coordinate with Wildfire Protection Plan
15. Invasive Plant Management Program					
Action 15-1.1	$2,500	$5,000			Renew map every two years. Initial mapping for 1511.1, 1.2, and 1.3 = 40 hrs. Botanist: 10 hrs. GIS @ $100 = $5000
Action 15-1.2	—	—	—	—	Cost in 15-1.1
Action 15-1.3	—	—	—	—	Cost in 15-1.1
Action 15-2.1	$1,000	$7,500	36		Control invasive plants allowance. Hand removal, herbicide. Hand crews CCC for 5 days per year.
Action 15-2.2	$1,000	$7,500	36		Control invasive plants allowance. Hand removal, herbicide
Action 15-2.3	$1,000	$7,500	36		Control invasive plants allowance. Hand removal, herbicide
Action 15-3.1	—	—	20	—	Program 20
Action 15-3.2	—	—	20	—	Program 14
16. Ecosystem-wide Management Coordination Program					
Action 16-1.1	—	—	20	—	Guidance for staff
Action 16-1.2	—	—	10	—	Guidance for staff
Action 16-2.1	—	—	10	—	Guidance for staff
Action 16-3.1	—	—	10	—	Guidance for staff
C. OUTREACH PROGRAMS					
17. Community Advisory and Docent Program					
Action 17-1.1	—	—	4	—	Hire docent coordinator
Action 17-1.2	—	—	64	—	2 hrs/wk for 8 month (Aug–Mar)
Action 17-2.1	$5,000	—	640	—	20 hrs/wk for 8 month (Aug–mar), supplies for the program
Action 17-2.2	—	—	64	—	2 hrs/wk for 8 month (Aug–Mar)
Action 17-2.3	—	—	—	—	Incorporated in Action 17-2.1
Action 17-2.4	—	—	—	—	Incorporated in Action 17-2.1
Action 17-2.5	—	—	—	—	Incorporated in Action 17-2.1
18. Interpretive Program					
Action 18-1.1	—	—	40	40	Staff prepare grant applications
Action 18-1.2	$500	$3,000	20	20	Design and install signage

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 18-1.3	—	—	20	—	Guidance for signs
Action 18-2.1	—	—	8	—	Guidance for signs
19. Education Program					
Action 19-1.1	—	—	80	—	1 hr/tour x 80 tours average, by docents
Action 19-1.2	—	—	20	20	Create education materials and keep them updated
Action 19-1.3	—	—	—	—	Incorporated in Action 17-2.1
Action 19-2.1	—	—	24	—	Monthly updates. 12 x 2 hrs. = 24 hrs
D. MONITORING, RESEARCH, AND ADAPTIVE MANAGEMENT PROGRAMS					
20. Monitoring Program					
Action 20-1.1	$4,800	—	20	—	This could be docents for 48 hours: 4 hours per survey for 12 surveys
Action 20-2.1	$4,800	—	—	—	Per year estimate. One field day with drone to cover 4 sites; camera use, analysis, and brief report
Action 20-2.2	—	—	20	—	Staff coordination
Action 20-3.1	$3,000	—	4	—	30 hrs for biologist for monitoring report, staff review
Action 20-3.2	$3,000	—	4	—	30 hrs for biologist for visitor impact assessment, staff review.
Action 20-3.3	$500	—	8	—	Coordination of programs for biologists and staff
21. Monarch Research Program					
Action 21-1.1	—	$15,000	16	40	Evaluate requests for research and issue permits as needed.
Action 21-1.2	—	—	8	—	Guidance for research permits
22. Adaptive Management Program					
Action 22-1.1	—	—	16	—	16 hours per year staff time
Action 22-1.2	—	—	8	—	8 hours per year staff time
Action 22-1.3	—	—	8	—	8 hours per year staff time
TOTALS	**$203,650**	**$63,500**	**3226**	**472**	

APPENDIX B. SPECTRAL IMAGING AND ANALYSIS FOR ASSESSING TREE HEALTH

To monitor and determine vegetation health within the aggregate sites, spectral imaging and analysis will be used. In the last few decades, high resolution multispectral and hyperspectral imaging have become more commonly used by agricultural and horticultural industries to manage soil, fertilizing, and irrigation, and to monitor the health of crops. Spectral imaging is similar to digital photography except that instead of just collecting an image of three primary colors or bands (red, green, and blue; RGB) the multispectral camera sensor (spectrometer) divides the color range into multiple discrete bands of colors (typically 5 to 15 bands for multispectral to greater than 100 for hyperspectral) across the visible and near-infrared spectrums. In addition, the image captures data about the amount of light for each band that reaches the sensor. Since most plants with chlorophyll absorb light in the red (650 to 700 nm) and blue spectrum (425 to 475 nm) and reflect green and yellow light (500 to 600 nm), changes in the ratio of light within these regions can be used to determine vegetation health over time or in comparison to known healthy vegetation. By using spectral imaging over traditional arborist techniques, small changes in vegetation health can be assessed rapidly, the data can be quantified, and management decisions can be monitored for effectiveness. In addition, very little quantifiable information about the health of vegetation and butterfly use of aggregation sites has been studied.

To monitor the health of vegetation in aggregate sites, a ground-based imaging spectrometer will be used at set locations within the study area and within known aggregates sites. The spectrometer will be placed on a tripod at a known elevation and location within a study site. A series of images (both spectral and RGB) will be taken at a predefined aspect and slope of the tree canopy and surrounding vegetation. All perennial vegetation (trees and shrubs) within each image will be identified, and a visual assessment of vegetation health will be recorded and catalogued in order to track changes over time. For at least the first 2 or 3 years of the study, images should be taken three times during the year to help determine phenotypical color differences (variation in color due to genetics) between members of the same species and to calibrate seasonal changes. Afterwards, image frequency can be reduced to twice a year (at the beginning and middle of the growing season). For each spectral image, key individuals will be identified, and multiple pixel groups will be sampled across the foliage using multispectral imaging software and statistically analyzed to determine relative chlorophyll absorbance and reflectance, to indicate vegetation health.

By comparing changes in spectral signatures of like species and individuals, and by looking for abnormal changes for all species over time, the health of vegetation can be assessed. Individual, chronic changes to perennial vegetation can help determine which individuals are stressed and have a higher potential for mortality, while overall changes to the ecosystem can indicate climate stressors (e.g., drought) or toxic conditions (e.g., pollution). Since modern cameras are small and light enough to be mounted to unmanned aerial vehicles (UAVs), this technique can be used to determine whole forest health by sampling upper canopy foliage (once yearly) along with below canopy aggregation sites. This would allow for a whole ecosystem assessment and would help determine stressed locations or individual species across the whole study area.

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APPENDIX C. NATIVE PLANTS TO BE INCLUDED IN HABITAT RESTORATION EFFORTS

The following plants are native to the Central Coast of California and are known to offer several valuable elements to enhance the quality and longevity of native coastal habitats, including: fall and winter nectar source for monarch butterflies, canopy for wind protection, food source for wildlife, drought resistance, and fire resistance. California native plants are plants that were present in California prior to the arrival of European explorers and colonists in the late 18th century. Native plant stock should be sourced from local populations.

Restoration Native Plant List	**Location**			**Purpose**					
Common Name (*Scientific Name*)	**Over-wintering Site**	**Open Area Adjacent to Overwintering Site**	**Devereux Creek**	**Understory Windbreak**	**Nectar Source**	**Wildlife Habitat and Forage**	**Fire Resistant**	**Drought Tolerant**	**Erosion Control**
Trees									
coast live oak (*Quercus agrifolia*)	X	X		X		X	X	X	
western sycamore (*Platanus racemosa*)			X			X			
toyon (*Heteromeles arbutifolia*)	X			X	X	X	X	X	X
arroyo willow (*Salix lasiolepis*)			X		X*	X			X
hollyleaf cherry (*Prunus ilicifolia*)		X			X*	X	X	X	
Shrubs									
seacliff buckwheat (*Eriogonum parvifolium* var. *parvifolium*)		X			X*	X			
California bay laurel (*Umbellularia californica*)	X			X	X*			X	
California wax myrtle (*Myrica californica*)	X			X				X	
lemonade berry (*Rhus integrifolia*)		X		X	X*	X	X	X	X
golden currant (*Ribes aureum*)		X		X	X	X	X	X	
mulefat (*Baccharis salicifolia*)			X		X*	X			
California brittlebush (*Encelia californica*)		X			X*	X		X	X
California goldenrod (*Solidago veluntina* ssp. *Californica*)		X			X*	X		X	
California goldenbush (*Ericameria ericoides*)		X			X*	X		X	
saltmarsh baccharis (*Baccharis glutinosa* [*douglasii*])			X		X	X			X
coyote bush (*Baccharis pilularis*)		X			X*	X		X	
black sage (*Salvia mellifera)*		X			X*	X		X	

Restoration Native Plant List	**Location**				**Purpose**				
Common Name (*Scientific Name*)	**Over-wintering Site**	**Open Area Adjacent to Overwintering Site**	**Devereux Creek**	**Understory Windbreak**	**Nectar Source**	**Wildlife Habitat and Forage**	**Fire Resistant**	**Drought Tolerant**	**Erosion Control**
seaside fleabane (*Erigeron glaucus*)		X			X*	X		X	
purple sage (*Salvia leucophylla)*		X			X	X		X	
blueblossom (*Ceanothus thyrsiflorus)*		X			X*	X		X	
heart-leaved Keckiella (*Keckiella cordifolia*)	X	X	X		X*	X		X	
Groundcovers									
black figwort (*Scrophularia atrata*)	X	X	X	X	X*	X		X	
purple needlegrass (*Nassella pulchra*)		X				X		X	X
blue-eyed grass (*Sisrinchium bellum*)		X			X*	X	X	X	
bluedicks (*Dichelostemma capitatum)*		X			X*	X		X	
Santa Barbara honeysuckle (*Lonicera subspicata* var. *supspicata*	X	X	X	X	X	X			
Sticky monkeyflower (*Diplacus aurantiacus*)		X	X	X	X*	X		X	

X* indicates species that bloom during the overwintering period (October – March)

Plant List References

The Theodore Payne Foundation for Wildflowers and Native Plants, Inc. Fire Resistant Native Plants with High Wildlife Value. Sun Valley, CA. Available; http://www.theodorepayne.org/plants/fire_resistant.htm.

The Xerces Society. 2017. Protecting California's Butterfly Grove: Management Guidelines for Monarch Butterfly Overwintering Habitat. 32+vi pp. Portland, OR: The Xerces Society for Invertebrate Conservation.

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
1	8/16/18	Public Workshop	Sharleen Marie	The parking lot is a great place for benches from fallen trees, interpretive signs, to make it more attractive for people to start their walks.	Comment noted. The MBHMP calls for this kind of use.	Aesthetics
2	8/20/18	Email	Barbara Massey	Monarch Butterfly Habitat Management Plan and Implementation Plan and the areas preservation should not be under the jurisdiction of the Public Works Department. These plans should be the responsibility of the Planning and Environmental Review Department.	Comment noted. MBHMP calls for monarch and natural resource education for the staff involved in the management activities.	Authority/ Agency
3	8/20/18	Email	Barbara Massey	The Public Works Dept. is not qualified to deal with environmentally sensitive Monarch Butterfly habitat. They don't have the necessary personnel that is environmentally trained and knowledgeable about the habitat to adequately plan and manage this important area.	Comment noted. MBHMP calls for monarch and natural resource education for the staff involved in the management activities	Authority/ Agency
4	8/16/18	Email	Alfred Smith	Page 14 Background, Third Paragraph: Recommend indicating who is responsible for Ellwood East and what if any support they are providing to the plans. (There is some mention later in the document, but it would help to mention it here as well.)	Comment noted. Parcels in this area may be incorporated into the MBHMP area as acquired by the City.	Authority/ Agency
5	8/16/18	Email	Alfred Smith	Page 21 - 58: Is it possible to indicate anticipated workload by Plan number (top level, not each sublevel)? All but one or two action items identify the Public Works Department as POC. Is it feasible for the Public Works Dept to undertake all this work? In cases where more than one POC is indicated, recommend a lead is suggested.	Comment noted. Estimates of staff hours for each program are included in Attachment 1 of the MBHMP and Public Works will be responsible for meeting those needs to implement the MBHMP.	Authority/ Agency
6	9/3/18	Letter	FOTEM	Empower Planning and Environmental Review Department with Oversight of the MBHMP	Comment noted. Public works is the department responsible for management actions. Public works personnel are expected to be hired with specific knowledge and experience to properly follow directives of the MBHMP. The Planning Department does not manage open space areas.	Authority/ Agency

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
7	9/3/18	Letter	Cynthia Brock	The MBHMP and IP should not be under the jurisdiction of the Public Works Department. These plans should be overseen by the Planning and Environmental Review Department, although Public Works and Neighborhood Services will carry out many of the actions. The Public Works Department doesn't have the necessary focus to deal with what is essentially a planning process or the personnel qualified to deal with environmentally sensitive habitat.	Comment noted. Public works is the department responsible for management actions. Public works personnel are expected to be hired with specific knowledge and experience to properly follow directives of the MBHMP. The Planning Department does not manage open space areas.	Authority/ Agency
8	9/4/18	Council Meeting	Cris Lange	Under the MBHMP, need to take a look at what other agencies are doing in the grove, like SCE. We need to have an umbrella to have everyone know what others are doing. Undergrounding powerlines is super important. Irrigation is super important.	Comment noted. Language added to Action 1-2.1 to clarify.	Authority/ Agency
9	8/16/18	Public Workshop	Tim Burges, SB Shores	The plan needs a definition of emergency – are we already there? Very concerned about anything that is cart-blanche. Concerned about what happened last year – almost lost a lot.	Comment noted. Language added in Section 9 to distinguish emergency actions.	Definitions/ Terminology
10	8/16/18	Public Workshop	Julie Gilmore	Explain Fuel Reduction Zones?	Comment noted. The City adjusted Figure 3 and added Table 1 in the MBHMP that describe the CWPP zones.	Definitions/ Terminology
11	8/16/18	Public Workshop	Julie Gilmore	Explain Fuel Reduction Zones? (discussion continued)	Comment noted. The City added additional information describing fuel reduction zones in Table 1.	Definitions/ Terminology
12	9/4/18	Council Meeting	Cris Lange	I don't like the Riparian "forest" because it sounds huge.	Comment noted. The City removed the term "forest" to describe these areas.	Definitions/ Terminology
13	9/4/18	Council Meeting	Cris Lange	Transitioning to riparian forest will impact monarch ESHA	Comment noted. The City adjusted language in section 14.3 to clarify that native planting would occur in areas already occupied by non-eucalyptus vegetation.	Restoration
14	9/3/18	Letter	Barbara Massey	The plans are weak without specific protections for the butterflies and trees. There is far too much use of the wording "managed, as feasible", which further weakens the plans. There are no protections in these plans to keep a large number of trees from being cut down at any time without the Council's or public's knowledge or approval.	Comment noted.	Definitions/ Terminology

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
15	9/3/18	Letter	Cynthia Brock	Terminology and mapping There is no clear and consistent definition of the various parcels included—or not included—in the "Ellwood Mesa Open Space Plan." The only map in the plan shows the location of center of major monarch overwintering sites, but doesn't identify the different parcels of land.	Comment noted. The MBHMP provides a map (Figure 2) that shows the Monarch Butterfly Habitat Management Plan Coverage Area. The coverage area is defined biologically by the availability of suitable monarch butterfly habitat; it is not defined by parcels.	Definitions/ Terminology
16	9/3/18	Letter	Cynthia Brock	Please map and clarify the terminology in the Plan. It should match what is in the General Plan. If you use the name Ellwood Mesa or the Ellwood Mesa Open Space Plan it should be defined in relationship to the named parcels in the General Plan, with only one definition for each name.	Comment noted. The MBHMP provides a map (Figure 2) that shows the Monarch Butterfly Habitat Management Plan Coverage Area. It is not defined by parcels.	Definitions/ Terminology
17	8/16/18	Public Workshop	Eurie, Pacific Oaks	Does the plan consider and protect the owl population at Ellwood?	Comment noted. The plan considers owls and other wildlife during management actions by including pre-activity surveys for nesting birds and incorporating management strategies for monarch butterfly habitat conservation that are intended to be consistent, where feasible, with other wildlife habitat management.	Misc. Clarification
18	8/16/18	Public Workshop	Jessie Altstatt	Overwintering season for monarchs and nesting season for birds need to be respected when there is work being done in the habitat	Comment noted. This is addressed in administrative programs, Action 1-2.1.	Restoration
19	9/3/18	Letter	Cynthia Brock	Since the purpose of the plan is to maintain and enhance the included areas as monarch butterfly habitat for migrating, overwintering butterflies, some language should be included that explains the monarch butterfly life cycle and habitat needs during their overwintering phase to those not familiar who might be reading and interpreting the plan in the future	Comment noted. The MBHMP is a working document that prescribes policies and actions for management. Information regarding monarch biology and habitat is to be reviewed and used to inform MBHMP actions into the future (Programs 20, 21, and 22.)	Misc. Clarification
20	8/16/18	Public Workshop	Wes Herman, retired fireman	Suggest not using blue gums at all. Red ironbark more drought tolerant, blue gums big fire risk.	Comment Noted. The City included both red iron bark and blue gums as species to be planed under final 2018 IP. The City will continue to consider a range of species while implementing the MBHMP.	Fire
21	8/16/18	Public Workshop	Tim Burges, SB Shores	The Fire Figure has lots of areas do not have that yellow fill. Is it property line?	Comment noted. The fire figure was revised to reflect setbacks from structures as per the CWPP.	Fire

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
22	8/16/18	Public Workshop	Jennifer Loftis	implementing fire plan is not in the IP. Will it be in the next IP?	Comment noted. The FP actions can be implemented now as maintenance.	Fire
23	8/16/18	Public Workshop	Jennifer Loftis	The Fire Plan was done in 2012. what have you done?	Comment noted. The City has done some work clearing and moving downed wood.	Misc. Clarification
24	8/16/18	Public Workshop	Cris Lange	Request for the City to do a referendum for undergrounding wires to reduce fire risk and destruction from pruning and topping trees.	Comment noted.	Fire
25	8/16/18	Public Workshop	Wes Herman, retired fireman	At end of Carmel and Pismo. 6-inch fire hydrant lines without hydrants.	Comment Noted. City goal is to provide funding to the GWD to install two new hydrants.	Fire
26	8/15/18	Email	Paul Pease, Island Oak Lane	I live in The Bluffs and absolutely love to observe the Monarchs over-wintering, especially in the area near Sandpiper as it is so serene. However, many of the non-native eucalyptus trees in that area have fallen down, taking other eucalyptus trees with them, and seem to be drying out (perhaps invaded by pests). It's not just a danger to the people walking in the area, but the dead eucalyptus trees become a rather volatile fuel source for fire. I have also seen encampments in that area with evidence of cooking campfires. Some of the recent devastating and fast-moving wildfires that have occurred in California and our community were caused by cooking campfires.	Comment Noted. Enforcement actions are conducted by the Sheriff.	Fire
27	8/15/18	Email	Paul Pease, Island Oak Lane	Has there been a re-assessment by the Fire Department regarding a potentially dangerous wildfire that would destroy the Monarch Butterfly habitat caused by a campfire and fueled by the new eucalyptus deadwood as well as live eucalyptus oil?	Comment noted. The Community Wildfire Plan addresses these risks and the City will be consulting with the County Fire Department and CalFire for specifics on Ellwood Mesa.	Fire
28	9/3/18	Letter	Cynthia Brock	To reduce threat of fire the Plan should include a feasibility study of undergrounding some or all of the power lines that are adjacent to monarch ESHA.	Comment noted.	Fire
29	9/3/18	Letter	Cynthia Brock	The extension of Santa Barbara Shores Drive that is a major access for fire-fighting equipment. The road and the culvert underneath it should be kept in good repair so that it is always passable and structurally sound.	Comment noted.	Fire

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
30	9/3/18	Letter	Cynthia Brock	Is there some comparison of the fire- resistant qualities of the recommended native plants with the fire-resistant qualities of those plants that are already there? If the non-native plants provide better fire resistance they should be allowed to remain. Removing them will reduce coverage until the new plants become established.	Comment noted. Actions 4-1.3 and 12-4.4 involve planting of fire-resistant native understory plants. Native plants to be included in habitat restoration efforts are listed in Appendix 3 of the MBHMP.	Fire
31	9/3/18	Letter	Cynthia Brock	At the public workshop a map was handed out that indicated fuel reduction zones along the groves that are close to structures, but also in the eastern windrow that contains the Ocean Meadows aggregation site where there are no structures near. The second paragraph on page 11 says, “In habitat areas that are not adjacent to structures, fuel treatment consist of mowing along the outside edge.” That seems inconsistent with the map. Please reconcile this and provide a new map if applicable	Comment noted. The fire figure has been revised to reflect setbacks from structures as per the CWPP.	Fire
32	9/3/18	Letter	Cynthia Brock	Increased patrolling of the area for people violating the “No Smoking” and “No Campfires” rules, especially at night, could reduce the risk of fire. Apparently, the City is constrained to give “homeless encampments” a 72-hour notice before taking any action. But if there is a fire or evidence that there has been one—whether it is an “urban camper” or kids—there should be a way to take immediate action to eliminate the threat.	Comment noted. Enforcement actions are conducted by the Sheriff.	Fire
33	9/3/18	Letter	Cynthia Brock	The gate at the end of Santa Barbara Shores Drive is the only way for a fire-truck to access major portions of the monarch groves. There is not appropriate signage on the gate: it says “Fire Access Lane, illegal vehicles will be towed.” This is apparently not clear enough (no one thinks their vehicle is “illegal” if it is licensed) because sometimes vehicles have been parked in front of the gate making it inaccessible. A large, bi-lingual “NO PARKING” sign might do a better job of keeping this fire lane clear.	Comment Noted. “No Parking” signs are included in the final 2018 IP.	Signs
34	8/16/18	Public Workshop	Tim Burges, SB Shores	Lots of young trees in this forest. Lots of age classes, lots of recruitment.	Comment noted.	Restoration
35	7/27/18	Email	Lara Drizd, USFWS	MBHMP Pg 63 - Appendix 3 - I noticed that you included detailed instructions for tree planting efforts in the Implementation Plan. I’d just like to add that the planting methods for natives can be quite different than they are for species we typically plant in our gardens. For instance, you usually want to avoid digging a hole much larger than your	Comment Noted. More recent methodologies have been used and cited throughout the final 2018 IP.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				pot. I might suggest adding a sentence to this paragraph here stating something to the effect of "natives will be planted according to appropriate planting methods which may vary by species."		
36	8/22/18	PTAC Meeting	Lynn Kirby	The Sperling parking lot is a great demonstration site for a demonstration garden; planters are already there and it's close to a water source.	Comment noted.	Restoration
37	8/22/18	PTAC Meeting	Lynn Kirby	Ellwood Cooper and his colleagues planted eucalyptus throughout CA from 1870 through 1900 as a renewable wood source. It also came out as a complete failure.	Comment noted.	Misc. Clarification
38	8/30/18	Email	Lisa Stratton, UCSB CCBER	The density could also have contributed to more intense competition for water between these water-loving and high water-use trees; which likely created problems during the drought. As such, it leads me to ask, why are this year's planned tree plantings slated for Ellwood North? Will they potentially fill up the very holes or galleries that might make that area more supportive of Monarch's in the future?	Comment Noted. Monarch butterflies prefer thicker stands of tall vegetation for wind protection that surrounds an open center. The north area of Ellwood North is currently too open and the roosting monarchs are moving south into more protected areas of the grove. The City's goal is to re-establish the wind barrier in the northern area and leave a more-open center for roosting.	Restoration
39	8/16/18	Public Workshop	Tim Burges, SB Shores	Be careful when selecting the species of eucalyptus to plant. Blue gum are very different from red ironbark. Red ironbark are incredible trees	Comment Noted. The City included both red iron bark and blue gums as species to be planed under final 2018 IP. The City will continue to consider a range of species while implementing the MBHMP.	Restoration
40	7/27/18	Email	Lara Drizd, USFWS	MBHMP Pg 64 - Plant List - You might consider adding black figwort (Scrophularia atrata) to the list. Black figwort is an important local species (really only found in SB county), drought tolerant, and great for bees and butterflies. And it was recommended by our botanist. :)	Comment noted. This species has been added to the list of native plants to be included in habitat restoration efforts listed in Appendix 3 of the MBHMP.	Restoration
41	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCERB	Native trees will be adaptive to climate change, reduce water use in creek and overall, not require pampering proposed for planted Eucs.	Comment noted.	Restoration
42	8/22/18	PTAC Meeting	Lynn Kirby	You want to use only eucalyptus trees. The Pismo Beach overwintering site uses a variety of trees to provide the necessary canopy. We already have pests and problems with eucalyptus - why are we not using a variety of trees? Street trees use a mixture/variety of tree types (not any one species) to increase resilience against pests (won't lose all at once). I want to see consideration of trees other than	Comment noted. The MBHMP would not involve expansion of the existing eucalyptus groves in the coverage area. The final 2018 IP involves planting of 63 eucalyptus trees as replacement and/or habitat enhancement trees. Within the boundaries of the existing eucalyptus	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				eucalyptus.	groves, native plants will be limited to understory species, including shrubs, grasses, and forbs that are seen co-occurring with the eucalyptus overstory in other locations on Ellwood Mesa.	
43	8/22/18	PTAC Meeting	Phebe Mansur	I heard an unconfirmed rumor that the Coastal Commission has some goal to remove eucalyptus trees throughout the state of CA. With that in mind, I agree with Commissioner Kirby in planting a variety of butterfly-friendly trees.	Comment noted. The MBHMP seeks find a balance between natives and eucalyptus species. The MBHMP would not involve expansion of the existing eucalyptus groves in the coverage area and would involve planting native understory species.	Restoration
44	8/30/18	Email	Lisa Stratton, UCSB CCBER	I would add Lonicera subspicata var. subspicata – native honeysuckle which grows well out here and provides nectar and fruit and can be locally sourced. I would also consider adding Diplacus aurantiacus (Sticky monkey flower); Keckiela cordifolia (Heart leaf-Penstemon), which grows well in the shade and provides nectar; and Salvia spathacea (Hummingbird sage).	Comment noted. This species has been added to the list of native plants to be included in habitat restoration efforts listed in Appendix 3 of the MBHMP.	Restoration
45	9/3/18	Letter	Cynthia Brock	Consider inclusion of native plants if the plant provides a service that actually improves conditions for monarch butterflies and improves the sustainability of the groves because that is the purpose of this plan. Either native or non-native plants can provide the things that butterflies and the groves need. Adding other goals complicates the plan and makes it more expensive to execute.	Comment noted. Goal 14 and supporting policies and actions encourage the use of appropriate native species both within the eucalyptus groves and along Devereux Creek.	Restoration
46	9/4/18	Council Meeting	Mayor Paula Perotte	Going back to the 30 trees that SCE scalped, what kind of an effect does that have to the trees later on? I don't know how they resprout after that.	Comment noted.	Misc. Clarification
47	9/4/18	Council Meeting	Mayor Paula Perotte	The understory that you are considering, our native understory is typically paired with eucalyptus as an exotic. Do these species grow well together?	Comment noted. Action 14-1.1 involves planting experimental plots of native species to determine which species can support sustainable populations. Action 14-1.2 encourages the use of native plant species currently growing in the eucalyptus groves on Ellwood Mesa.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
48	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	Native trees reduce fire risk, give off water, not oils like Euc's. Plant native oaks and sycamores along all edges of groves by homes and down to creek as well as in all non-aggregation zones that could become fuel corridors. Native trees will better support other nectar providing species in understory.	Comment noted.	Restoration
49	9/4/18	Council Meeting	Councilmember Michael T. Bennett	The conifer forests are impacted by the drought, the fires are dense and there's not enough water to support the density. I assume we would want to go back to having a natural forest and we would want to be very careful about suggesting adding more trees. I would hope that we would do the science so the forest can be sustainable and it make sense to plant trees. If the science is behind it, then I will support it.	Comment noted. The MBHMP has provisions for continued reference to and adaptation of the Plan based on best available science. Programs 16, 20, 21, and 22.	Restoration
50	9/3/18	Letter	FOTEM	Although the MBHMP has policies that support maintaining the entire eucalyptus forest and re-planting of eucalyptus to replace removed trees, the Restoration Plant table in Appendix 3 does not include any type of eucalyptus. We request that a Restoration Plant list includes any species of eucalyptus that might be considered for planting to replace removed trees or for enhancement of the structure and function of the monarch habitat.	Comment noted. The restoration species list in Appendix 3 is named "Native Plants to be Included in Habitat Restoration Efforts". It is not a list of eucalyptus tree species proposed for use. Eucalyptus trees are designated for use "To correct habitat deficiencies such as: The overstory has become too sparse, Wind speeds in the grove are too strong, A tree died, fell over, or was removed." (Action 12-1.2, Table 1). Tree species to be planted will be stated in each IP, and may change over time with site conditions.	Restoration
51	9/3/18	Letter	Cynthia Brock	The plant list in Appendix 3 doesn't indicate when the native plants included are blooming and could provide nectar for the butterflies. There are few native plants that provide winter nectar; some that provide fall nectar. The butterflies generally begin to leave in February, so spring or summer blooming plants won't be useful for this function. It will be important to know whether native plants that are used will actually be useful to the butterflies, and provision of winter nectar is an important attribute.	Comment noted. Of the 27 native species listed 23 produce nectar usable by monarch butterflies, and 18 produce nectar during the overwintering period (Oct.- Mar.).	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
52	9/3/18	Letter	Cynthia Brock	There should be some explanation of how the non-deciduous blue gums enhance the microclimate, provide the structure, shelter, and open canopy that overwintering aggregations need. In addition to providing shelter for monarch colonies, blue gum eucalyptus serves as a source of nectar during the winter when most native plants do not bloom.	Comment noted. The MBHMP is a working document that prescribes policies and actions for management. Information regarding monarch biology, habitat, and tree form and function is to be reviewed and used to inform MBHMP actions into the future (Programs 20, 21, and 22.)	Restoration
53	9/4/18	Council Meeting	Cris Lange	Plant list needs blue gum added and whether plants are native to our specific area.	Comment noted. The plant list in Appendix 3 is of native plants from our area.	Restoration
54	8/30/18	Email	Lisa Stratton, UCSB CCBER	In my comments sent a few weeks ago, see attached pdf, I suggest some zones that might be suitable for prioritizing native tree planting. These are zones outside of the core aggregation areas and along the creek channels and adjacent to the homes where native plants will serve these purposes: 1. Help protect against wildfire; 2. Reduce water use in the creek and keep flows which will benefit diverse wildlife; 3. Be more sustainable in the face of climate change; 4. Support a higher diversity of native insects, birds, reptiles and herps; and 5. Be less vulnerable to a single pest or disease the way the current monoculture is vulnerable.	Comment noted.	Restoration
55	9/3/18	Letter	FOTEM	Finally, 2018 IP does not directly replace the blue gum eucalyptus removed in 2017 with other blue gum eucalyptus. Rather, mostly ironbark are proposed for replanting. While we understand there may be certain benefits to ironbark in terms of its relative drought resistance, it has different characteristics than blue gum which are typically taller and provide a valuable source of nectar for overwintering monarchs. We request that at a minimum 29 blue gum be replaced proximate to the removal locations, in addition to the ironbark replanting proposed	Comment noted. As has been discussed in public meetings, there is great advantage to planting red iron bark eucalyptus in the site proposed. The 2018 IP also specifies the blue gum eucalyptus will be planted. The monarch butterfly specialist will designate planting points for each tree to maximize benefit to the aggregation site, placing the drought resistant iron bark eucalyptus in a wind break configuration and the blue gums near the aggregation center. Action 1 of the 2018 Implementation Plan requires details to be included in a tree restoration planting map.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
56	9/4/18	Council Meeting	Mayor Paula Perotte	Are they at risk of disease just from the fact that they've been cut like that?	Comment noted.	Misc. Clarification
57	9/4/18	Council Meeting	Mayor Paula Perotte	But not all the trees they trimmed were dead? So they could be stressed even more.	Comment noted.	Misc. Clarification
58	8/15/18	Email	Paul Pease, Island Oak Lane	Are there considerations for removing the dead eucalyptus danger and re-planting with more native tree species, such as oaks?	Comment noted. Restoration of native plantings would occur in supporting areas	Restoration
59	8/22/18	PTAC Meeting	Lynn Kirby	The Mexican overwintering site is a fir forest and has no eucalyptus trees. If we are replanting and there is a rumor that they are going to take out the eucalyptus, I believe we should plant no eucalyptus trees. We don't want City Council 100 years from now to ask why we replanted with trees that are already failing.	Comment noted.	Restoration
60	8/30/18	Email	Lisa Stratton, UCSB CCBER	Regarding the Restoration Plant list. This is mostly good, but I would remove seaside fleabane (Erigeron glaucus), "blue blossom (Ceanothus thyrsiflorus) and dwarf coyote bush (Baccharis pilularis ssp. pilularis "pigeon point") as these are cultivars or not locally sourceable.	Comment noted.	Restoration
61	8/16/18	Public Workshop	Wes Herman, retired fireman	Asked about $3.9M – feasibility of using this, etc.	Comment noted. City is applying for funds to the Coastal Conservancy.	Funding
62	8/16/18	Email	Alfred Smith	Page 13 Executive Summary: Is the $3.9M "one-year money"? That is, does it all have to be spent in the 2018-2019 fiscal year? What is the fiscal year for this money? Has the money arrived? If not, when is it expected? The paragraph states that the money can only be spent on "restore, enhance, manage, and monitor" activities. This does not line up with the "Admin, Management, Outreach, Monitoring, Research, and Adaptive Management" plans identified earlier in the summary. Recommend words are added to clarify which part of the proposed plans are covered and which are not. For the ones that are not (if any), please identify estimated budgets necessary and potential sources.	Comment noted. City is applying for funds to the Coastal Conservancy.	Funding
63	8/22/18	PTAC Meeting	Lynn Kirby	Please describe the details/ Terms of the $3.9M grant from the State of CA. My understanding is that we cannot use this grant money to fund the current implementation plan.	Comment noted. City is applying for funds to the Coastal Conservancy.	Funding

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
64	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	The cost table in the appendix is our regular on going budget, our maintenance of effort. And the extra grant is on top of it?	Comment noted. City is applying for funds to the Coastal Conservancy.	Funding
65	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	It is not clear to me that the current time spending on this project is not included in the cost table.	Comment noted.	Funding
66	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	I would like to see a 5-year plan for how we are doing to spend the $3.9M that includes irrigation.	Comment noted.	Funding
67	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	If you take the money and put it into a butterfly fund, will people be able to bill their hours to this butterfly fund from different departments? Will this be a simplifying process? Does this make sense from an accounting perspective?	Comment noted.	Funding
68	8/31/18	Support letter	Emma Pelton, Xerces Society	We are writing to you to express our support of the Draft Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan and 2018 Implementation Plan.	Comment noted.	General Support
69	8/31/18	Support letter	Emma Pelton, Xerces Society	We also recognize the incredible expertise that Dan Meade of Althouse and Meade and Charis van der Heide of Rincon Consultants bring to monarch butterfly habitat conservation, and encourage you to continue consulting with both parties to quickly develop and implement a habitat restoration and management plan for this site, and to address hazards posed by dead trees with minimal disruption to the monarch butterflies. In addition, the Xerces Society is deeply invested in monarch butterfly conservation, and we would be happy to provide further input on the management and restoration of monarch butterfly overwintering habitat within Ellwood Mesa.	Comment noted.	General Support
70	8/31/18	Support letter	Emma Pelton, Xerces Society	We also support the proposed actions of the 2018 Implementation Plan to replant eucalyptus trees to replace the 28 trees which were removed from the grove in 2017. Replacement tree planting is critical so that the microclimatic conditions that monarchs require can be restored as soon as possible. The proposed tree planting, as well as other activities such as implementing an irrigation plan, assessing the grove for hazard trees, and monitoring monarch's use of the grove align with the Xerces Society's approach to monarch butterfly overwintering site restoration which is summarized in our recently published	Comment noted.	General Support

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				guide for land managers: Protecting California's Butterfly Groves: Management Guidelines for Monarch Butterfly Overwintering Habitat.		
71	7/27/18	Email	Lara Drizd, USFWS	I'm in full support of what your group has put together and I don't think any major changes are needed. You all did an awesome job!	Comment noted.	General Support
72	9/4/18	Council Meeting	Cris Lange	I support the letter from attorney for FOTEM and the details that are included. Thank you for taking a detailed look at this letter.	Comment noted.	General Support
73	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	I appreciated getting this staff report and learning that we are moving this process along and it was really well written. Thank you	Comment noted.	General Support
74	9/4/18	Council Meeting	Councilmember Kyle Richards	We respect to the feedback you requested, I do support the site that was chosen. I think it makes sense for the reasons you describe.	Comment noted.	General Support
75	9/4/18	Council Meeting	Councilmember Kyle Richards	I would encourage us to consider areas where we can plant more trees. I'm sure we have plans to do that and I think we should plant as many trees sooner than later.	Comment noted.	Restoration
76	8/16/18	Public Workshop	Wes Herman, retired fireman	Do red ironbark eucs encourage monarch overwintering?	Comment noted. Yes, red iron bark does support monarch butterflies.	Misc. Clarification
77	8/16/18	Public Workshop	Lori Gastin	Coronado seep important area for birds. Urge restoration work be done in creek	Comment noted.	Restoration
78	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	The Plan focused almost solely on Monarch Butterfly and needs to think more broadly about species support, sustainability, etc. See breeding records from Breeding Bird Study showing that you get nearly double the diversity of breeding birds in oaks (57 species) than in Eucalyptus (32).	Comment noted.	Restoration
79	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	Data from USFWS status of Monarch paper and Griffith and Villablanca paper demonstrate that Butterflies do not prefer Eucalyptus and that in Central CA they prefer pines and cypress and oaks disproportionately to their low cover in the groves.	Comment noted. This paper states it should not be considered relevant in Santa Barbara County and south.	Restoration
80	8/20/18	Email	Barbara Massey	The way this document is written, it seems that it still permits the cutting down of trees, planting in inappropriate areas, planting trees other than eucalyptus trees, and the ability to do anything staff wants without review. There needs to be more oversight of the habitat.	Comment noted. The Plan calls for the appropriate review and monitors to be involved. All project specifics will be outlined in the Implementation Plans and be open for review by the public.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
81	8/20/18	Email	Barbara Massey	There are a number of things seriously wrong with the Management and Implementation Plans. Far too much emphasis is placed on public access to the detriment of the aggregation sites. It needs to be remembered that the Monarch Butterfly Habitat is an important and valuable environmental resource and not for the entertainment of the public.	Comment noted.	Human Impacts
82	8/16/18	Email	Alfred Smith	Pg. 12 Executive Summary, Last paragraph: "With adoption and implementation of this MBHMP, the City will fulfill a major commitment to the …" What major commitment? Did the City make a commitment? The sentence implies the entire MBHMP needs to be "adopted and implemented". Is that the case? Is there significant benefit by "adopting and implementing" something less?	Comment noted. The Open Space Plan monarch policies 1, 2, and 3 calls for implementing habitat improvements to benefit the butterflies. The City is committed to maintaining the overwintering habitat.	Authority/ Agency
83	8/16/18	Email	Alfred Smith	Page 14 Background, Second Paragraph: "…have numbered in the tens of thousands during some years, Making Ellwood Mesa one of the most important sites for monarch butterflies in California" Is this statement misleading? "Status of Ellwood Mesa-Related Tree Projects, Emergency Permit And Habitat Management Plan" presented to City Council 20 Feb 2018 indicates 2011 was the last time anything like these numbers have been recorded. All years since then were less than 10,000 and three were less than 3000. Recommend a population by year chart be included in the report to give proper context.	Comment noted. Regarding Ellwood Main, The Xerces Society states, " This is the premier Monarch site in Southern California……..." https://xerces.org/where-to-see-monarchs-in-california/#sanluisobispo Ellwood Main is ranked at the 4th out of 50 most important monarch butterfly aggregation sites in California. "Sites in which the monarch populations have undergone the greatest declines, yet host the largest proportion of the remaining population have the highest ranking." Pelton, Jepsen, Shultz, Fallon , and Black. 2016. State of the Monarch Butterfly Overwintering Sites in California. The Xerces Society for Invertebrate Conservation.	Misc. Clarification
84	8/16/18	Email	Alfred Smith	Page 14 Background, Second Paragraph: Is there a reference to support the claim that "Ellwood Mesa <is> one of the most important sites for monarch butterflies in California."? A reference would add weight to the claim.	Comment noted. The reference is included in the MBHMP. Pelton, Jepsen, Shultz, Fallon , and Black. 2016. State of the Monarch Butterfly Overwintering Sites in California. The Xerces Society for Invertebrate Conservation.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
85	8/22/18	PTAC Meeting	Jessica Altstatt	Consider other wildlife uses of the area. For example, the seep at the end of Coronado is very important for birds and other wildlife as a source of fresh water.	Comment noted.	Restoration
86	8/30/18	Email	Lisa Stratton, UCSB CCERB	Ellwood North grove was likely used increasingly less by Monarchs from 1994 to 2011 because of the lack of management (e.g. regular logging or thinning), which effectively created too DENSE a woodland with a lack of open flight areas or gallery for the butterflies (page 20). This speaks to a need to do some active management of the overall woodland to keep these open areas.	Comment noted	Restoration
87	8/31/18	Support letter	Emma Pelton, Xerces Society	We are supportive of the Habitat Management Plan's programs; in particular, the Natural Resources Management Programs and Monitoring, Research, and Adaptive Management Programs which are focused on protecting monarchs and restore or enhance their overwintering habitat at Ellwood Mesa.	Comment noted	General Support
88	8/31/18	Support letter	Emma Pelton, Xerces Society	Western monarchs overwintering in coastal California have declined more than 95% since the 1980s and the migratory population faces a high risk of extinction in the next few decades. The Ellwood Main overwintering site is among the most important western monarch habitat – of the hundreds of sites in California where monarchs spend the winter, Ellwood Main is ranked as the fourth highest priority to conserve, based on the historic monarch population and overall degree of population decline. Other overwintering sites found within the Ellwood Complex are also important for monarchs and the entire forested area likely acts as a network of more and less suitable habitat which offers the butterflies' redundancy and resiliency to occupy the best habitat in a given year or within a season. Thus, management decisions at the Ellwood Complex have a greater potential to help – or harm – the overall western monarch population than management activities at most other western monarch overwintering sites.	Comment noted	Restoration
89	9/2/18	Email	Karl Rider	I would encourage the establishment of an indigenous plant community dominated by the California fan palm, Washingtonia filliformis. The fan palm is adapted to the site, provides wintering protection and has a long lifespan better than 500 years in this fire dependent ecosystem. With the knowledge of what a 120 yr old eucalyptus stand looks like and its difficulties of management, we can give future	Comment noted	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				generations a more diversified landscape, able to meet the many goals of conservation, preservation, production, safety and recreation. A diverse mosaic of vegetation types and ages is the most productive and resilient defense to a catastrophic event that is likely to effect the current monotype stand.		
90	8/16/18	Public Workshop	Cris Lange	Understory and debris is important for monarchs when they fall to the ground. Can't remove debris before allowing new plants to establish and replace it.	Comment Noted. The final 2018 IP will incorporate this concern and is not calling to remove all debris. .	Restoration
91	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	Eucalyptus trees have been shown to reduce creek flows through excessive transpiration, thereby reducing habitat quality. If diversify with native trees have a better chance of having sustainable creek flows which support butterflies and other wildlife and long term survivorship of species adapted to coastal California (e.g. oaks, sycamores, willows, toyon).	Comment Noted.	Restoration
92	8/9/18	Email	Lisa Stratton, UCSB CCBER	I should clarify that we don't have a vision for the long term elimination of the Eucalyptus grove, but for creating a patchwork of native areas along the edges and between the aggregation areas that will be implemented in a strategic and incremental manner as trees die to create a mixed age, diverse woodland that is sustainable in the long run and continues to support psilids for warblers, trees for hawks and woodland for butterflies WITH important nectar providing, flowering plants. Such a system would be more sustainable in the face of climate change, increased drought, increased fire, reduced water availability... and would reduce threats to residences nearby without compromising function for desired species.	Comment Noted.	Restoration
93	8/30/18	Email	Lisa Stratton, UCSB CCBER	Meade also notes that one of the more highly used areas in this section was in an area where there was a tree fall and ensuing opening which allowed a Toyon to get established that became a focal point for 'basking' by the Monarchs (page 44). The point being that a thinner, safer, less fire-prone Eucalyptus Forest with native plants is a favorable condition for Monarchs; far more than an un-managed "do nothing because the public doesn't want to see anything done" philosophy that has defined management for the past 10 years.	Comment Noted.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
94	9/4/18	Council Meeting	Mayor Paula Perotte	As for the location, Ellwood North is the most accessible. It's not the best prime butterfly habitat.	Comment Noted.	Restoration
95	9/3/18	Letter	FOTEM	Action 2-2.2 allows payments of compensatory mitigation fees into the Butterfly Fund, for projects with "limited impacts on monarch butterfly habitat." It is critical that the City not allow projects that impact monarch butterfly habitat. Action 2-2.2 should be revised to clarify that payment of compensatory mitigation fees are only allowed where projects have implemented all available measures to avoid impacts to monarch butterfly habitat, or to directly mitigate impacts on- site where appropriate, before projects may turn to compensatory mitigation.	Comment noted.	Restoration
96	9/3/18	Letter	Barbara Massey	There is not enough Council and public review of the actions of staff in implementing the plan. Too many inappropriate and unapproved actions have been taken that damaged the habitat in the last two years. There needs to be better protections put in place to stop tree removal and pruning without Council review.	Comment noted. The Plan calls for the appropriate review and monitors to be involved. All project specifics will be outlined in the Implementation Plans and be open for review by the public.	Authority/ Agency
97	8/30/18	Email	Lisa Stratton, UCSB CCBER	Native understory planting should occur where there are openings in the "aggregation" areas and in conjunction with targeted weed control activities. In addition, native trees are used by Monarchs and other butterflies and native trees, if established soon enough, can help provide the environmental amelioration benefits that support the use of the aggregation areas. As such, I think a more specific, say 5-year or 10-year action plan that addresses current die-off areas as well as strategic restoration planting in specific, mapped areas, would provide the clarity, direction, and guidance to allow for effective management of the restoration component of the plan. This is particularly important in light of the very limited window for removing dead trees and other restrictions on the timing of work in the grove and in light of the commendable commitment to using locally collected seed and plant material.	Comment noted.	Restoration
98	9/3/18	Letter	Barbara Massey	The Monarch Butterfly Habitat is an important and valuable environmental resource to be preserved and is not for the entertainment of the public. Public safety should be maintained by keeping the public from any area that might present a safety threat.	Comment noted. MBHMP Programs 5 (trails), 6 (waste management), 7 (aesthetics) provide management guidelines for public use. Implementation of the MBHMP will improve public safety while protecting monarch habitat.	Human Impacts

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
99	8/22/18	PTAC Meeting	Lynn Kirby	There is no mention of handicap accessibility in any of these plans. This has always been a problem out there and I cannot believe this is not a requirement of the state.	Comment noted.	Handicap Access
100	8/22/18	PTAC Meeting	Lynn Kirby	Would be nice to at least have a ADA-accessible trails map to show where someone who is handicapped can have a nature experience. Where do I park my car? Some signage would be very helpful.	Comment noted. ADA parking spots are present at the parking lot. All new signage locations are depicted on Figure 3 of the final 2018 IP with a majority being located at main entry points to the grove and minimized within the grove itself. Further, a separate permit for improved trail routes and designs and additional trail area restoration is currently under review by the Coastal Commission for the Ellwood Mesa outside of the butterfly habitat.	Handicap Access
101	8/16/18	Public Workshop	Eurie, Pacific Oaks	What is our general impression on how to handle the problem of homeless encampments on Ellwood Mesa?	Comment noted. Encampment problems are addressed by the Sheriff.	Human Impacts
102	8/16/18	Public Workshop	City Manager Michelle Greene	About the homeless encampments	Comment noted. Encampment problems are addressed by the Sheriff.	Human Impacts
103	8/7/18	Email	Kevin Duffy	One VERY important point missed was the city's OBLIGATION TO ADDRESS THE PROBLEM OF Invasive, Destructive, Persistent PRESENCE OF semipermanent CAMPERS who: 1) Create a public health risk (hepatitis) by using this environment as a toilet. 2) Accumulate then leave behind weathered piles of personal items , trash, and yes hypodermic needles, all of which I have photo documented and presented numerous times to city staff, council, etc. 3) Destroy shrubs, trees , disturb natural habitat , displace wildlife by hiding camps deep in thickets. 4) Create a fire hazard with camp fires and smoking.	Comment noted. Encampment problems are addressed by the Sheriff.	Human Impacts
104	8/16/18	Public Workshop	Julie Gilmore	Will the plan address busloads of people coming up from LA? City did a good job of directing them to the parking lot; still lots of impact. Will plan address this?	Comment noted. The MBHMP addresses visitor issues in Sections 5, 6, 11, 12, 18 and 20.	Human Impacts
105	9/4/18	Email	Ken Knight	Provide greater detail on the estimated amount of water and irrigation infrastructure needed for both newly planted young trees and strategic mature Blue Gum Eucalyptus to survive and thrive.	Comment noted. A watering and monitoring program is discussed in the final 2018 IP for Coastal Commission review and approval.	Irrigation

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				▪ Underestimating water needs is a major reason why restoring the redwoods at Stow Grove has been so difficult. A 5 year irrigation plan may be necessary if the current drought continues. Irrigation water may not be available or prohibitively expensive.		
106	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	What is the plan for long-term irrigation for the a whole of Ellwood Mesa?	The MBHMP allows for use of water tanks to irrigate new plantings. Specific irrigation plans would be outlined in the IP's.	Irrigation
107	8/9/18	Stakeholder meeting	Bob Morgenstern	The Plan won't work if we don't replace what nature is no longer providing.	Comment noted.	Irrigation
108	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	I really want to see the irrigation plan for the whole of Ellwood Mesa.	Comment noted.	Irrigation
109	9/4/18	Council Meeting	Councilmember Michael T. Bennett	It would seem that the only water that we have available is the reclaimed water and we are not using anywhere near what is being produced. And we do have the pipes on Hollister Ave. Is the plan to bring it into the top end of Santa Barbara Shores?	Comment noted.	Irrigation
110	9/4/18	Council Meeting	Councilmember Michael T. Bennett	Will the current high salt content in the reclaimed water have an impact on the habitat?	Comment noted.	Irrigation
111	8/20/18	Email	Barbara Massey	The plans are weak without specific protections for the butterflies and the trees. There is far too much use of the wording "managed, as feasible," which further weakens any protections. There are no protections in these plans to keep a large number of trees from being cut down at any time without the Council's or public's knowledge. This is exactly what the Monarch Butterfly Habitat Management and Implementation Plans were supposed to stop.	Comment noted.	Definitions/ Terminology
112	9/3/18	Letter	Cynthia Brock	This plan should make it clear that the intention is NOT to REPLACE blue gum eucalyptus with native trees in any part of the eucalyptus grove—not in the "gaps" or along the edge of the groves, or on the banks of the creek.	Comment noted. Language clarified to designate areas of native planting in areas already occupied by non-eucalyptus vegetation	Restoration
113	8/16/18	Public Workshop	Mandi Burgess	planting on Ellwood North for variety of reasons, probably will run into same reasons that make it difficult to plant – water, access. What tools and resources will you use in the future when you need to plant further in? City of SB uses gatorbags, close off…	Comment Noted. A watering program is envisioned and included in the final 2018 IP.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
114	9/4/18	Council Meeting	Mayor Paula Perotte	Ok, and if you need watering, you can get the kids to come down from Ellwood School and do some watering for us.	Comment noted.	Public Involvement
115	9/4/18	Council Meeting	Mayor Paula Perotte	I think Ellwood North is a fine location.	Comment noted.	General Support
116	8/16/18	Public Workshop	Sharleen Marie	Put a tank up and drip Ellwood Main.	Comment noted.	Restoration
117	8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	This plan needs to be more sustainable in the long term and support a higher diversity of species over time	Comment noted.	Restoration
118	8/30/18	Email	Lisa Stratton, UCSB CCBER	Finally, I think you and your consultants have done a good job overall with the plan and I would like to propose that the City contract with CCBER to do a number of the recommended actions. In particular, I think our staff could do a good job of conducting regular invasive plant monitoring program for the plan area. We could provide recommendations for action and oversight and/or monitoring of any work done by crews you hire to implement the work. We are concerned about weeds spreading from adjacent areas into campus and see weeds as a significant threat to the monarchs and all users of the open space. We also think we could help support a research program on insect biodiversity in and out of the grove because our director, Katja Seltmann, is an entomologist. These are just two realms outside of helping with providing plants and restoration expertise where we think we can become effective and long term, affordable partners in restoring the larger Ellwood-Devereux Open Space.	Comment noted.	Restoration
119	9/4/18	Email	Ken Knight	Provide a more detailed assessment of the ongoing costs and level of service needed to maintain a reasonable level of risk to the public using the area. ▪ The nature of Blue Gum Eucalyptus trees will require a level of ongoing maintenance similar to and exceeding that provided to street trees.	Comment noted.	Restoration
120	9/3/18	Letter	Barbara Massey	Instead of maintaining, replacing, and improving the eucalyptus groves, this plan is more interested in the removal of trees and the public use of the Ellwood Mesa Monarch Butterfly Habitat.	Comment noted.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
121	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	Lack of management in grove is leading to proliferation of saplings, particularly along southern edge. These many smaller trees are faster growing, use more water resources, compete with the large trees that support the monarchs. Management of woodland should involve active removal of saplings and small trees and planting of native trees.	Comment noted.	Restoration
122	8/30/18	Email	Lisa Stratton, UCSB CCBER	Further on this line of thinking is another comment from the 2013 document (page 23), which indicates in some areas the woodland is spreading to the south. This is an undesirable outcome because of the other habitat values on Ellwood Mesa. The southern edge, and any spreading edges, need to be managed. This also speaks to the need for a map.	Comment noted. The eucalyptus current boundary would not be expanded.	Restoration
123	8/30/18	Email	Lisa Stratton, UCSB CCBER	My overall point is that active management is needed and that integration with natives is important. The document suggests this, but I'm not sure it is spelled out clearly enough in terms of say a map of zones for native planting or with specific desired 'tree densities" or other measures that would support a clear next step in terms of defining active management goals for each September. This kind of specificity is important and should save money over time.	Comment noted.	Restoration
124	9/2/18	Email	Karl Rider	I would like to caution on the less is more approach that was mentioned several times throughout the meeting. While there are widely divergent goals of the different shareholder groups, there could be enough consensus to move forward with active planning to implement the 2018 goals. Active management of these goals will be needed to accomplish the timeframe that was mentioned (5yrs) to be eligible for the funding if I understood correctly. Actively managed lands are more productive, more resilient to change, and allow greater opportunities for recreation. This land has been actively managed for the last 120 years and its current use and importance is a testament to the success of actively managing land.	Comment noted.	Restoration
125	9/4/18	Council Meeting	Ana Citrin	It should be a public map…	Comment noted.	Definitions/ Terminology

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
126	9/4/18	Council Meeting	Ana Citrin	It would be helpful to go back and see that map because I haven't been able to find that map in the GP. I thought the zoning of the additional parcels was consistent, even though one area has a playground and is a little different. If you look at the draft MBHMP that was published on the City's website forever, and the print out included in the comments, it clearly includes additional area.	Comment noted.	Misc. Clarification
127	8/22/18	PTAC Meeting	Jessica Altstatt	How is canopy cover measured? What metrics are used? What is the baseline/reference point? If the baseline is from within the past five years, it will be reduced due to the drought. What are we trying to get back to? Also, are we taking into account the recent Edison tree removal?	Comment noted. Mapping will include up-to-date aerials, historic references, and current best practices.	Misc. Clarification
128	8/16/18	Email	Alfred Smith	Page 14 Background, Last Paragraph: Recommend that a footnote be added to provide the implications of terms like "Special Animals List" and "imperiled to vulnerable". How did those designations influence recommendations?	Comment noted. Reference added.	Misc. Clarification
129	8/16/18	Email	Alfred Smith	Page 19 Community Wildfire Protection Plan: "...butterfly and wildland fire experts…" Recommend a footnote to indicate who these experts were.	Comment noted. Experts will be City-approved.	Misc. Clarification
130	8/21/18	Email	Chris Messner	The Urban Forest is defined as all public and private trees. Including Street Tree Systems, trees in Parks and other Public Lands Under Resolution No. 12-78 -and- Ordinance No. 12-16, the UFMP clearly calls for a public Commission to advise and develop plans for all of the Urban Forest.	Comment noted.	Authority/ Agency
131	8/21/18	Email	Chris Messner	UFMP Chapter 1.0, First paragraph: "The City of Goleta initiated the development of this urban Forest Management plan to provide a guide for long term preservation and enhancement of the urban forest within the City's jurisdiction."	Comment noted. Reference added.	Misc. Clarification
132	8/21/18	Email	Chris Messner	UFMP Chapter 1.0, Third paragraph: "The Urban forest consists of all public and private trees, which include the street tree system, trees in parks and other public lands,… This plan deals with the City trees, focusing on those trees which line streets, walkways, parks and other City owned areas."	Comment noted.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
133	8/21/18	Email	Chris Messner	UFMP Chapter 1.0, Policy Goals: 1.0.1 "Implement the Urban Forest Management Plan covering all City areas, and all new land use development applications within the City of Goleta."	Comment noted.	Misc. Clarification
134	8/21/18	Email	Chris Messner	UFMP Chapter 4.15.1, Guidelines: Use UFMP adopted procedures for defining and designating the protection of Heritage/landmark trees on city property.	Comment noted.	Misc. Clarification
135	8/21/18	Email	Chris Messner	UFMP Chapter 4.15, Naming a Heritage Tree: When considering a heritage tree designation, PTAC will also make a recommendation to the City Council on the naming of the heritage trees. The name shall be informative: a. Location b. Common Name i.e.: the Stow Grove Park Redwoods the Ellwood Mesa Eucalyptus Grove the Old Town Park Sycamore (NOTE: reference of trees above are of Parks and Open Space areas)	Comment noted.	Misc. Clarification
136	8/21/18	Email	Chris Messner	UFMP Chapter 4.17: Public tree Advisory Commission (PTAC) "The Public Tree Advisory Commission was adopted by City Council through Resolution NO. 12-78, on November 6, 2012 (incorporated herein as Appendix E). The Public Tree Advisory Commission should provide advice to the Public Works Director and the City Council on how to plan and implement a City urban forestry management program. The mission of the commission should include advising, administration and management of City UFMP."	Comment noted.	Misc. Clarification
137	8/21/18	Email	Chris Messner	UFMP Appendix C, title of Appendix C: PUBLIC TREE PLANTING GUIDELINES	Comment noted.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
138	8/21/18	Email	Chris Messner	UFMP Appendix D Resolution 12-78, EXHIBIT "A" Duties and Responsibilities: 4. Review and provide suggestions to staff on the implantation of public tree planting. 7. Coordinate with appointed City commissions and make recommendations to staff on policies, standards, guidelines and regulations for street trees and other public trees located within City-owned open spaces.	Comment noted.	Misc. Clarification
139	8/31/18	email	Emma Pelton, Xerces Society	I would state the overwintering population's decline more bluntly on pg. 1. The way it's currently written: "The monarch butterfly populations at Ellwood Mesa and in California statewide have been in decline for several years." sounds like the species could be in relatively minor decline and that it's only a recent phenomenon. I would suggest re-framing this sentence to include the decline number of "over 95% since the 1980s" (Schultz et al. 2017) or at least "74% since the 1990s" (Pelton et al. 2016).	Comment noted. Additional language included.	Misc. Clarification
140	8/30/18	Email	Lisa Stratton, UCSB CCERB	Action 12-1.10 says, "Replace removed trees at a one to one ratio with five-gallon container stock". Is that replace with natives or non-natives? Needs clarification and seems wrong given the indication that too much forest density creates problems for Monarchs – add a caveat that allows you to integrate considerations for density, gallery areas, etc., and identify those areas specifically. You do something along those lines in Action 12-2.1, but please link tree planting to the criteria in 12-2.	Comment noted.	Restoration
141	8/16/18	Public Workshop	Lori Gastin	Lots of terms that are passive. "Shall encourage, as feasible, shall establish." Lots of qualifiers.	Comment noted.	Definitions/ Terminology
142	7/27/18	Email	Lara Drizd, USFWS	I wasn't sure if I was able to view all of the figures in the Implementation Plan because a couple of blank pages towards the end didn't include the blank page notice.	Comment noted.	Misc. Clarification
143	8/16/18	Email	Alfred Smith	Pg. 12 Executive Summary, Fourth paragraph: Recommend the executive summary provides the reader some indication of budget and schedule for each of the four bullet points. Without it, there is no way for the reader to grasp the magnitude of these plans.	Comment noted.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
144	8/16/18	Email	Alfred Smith	Methods: Suggest the main focus should also include recommended content of regular, concise reports to track progress and to whom they are delivered.	Comment noted. Monitoring reports are included in MBHMP Action 20-3.1.	Misc. Clarification
145	8/21/18	Email	Chris Messner	It has come to my attention that some city staff in the past have argued that the PTAC only covers Street Trees. This erroneous statement was recently put forward again. I would urge all staff who deal with tree, or open space, to actually read the City's adopted UFMP. The Ellwood Mesa Grove needs to go before PTAC whether or not staff wishes that were so because the City Council has spoken.	Comment noted.	Misc. Clarification
146	8/22/18	PTAC Meeting	Jessica Altstatt	A 1-page summary of the 2018 IP to describe "this is what we're doing" would be helpful.	Comment noted.	Misc. Clarification
147	8/22/18	PTAC Meeting	Jessica Altstatt	Why is this not a catastrophic event now? We've lost so many trees - how much worse can it get before we call it catastrophic?	Comment noted. The MBHMP requires approval by the City Council of a finding that an event is catastrophic (Section 9, Policy 9-2 and Action 9-2.3). This provides a public process and a decision by elected officials.	Misc. Clarification
148	8/22/18	PTAC Meeting	Lynn Kirby	Work in the 2018 IP is to be done in the month of September. However, if this goes to City Council and gets tweaked, none of it will start until 2019, if things go well.	Comment noted.	Misc. Clarification
149	9/3/18	Letter	FOTEM	Clarify Policy 1-1 to Ensure the MBHMP Reflects Current Data Regarding our Local Monarch Population. Suggested language::Policy 1-1: The City shall review, and revise as necessary, the MBHMP to reflect current data, butterfly conservation science, and management techniques regarding the local monarch population	Comment noted. Language will be clarified to emphasis information applicable to the local habitat.	Definitions/ Terminology
150	9/3/18	Letter	FOTEM	Changes such as the below recommended change to Policy 1-2 clarify that it is not protection of the environment in general, rather protection of monarch butterfly habitat specifically that is the MBHMP's charge. Policy 1-2. During implementation of the programs, goals, policies, and actions described in this MBHMP, and during the planning and implementation of other projects that may affect monarch butterfly habitat within the Ellwood Mesa Open Space, protection of monarch butterfly habitat the environment shall be given the utmost consideration	Comment noted. Language in Policy 1-2 is clarified.	Definitions/ Terminology

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
151	9/3/18	Letter	FOTEM	Policy 14.2 speaks about "Gaps in the eucalyptus groves" being considered for "restoration alternatives." Where are the gaps that this policy refers to? Please clarify and provide a map	Comment noted. Language clarified.	Definitions/ Terminology
152	9/3/18	Letter	FOTEM	Action 14-3.1 calls for the establishment of a riparian forest along the banks of Devereux using some native plants in or around the eucalyptus forest for windbreak, to fill out the understory, to provide nectar, or other functions that benefit the monarchs. This action seems to call for the substitution of one type of ESHA (native riparian forest) for another (monarch ESHA) and essentially strip Ellwood of its most important monarch habitat. This policy seems to directly contradict Policy 14.5 and others.	Comment noted. Language clarified to designate areas of native planting in areas already occupied by non-eucalyptus vegetation	Definitions/ Terminology
153	9/3/18	Letter	FOTEM	Expressly Include Activities Undertaken by Utilities and Other Non-City Entities and Clarify Minimum Requirements. Include additional language to include utilities and other non-City entities, and require City monitoring.	Comment noted. Although SCE has a separate permitting pathway, language added to include MBHMP standards.	Authority/ Agency
154	9/3/18	Letter	FOTEM	Goal 10. To facilitate ensure the ongoing use of Ellwood Mesa by the monarch butterfly.	Comment noted. Language clarified.	Definitions/ Terminology
155	9/3/18	Letter	FOTEM	Policy 10-1. The City shall encourage implement management strategies that facilitate the use of Ellwood Mesa by monarch butterflies.	Comment noted. Language clarified.	Definitions/ Terminology
156	9/3/18	Letter	FOTEM	Policy 10-2. Preservation of aggregation sites on Ellwood Mesa shall be a the focus of management activities, as feasible, and in coordination with Program 9, Catastrophic Event Response Program.	Comment noted. Language clarified.	Definitions/ Terminology
157	9/3/18	Letter	FOTEM	Policy 20-3: Create a Monitoring Report, updated annually, when feasible, resulting from the information obtained during the implementation of the various policies and actions called for in this MBHMP	Comment noted. Language clarified.	Definitions/ Terminology
158	9/3/18	Letter	FOTEM	Action 20-3.1: Track the implementation of this MBHMP in the form of a Monitoring Report, preferably updated on an annual basis, and presented at a public workshop.	Comment noted. Language clarified.	Definitions/ Terminology
159	9/3/18	Letter	Cynthia Brock	Action 1-2.1 says, "…should normally include pre-activity surveys…as deemed appropriate." Why would it ever be inappropriate to do a pre-activity survey before doing "activities with the potential to significantly disrupt habitat values?" It should say, "Shall include pre-activity surveys…"	Comment noted. The phrase, "as deemed appropriate", follows a list of potential surveys, and applies to the type of survey. For example, it is not appropriate to survey for nesting birds in October, when birds are not nesting.	Definitions/ Terminology

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
160	9/3/18	Letter	Cynthia Brock	Policy 20-3 says a Monitoring Report should be updated annually when feasible." Why wouldn't it be feasible? That word should be removed.	Comment noted. Language clarified.	Definitions/ Terminology
161	9/3/18	Letter	Cynthia Brock	Action 20-3.1 says to "track the implementation of this plan in the form of a monitoring report preferably updated on an annual basis." Take out "preferably" and add "presented in a public workshop."	Comment noted. Language clarified. The report will be a public document.	Misc. Clarification
162	9/3/18	Letter	Cynthia Brock	Policy 8-1 speaks of a review for need for updates…at least every five years. But Action 22-1.3 talks about reviewing the plan every fifth year "as feasible." Is this the same review or a different one? This second mention of a review implies that it might be an even longer interval before there is such a review and evaluation. Even if this is done every five years, that is still not very often.	Comment noted. Action 22-1.3 is in the context of the adaptive management program and calls for review of management policies and actions with respect to any changes in butterfly use or ecosystem health. Goal 8 is a review of the entire MBHMP, not just biology.	Misc. Clarification
163	9/3/18	Letter	Cynthia Brock	Several of these policies and actions refer to managing aggregation sites, and not the entire ESHA. Others are like Policy 16-2 that says, "The City shall manage eucalyptus trees supporting monarch butterfly aggregation sites in the context of all eucalyptus habitat at Ellwood Mesa."" I am not sure what "in the context" means. Does it mean that all eucalyptus habitat will be maintained?	Comment noted.	Definitions/ Terminology
164	9/3/18	Letter	Cynthia Brock	It should be made clear that all eucalyptus forest designated as monarch ESHA should be maintained, not just "aggregation sites."	Comment noted.	Definitions/ Terminology
165	9/3/18	Letter	Cynthia Brock	Action 2-2.2 allows payments of compensatory mitigation fees to help fund the plan when a development project has impacts on monarch habitat. This is concerning because it suggests that a developer would be allowed to harm monarch habitat and just pay mitigation fees. And perhaps the City would welcome this as a way to fund the plan. Please clarify how this would not create a conflict of interest in the project approval process.	Comment noted.	Funding
166	9/3/18	Letter	Cynthia Brock	Policy 14.2 speaks about "Gaps in the eucalyptus groves" being considered for "restoration alternatives." Where are the gaps that this policy refers to?	Comment noted. Language clarified.	Definitions/ Terminology

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
167	9/3/18	Letter	Cynthia Brock	Action 14-3.1 calls for the establishment of a native riparian forest along the banks of Devereux Creek composed of native riparian tree species. This action would result in the replacing one type of ESHA (monarch habitat) with another (native riparian forest).	Comment noted. Language clarified to designate areas of native planting in areas already occupied by non-eucalyptus vegetation.	Misc. Clarification
168	9/4/18	Council Meeting	Councilmember Kyle Richards	Terminology and designations of the different areas included in the MBHMP	Comment noted.	Definitions/ Terminology
169	9/4/18	Council Meeting	Cynthia Brock	Comments to the Implementation Plan, Figure 1 shows 22 dead trees and should also show the trees that were removed.	Comment noted. Figure has been revised.	Misc. Clarification
170	9/4/18	Council Meeting	Cynthia Brock	Work will include trees proposed for removal	Comment noted. The Final 2018 IP describes work to be done; no additional trees are proposed for removal in the 2018 IP.	Misc. Clarification
171	7/27/18	Email	Lara Drizd, USFWS	MBHMP Pg 39-41 - Interpretive Program - If there's anything we can do to help with outreach and education, please let us know. Diana has already sent me her curriculum for the Monarch MOVES program which I'm currently going through. We also have a biologist in our office here who has been planting pollinator gardens with school groups for years and we could help out if you're interested in having kids involved in restoration and planting efforts.	Comment noted.	Public Involvement
172	8/20/18	Email	Barbara Massey	Docents need much better training so that they follow proper procedures. They should never go into areas not approved for visitors even when there is a lack of butterflies at the approved sites. This could be used as a teaching moment to discuss what happens when an area is disturbed or when their numbers decrease.	Comment noted. Training of the docents is the role of the monarch docent coordinator.	Public Involvement
173	8/16/18	Public Workshop	Barbara Massey	I don't trust Public Works.	Comment noted.	Authority/ Agency
174	8/22/18	PTAC Meeting	Lynn Kirby	Public Works is responsible for implementing the 2018 IP. Is Public Works getting more staff to do this work?	Comment noted.	Authority/ Agency
175	9/3/18	Letter	Barbara Massey	One of the worst parts of the Monarch Butterfly Habitat Management and Implementation Plans is that the Public Works Department has been given the responsibility for most of the Monarch Butterfly Habitat Management and Implementation Plans. This is placing the very people who tried to cut down 100s of eucalyptus trees in charge of their care. The plans should be the responsibility of the Planning	Comment noted	Authority/ Agency

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				and Environmental Review Department with any work done by Public Works staff or qualified contractors.		
176	9/4/18	Council Meeting	Ana Citrin	It was encouraging to hear about the new management of an open space, however it is critical the staff members with biological resources expertise oversee implementation of this plan. PW is focused on getting the job done and here we need to ensure that the habitat is safeguarded.	Comment noted.	Authority/ Agency
177	9/2/18	Email	Karl Rider	I encourage the commission to seek the advice of a forester, familiar with managing a similar stand type, acknowledgement of the fact that this may need to be sourced from the eucalyptus native range. The forester would be able to discuss stand management, harvest strategies, regeneration rates and timber uses of the stand. Active management of the stand can be accomplished while addressing the various stakeholders needs. In keeping with the planters goals for the stand, an avenue could be explored for utilizing the wood that could be fuel wood, building materials, chips for paths, grade control structures for riparian restoration or other uses that will enhance and help preserve the site.	Comment noted.	Authority/ Agency
178	8/16/18	Public Workshop	Eurie, Pacific Oaks	hard time to figure out who to contact. Add this info to signs? Call XX if you see issues with Ellwood.	Comment noted.	Signs
179	8/16/18	Public Workshop	Mark Holmgren	clarification of removal of pest-infestation. Psillids – lurps on leaves – can be considered infestation but mostly just essential part/user of ecosystem.	Comment noted. Language clarified.	Restoration
180	8/16/18	Public Workshop	Tim Burges, SB Shores	Why is there a fire zone on the south east boundary?	Comment noted. Maps have been revised.	Fire
181	8/16/18	Public Workshop	Tim Burges, SB Shores	Boundary of plan area: the Pebble Beach and SB shores area is included in the GP maps and in Ellwood Dev OSP. Why was this area excluded and can it be included in the final plan?	Comment noted.	Restoration
182	8/16/18	Public Workshop	Public	Public wants to include this park area into the MBHMP	Comment noted.	Authority/ Agency
183	7/27/18	Email	Lara Drizd, USFWS	MBHMP Pg 1 - It was unclear to me how Ocean Meadows is being treated. The Implementation Plan seems to imply that it's not on City Property. I'm guessing the difference is that it doesn't regularly have monarchs, despite the trees being in fairly good health?	Comment noted.	Authority/ Agency
184	9/3/18	Letter	FOTEM	Request staff to expand boundary of the MBHMP to include Area S	Comment noted.	Authority/ Agency

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
185	9/3/18	Letter	Cynthia Brock	The area covered by the Monarch Butterfly Habitat Management Plan (MBHMP) should encompass all monarch ESHA on City-owned properties that were included in the Ellwood/Devereux Open Space Habitat Management Plan (OSHMP).	Comment noted.	Authority/ Agency
186	9/4/18	Council Meeting	Ana Citrin	Plan area scope and what is included in that Area. The area between Santa Barbara Shores Drive and Pebble Beach Drive that is included in the Devereux-Ellwood Open Space Plan, including the City's approved portion of it and included in all the General Plan maps. There is monarch ESHA in that area. One plan map identifies key site 4 as an open coastal spot, it is not clear to me that it is the exclusive open plan map and seems as those the open space management plan contains the guiding directives in terms of protecting monarch habitat and this area is recognized as part of that plan, specifically the value of unoccupied groves are acknowledged as providing backup of it. It is important that this additional area be preserved for the monarch butterfly. We encourage you to extend the MBHMP boundary to include this area. We have not heard a good reason as to why not. There is a small area with some playground equipment that could easily be treated differently to protect what's there for children.	Comment noted.	Authority/ Agency
187	9/4/18	Council Meeting	Ana Citrin	Boundary issue (continued)	Comment noted.	Authority/ Agency
188	9/4/18	Council Meeting	Ana Citrin	Ellwood Mesa Boundary Issue	Comment noted. The Open Space Element of the General Plan shows on Figure 3-2 Parks and Recreation Plan Map that the Ellwood Mesa is #30, 31 and 34 and are listed as Regional Open Space on Table 3-1. Santa Barbara Shores Open Space is labeled #33 and designated as Neighborhood Open Space. These different distinctions preclude the inclusion of the SB Shores area with the Ellwood Mesa area in the MBHMP.	Authority/ Agency
189	8/22/18	PTAC Meeting	Jessica Altstatt	The proposed restoration site is a good location - it is accessible for work and for visitors/education. It's also easier to monitor and care for the trees.	Comment noted.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
190	8/22/18	PTAC Meeting	Jessica Altstatt	The west side of Ellwood North would be a good site for native restoration (shrubs or trees) - it is out of the fire management area and visible for educational purposes. It also provides greater light, which is lacking within the eucalyptus grove. This would be beneficial for birds, bees, butterflies, and the public.	Comment noted.	Restoration
191	9/4/18	Council Meeting	Mayor Paula Perotte	Do we set the replacement ratio or is that the CCC?	Comment Noted. The total number of trees to be used in the restoration was derived by calculating the number of trees that could be planted and grow effectively within the restoration area to maximize the most suitable habitat and density sought. A "ratio" was not used.	Misc. Clarification
192	9/4/18	Council Meeting	Mayor Paula Perotte	If we want to increase the replacement ratio, would it be up to the Council? Because not all trees survive.	Comment noted. Yes, the MBHMP requires Council approval of IP recommendations.	Misc. Clarification
193	8/31/18	email	Emma Pelton, Xerces Society	Have you considered increasing the replacement ratio from 1:1 to 2:1? Just to account for some sapling mortality and/or have better wind protection sooner? However, it may require later thinning which I can see might require careful public messaging.	Comment Noted. The total number of trees to be used in the restoration was derived by calculating the number of trees that could be planted and grow effectively within the restoration area to maximize the most suitable habitat and density sought. A "ratio" was not used.	Restoration
194	9/4/18	Email	Ken Knight	Provide an estimated survival rate of newly planted trees, and a follow up process to replant and maintain those trees. ▪ This is a very challenging area to plant. It will be difficult to replant and irrigate after initial planting efforts have been completed.	Comment Noted. In any instance where a planted restoration trees dies, it will also be replaced in order to meet the 100% survival goal in the final 2018 IP.	Misc. Clarification
195	9/4/18	Email	Ken Knight	Update the 2001 UC Cooperative Extension planting standards used in the Plan to 2018 planting standards, such as International Society of Arboriculture Best Management Practices for planting trees. ▪ There have been great advances in planting methodologies over the last 17 years that have not addressed in the Plan including soil testing, root shearing before planting and techniques for planting in dry, compacted soils.	Comment Noted. More recent methodologies have been used and cited throughout the final 2018 IP.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
196	9/3/18	Letter	FOTEM	The 2018 IP is intended to include mitigation for the previous removal of 29 eucalyptus in 2017 authorized under an emergency permit from the Coastal Commission. We're concerned that the 2018 IP appears to include the absolute bare minimum, and should be revised to include additional eucalyptus planting proximate to the area where each of the 29 eucalyptus were removed under the 2017 emergency permit, in addition to the proposed planting near Ellwood North	Comment Noted. The final 2018 IP involves planting of 63 eucalyptus trees as replacement and/or habitat enhancement trees, with red ironbark eucalyptus planted closer to the outer edge of the restoration area and blue gum eucalyptus planted closer to the interior of the restoration area. This configuration will mean that the heartier tree species will be located on the outside of the grove, thereby offering protection for the tree species on the interior, to help ensure that the enhanced habitat will be healthier and therefore be more suitable for monarch butterflies.	Restoration
197	9/3/18	Letter	Cynthia Brock	Consider a higher mitigation ratio, or plan to plant additional trees when needed to re-create optimal structure and desirable density of the forest.	Comment Noted. The final 2018 IP involves planting of 63 eucalyptus trees as replacement and/or habitat enhancement trees, with red ironbark eucalyptus planted closer to the outer edge of the restoration area and blue gum eucalyptus planted closer to the interior of the restoration area. This configuration will mean that the heartier tree species will be located on the outside of the grove, thereby offering protection for the tree species on the interior, to help ensure that the enhanced habitat will be healthier and therefore be more suitable for monarch butterflies.	Restoration
198	9/4/18	Council Meeting	Cynthia Brock	Planting only 28 trees doesn't provide adequate mitigation for the previously removed trees. Some of the trees removed were very large, multi-trunk trees. One small tree won't replace the function of the older trees for many decades. If the mitigation ratio was higher, we could begin to restore the aggregation site buffers where the trees were removed as well as enhance the Ellwood North site. The blue gum eucs that were removed could be replaced in addition to adding the ironbark eucs. so plant more trees at least some of them in the areas where the trees were removed especially near the aggregation sites	Comment Noted. The final 2018 IP involves planting of 63 eucalyptus trees as replacement and/or habitat enhancement trees, with red ironbark eucalyptus planted closer to the outer edge of the restoration area and blue gum eucalyptus planted closer to the interior of the restoration area. This configuration will mean that the heartier tree species will be located on the outside of the grove, thereby offering protection for the tree species on the interior, to help ensure that	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
					the enhanced habitat will be healthier and therefore be more suitable for monarch butterflies.	
199	9/4/18	Council Meeting	Mayor Paula Perotte	Why not ask the CCC to plant more than 1:1 replacement ratio of trees?	Comment Noted. The final 2018 IP involves planting of 63 eucalyptus trees as replacement and/or habitat enhancement trees, with red ironbark eucalyptus planted closer to the outer edge of the restoration area and blue gum eucalyptus planted closer to the interior of the restoration area. This configuration will mean that the heartier tree species will be located on the outside of the grove, thereby offering protection for the tree species on the interior, to help ensure that the enhanced habitat will be healthier and therefore be more suitable for monarch butterflies.	Restoration
200	9/4/18	Council Meeting	Mayor Paula Perotte	I like the idea of putting them all in this one area for now and there must be other areas that need it.	Comment Noted.	Restoration
201	9/4/18	Council Meeting	Mayor Paula Perotte	What I read about the questioning of the 1:1 seemed to be questioning whether that was going to die off of the plantings and you need to accommodate for the survival rate being 100% or 70%.	Comment Noted.	Restoration
202	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	I see, so for the CCC, if you wanted to have a final take of 28 trees and we planted 40, they would want to see 40. They assume 100% survival rate and we would replace as we go along.	Comment Noted.	Restoration
203	9/4/18	Council Meeting	Councilmember Kyle Richards	Is there any other reason that we would want to not start planting aggressively now?	Comment Noted. Any restoration plantings or other activities within the Ellwood Mesa area will require approval by the Coastal Commission before the City is permitted to begin.	Restoration
204	9/4/18	Council Meeting	Mayor Paula Perotte	The only reason I am questioning the 1:1 is because I haven't heard of 1:1. I've heard of 2 or 3	Comment Noted. No "ratio" was used in the final 2018 IP, but rather a restoration area and healthy planting distances and methodology to derive 63 replacement trees.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
205	9/4/18	Council Meeting	Councilmember Kyle Richards	Regarding the density, I was thinking that if we had more, then we would look at a larger area, not putting more in the same area	Comment Noted.	Restoration
206	9/3/18	Letter	FOTEM	The location of the replanted trees is problematic. While we understand that the proposed replanting in the Ellwood North area carries certain benefits for the Ellwood North aggregation area, it does not directly mitigate for the trees lost. We encourage the City Council to direct Staff to revise the 2018 1P to include additional replanting of eucalyptus proximate to the locations where each of the 29 eucalyptus were removed.	Comment Noted. The proposed replanting location presents the fewest problems for successful replanting, and provides much needed protection of a monarch butterfly aggregation site. It is a high priority restoration area, where the location of dead tree removal is not. Removal of dead trees does not carry a "mitigation" requirement under the current permit, but is a restoration activity. Trees in the removal area will be replaced under the guidance of an approved CDP from the Coastal Commission, with the recommendations set forth in the 2018 IP.	Restoration
207	9/4/18	Council Meeting	Cynthia Brock	Will trees be planted to mitigate the removal of additional trees?	Comment Noted. No additional trees are proposed for removal in the 2018 IP.	Misc. Clarification
208	9/4/18	Council Meeting	Cynthia Brock	Will all the 28 replacement trees be planted along the western boundary Ellwood North and I guess we've had that answered, it would do nothing to mitigate the other areas where trees were removed. It doesn't address the condition in the emergency permit that calls for restoration of aggregation sites. 5 of the trees that were removed last year were within the buffer zones of Ellwood Main and West. The structure and function of those groves should be restored by planting some of these trees within the areas were trees were removed, especially within the aggregation sites.	Comment Noted. The proposed replanting location presents the fewest problems for successful replanting, and provides much needed protection of a monarch butterfly aggregation site. It is a high priority restoration area, where the location of dead tree removal is not. Removal of dead trees does not carry a "mitigation" requirement under the current permit, but is a restoration activity. Trees in the removal area will be replaced under the guidance of an approved CDP from the Coastal Commission, with the recommendations set forth in the 2018 IP.	Restoration
209	9/4/18	Council Meeting	Ana Citrin	Increase mitigation ratio is critical. You're going to need to go the coastal commission every time you want to do one of these approved. Why not ask for additional planting and get authorization for irrigation in additional planting areas now so that you have the flexibility to do that and to truly restore this area and mitigation for the impacts that were previously done to this area.	Comment Noted. No "ratio" was used in the final 2018 IP, but rather a restoration area and healthy planting distances and methodology to derive 63 replacement trees.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
210	9/3/18	Letter	Barbara Massey	There are no protections in these plans to keep a large number of trees from being cut down at any time without the Council's or public's knowledge or approval.	Comment Noted.	Authority/ Agency
211	9/4/18	Council Meeting	Councilmember Kyle Richards	Will there be a staff response to the comment letters? To what degree will we know that the comments have been received and that we did anything about them?	Comment Noted. City staff has created a matrix of comments and staff responses to each comment received during public discussions as well as those that were emailed to the City.	Misc. Clarification
212	9/4/18	Council Meeting	Councilmember Kyle Richards	What about when there is a conflict in the comments? With the type of species that we plant and the riparian areas? How do we manage that? Or will that come back to us?	Comment Noted. Conflicts are resolved with the best available information.	Misc. Clarification
213	9/4/18	Council Meeting	Councilmember Kyle Richards	I'd like to include the comments that were brought up today and the topic of the expansion area and the other concerns that were brought up today.	Comment Noted. Many of the comments received during the public meeting guided revisions to the draft IP and help form the final 2018 IP that submitted to the Coastal Commission for review as part of the follow-on CDP to the 2017 EMP.	Misc. Clarification
214	9/3/18	Letter	Cynthia Brock	The BMHMP assigns a large role to the docents to provide feedback about the management of the groves. While this group has valuable experience in the grove, there are many other members of the public who are very concerned and also bring valid information.	Comment Noted. Each IP will be presented at a public hearing for City Council review and approval.	Public Involvement
215	9/3/18	Letter	Cynthia Brock	Policy 18-2 makes the docents (through the docent coordinator) the only input for the signage program. What about all the other interested people? Their opinions and recommendations should also be sought. Add methods to solicit recommendations from other interested persons.	Comment Noted. Policy 18-2 states the Butterfly Docent Coordinator shall provide input regarding the interpretative program. The policy in no way restricts public comment or inquiry.	Public Involvement
216	8/16/18	Public Workshop	Sharleen Marie	What are we doing this year in September?	City continued to edit the final 2018 IP throughout later months of 2018 and will be submitting an application to the Coastal Commission to formally permit the emergency removal and pruning that occurred in late 2017.	Misc. Clarification
217	8/16/18	Public Workshop	Sharleen Marie	Will the City be cutting more trees? Removing vines? Planting things?	Not in 2018, but the City will consider if removal of additional dead trees will be necessary in the future. Any additional work for restoration will be discussed in detail in the final 2018 IP.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
218	8/16/18	Public Workshop	Eurie, Pacific Oaks	What's a stakeholder?	Anyone who is interested in process including but not limited to agencies, staff, council, public, neighbors at Coronado and North Campus open space.	Misc. Clarification
219	8/16/18	Public Workshop	Eurie, Pacific Oaks	Has there ever been any mgmt. of this area, ever?	Yes, the forest was actively managed as a wood lot from its beginning in the 1870s until the 1980s.	Misc. Clarification
220	8/16/18	Public Workshop	Mandi Burgess	What do you want from us? what we want to see?	Comment Noted. Staff has incorporated all relevant and applicable comments and suggestions into the final 2018 IP, as appropriate.	Misc. Clarification
221	8/16/18	Public Workshop	Cris Lange	What is CCC reviewing?	Comment Noted. The City will be including the final 2018 Implementation Plan in its application to the Coastal Commission, as required by the issued Emergency Permit. The City anticipates work detailed within the plan to begin in 2019.	Misc. Clarification
222	8/16/18	Public Workshop	General public comment	MBHMP page 126 says that down fuel does not play important role. Has anything in the research changed since 2012?	Comment Noted. MBHMP monitoring, research, and adaptive management programs will obtain new information as it becomes available.	Misc. Clarification
223	8/16/18	Email	Alfred Smith	Pg. 12 Executive Summary, Second paragraph: Why is the UFMP not mentioned as a key policy document? Was the UFMP referenced at all when developing the plans?	Comment Noted. Reference to the UFMP was added to the policy section of the document.	Authority/ Agency
224	8/22/18	PTAC Meeting	Phebe Mansur	Are you coordinating with the folks on the Coronado Plan?	Comment Noted. The City coordinates Plans.	Misc. Clarification
225	9/4/18	Council Meeting	Mayor Paula Perotte	Will the signage be going to the design review board?	Comment Noted. Public signage within City-owned parks and open spaces is determined by the City Council (and the Coastal Commission within the Coastal Zone areas of the City) and is installed and maintained by Public Works. Signage would likely only go to DRB if directed by the Council to do so.	Misc. Clarification
226	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	If you put together a budget and an irrigation plan I presume after the MBHMP, would that be part of submitting this?	Comment Noted. The final 2018 IP has been revised to describe the restoration work sought by the City.	Misc. Clarification

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
227	9/4/18	Council Meeting	Mayor Pro Tempore Stuart Kasdin	So for the irrigation you will have already taken care of the introductory requirements and will then just need permitting?	Comment Noted. The final 2018 IP has been revised to describe the restoration work sought by the City.	Misc. Clarification
228	9/4/18	Council Meeting	Cynthia Brock	Will the 22 dead trees in Figure 1 be removed prior to restoration planting?	Comment Noted. Figure 1 depicts only those trees that were previously removed or pruned in 2017 under the Emergency Permit.	Misc. Clarification
229	9/4/18	Council Meeting	Mayor Paula Perotte	Did you get the direction that you wanted?	Comment Noted. Staff has incorporated all relevant and applicable comments and suggestion into the final 2018 IP, as appropriate.	Misc. Clarification
230	9/4/18	Council Meeting	Mayor Paula Perotte	The big question is the scope of the open space plan. I think we need to make it really clear what is the scope. I'm still a little confused as to the boundary and the scope of the plan. How can we deal with it?	Comment noted. The MBHMP provides a map (Figure 2) that shows the Monarch Butterfly Habitat Management Plan Coverage Area. It is not defined by parcels.	Authority/ Agency
231	9/3/18	Letter	Cynthia Brock	Is the treatment different for "aggregation areas," "roosts," "trees supporting seasonal monarch butterfly aggregation sites," "aggregation site buffers," or the eucalyptus forest beyond the buffers.	There is no difference in the treatments for these various areas.	Restoration
232	9/3/18	Letter	Cynthia Brock	If other types of eucalyptus will be considered for restoration, a table should be added that shows those different types and compares their attributes like size, growing habit, nectaring time, whether they are known to be used for aggregation, etc.	Comment Noted. Restoration in North Ellwood associated with the emergency removal of hazard Eucalyptus trees will use both eucalyptus trees and native understory. A variety of tree and plant species are being considered throughout the other areas of the grove.	Restoration
233	8/30/18	Email	Lisa Stratton, UCSB CCBER	Policy 14-2 says: "Gaps in eucalyptus groves shall be considered for habitat enhancement and restoration alternatives" – the subsequent actions are good – but could you add a strategic time line to this (now that funding is available) that says something like: A strategic planting plan and map will be created in 2018-19 with the goal of addressing all current and developing gaps and restoration opportunities by (say) 2024.	Comment noted. Language clarified to designate areas of native planting in areas already occupied by non-eucalyptus vegetation.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
234	8/16/18	Public Workshop	Barbara Massey	Want eucs restored with eucs, not natives.	Comment Noted. As discussed in the final 2018 IP, there would be 11 red ironbark eucalyptus planted closer to the outer edge of the restoration area, and 52 blue gum eucalyptus planted closer to the interior of the restoration area.	Restoration
235	8/16/18	Public Workshop	Mandi Burgess	About eucs vs natives discussion	Comment Noted. Restoration in North Ellwood associated with the emergency removal of hazard Eucalyptus trees will use both eucalyptus trees and native understory. A variety of tree and plant species are being considered throughout the other areas of the grove.	Restoration
236	8/16/18	Public Workshop	Jennifer Loftis	Dead trees prevent recruitment of understory – how are you doing restoration?	Comment Noted. The total number of trees to be used in the restoration was derived by calculating the number of trees that could be planted and grow effectively within the restoration area to maximize the most suitable habitat and density sought. A “ratio” was not used.	Restoration
237	8/2/18 & 8/9/18	Stakeholder meeting	Lisa Stratton, UCSB CCBER	No maps provided in plan, see below for proposed focus on doing active restoration of all non-aggregation areas with native trees which can reduce fire risk, establish early to continue to provide environmental amelioration of the grove, support insects, birds, wildlife to complement Eucalyptus trees	Comment Noted. The 2018 IP has been updated with maps.	Restoration
238	9/3/18	Letter	Barbara Massey	There seems to be a continuing push from staff to restore eucalyptus trees with native plants, not eucalyptus trees. At the workshop the public strongly supported any restoration to be with the more appropriate eucalyptus trees.	Comment Noted. The MBHMP Identifies planting eucalyptus as the action to correct habitat deficiencies.	Restoration
239	9/3/18	Letter	Barbara Massey	There is also too much emphasis on clearing understory and removing fallen trees which are much needed by the other wildlife in the groves. I see this as no improvement or very little over current flawed plans.	Comment Noted.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
240	9/4/18	Council Meeting	Councilmember Roger S. Aceves	Restoration with native understory makes good sense to me. Assuming this is in the preferred restoration site, how would we deal with this? (photo on slide 5 of presentation)	Comment Noted. Restoration in North Ellwood associated with the emergency removal of hazard Eucalyptus trees will use both eucalyptus trees and native understory. A variety of tree and plant species are being considered throughout the other areas of the grove.	Restoration
241	9/4/18	Council Meeting	Councilmember Roger S. Aceves	Would the debris in the restoration area be removed?	Comment Noted. The final 2018 IP will incorporate this concern and is not calling to remove all debris.	Restoration
242	8/16/18	Public Workshop	General public comment	In terms of replanting: how are you defining success of trees that you are planting? Could die in 5-10 years. When do you say you're done with the tree?	Comment Noted. The final 2018 IP includes a tree monitoring program to ensure replacement trees are successfully established and have a 100% survival rate.	Restoration
243	8/16/18	Public Workshop	Wes Herman, retired fireman	Post "no fire" signs at the entrances and at the beach	Comment Noted.	Signs
244	8/16/18	Public Workshop	Cynthia Brock	Add "No Parking" signage at end of SB Shores drive to keep the fire access clear	Comment Noted.	Signs
245	8/16/18	Public Workshop	Sharleen Marie	Will the trail closure signs that are up stay there this season?	Comment Noted. If approved by the Coastal Commission, the City would be replacing trail closure signs with warning signs, as shown on Figure 3 of the final 2018 IP.	Signs
246	8/16/18	Public Workshop	Tim Burges, SB Shores	Votes for "enter at your own risk" Do not try to protect everyone that goes through them.	Comment Noted.	Signs
247	7/27/18	Email	Lara Drizd, USFWS	MBHMP Pg 16 - Signage/Fencing - It wasn't clear to me if these activities would be done outside of the OW time period. I would just add a note that installation and maintenance of signage and fencing will be conducted in such a way as to not disturb overwintering monarchs.	Comment Noted.	Signs
248	9/3/18	Letter	Cynthia Brock	Most interpretive signage should be placed at the main entry points rather than in the forest. The parking lot and the Coronado Preserve are both good places for informational and directional signs	Comment Noted.	Signs

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
249	9/3/18	Letter	Cynthia Brock	We should consider the possibility of using simple brochures, distributed at the parking lot or other main entry points to provide information, rather than installing a profusion of signs in our natural area. I think most people would deposit their brochures for re-use. And the forest wouldn't be "littered" with obtrusive signs.	Comment Noted.	Signs
250	9/4/18	Council Meeting	Councilmember Kyle Richards	Questions about the trail closure signs, are we talking about an "enter at your own risk" sign? So, it would be open to the public just with more warnings about there is danger here so it decreases our liability?	Comment Noted. If approved by the Coastal Commission, the City would be replacing trail closure signs with warning signs, as shown on Figure 3 of the final 2018 IP.	Signs
251	9/4/18	Council Meeting	Mayor Paula Perotte	I will comment on the replacement of the trail signs with cautionary signs. We checked with JPA and the "enter at your own risk" is fine. I support that.	Comment Noted.	Signs
252	9/4/18	Council Meeting	Mayor Paula Perotte	Will signage be approved by the DRB?	Comment Noted. However, public signage within City-owned parks and open spaces is determined by the City Council (and the Coastal Commission within the Coastal Zone areas of the City) and is installed and maintained by Public Works.	Signs
253	9/3/18	Letter	Cynthia Brock	Any further signage and fencing in the monarch groves should be required to be reviewed, in a public meeting, by the Design Review Board. The City itself should be held to standards as high as any commercial establishment or developer is. And the public should be given just as much of a chance to comment on these features as they would on any other project.	Comment Noted. However, public signage within City-owned parks and open spaces is determined by the City Council (and the Coastal Commission within the Coastal Zone areas of the City) and is installed and maintained by Public Works.	Signs
254	9/3/18	Letter	Cynthia Brock	Signs directing tourists who want to visit monarchs should point them only to the Ellwood Main site. Tourism can be a destructive force in the groves and its impact should be limited by channeling groups to just one area where they can be controlled by fencing, docent presence, etc. Don't provide other signals like cleared paths or seating areas that would visually direct tourists into the other aggregation sites.	Comment Noted.	Signs

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
255	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	The MBHMP encompasses a significant riparian system (i.e., channels, tributaries) that has been heavily and negatively impacted by human activity as well by neglect. While the MBHMP mentions modest efforts to address riparian degradation, we believe that a more concerted focus on restoration and rehabilitation of this important habitat would benefit the monarch aggregation sites as well as the local ecosystem as a whole.	Although the primary focus of the MBHMP is monarch butterfly habitat, improvement of habitat for other wildlife species within the coverage area is also a priority. This is embodied in the Habitat Enhancement and Restoration Program (Program 14), which includes actions for habitat enhancement and native restoration in areas outside the butterfly groves, and along Devereux Creek in particular (Action 14.3-1).	Native Habitats
256	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	Expanding on the above point, we believe the key to successful restoration efforts is a carefully targeted approach to the selection and design of native restoration sites. This might result, for example, in restoration efforts limited to within 50-100 feet of existing waterways, that is, wetter areas where some native vegetation (e.g., coast live oak and toyon) already exists. (One strategy here might be to remove competing eucalyptus and design restoration around these natives; additionally, dead eucalyptus would need to be removed so as to allow sunlight to reach the restoration areas.) The attached annotated map suggests such possible areas. More precise siting ideally would be informed by bringing expert (hydrologic, geologic) knowledge to bear on more detailed mapping of the seeps and springs that occur along the Ellwood segment of the More Ranch Fault (see attached), many of which are now degraded, weakly expressed, or entirely obliterated. This fault is known to host persistently wet riparian habitats, which, among other attributes, makes it one of National Audubon's Important Bird Areas (IBAs). Principles underlying this recommendation include the facts that: a. Monarchs may aggregate in vegetation other than eucalyptus b. The habitat structure requirements needed to achieve correct micro-climate conditions can be achieved through native as well as eucalyptus plantings. c. Restoration with natives provides more diversity than eucalyptus alone. d. Carefully sited and designed native habitats have the greatest likelihood of being self-sustaining and	While monarch overwintering in native vegetation has been documented in San Luis Obispo County and to the north, native vegetation in Santa Barbara County and southward does not tend to support suitable monarch aggregation habitat for the duration of the overwintering season without the support of eucalyptus trees. Integrating native species into restoration designs is envisioned as part of the MBHMP's programs, but must be undertaken cautiously to ensure that butterfly habitat is not compromised. In and near known aggregation sites, replacement of eucalyptus with other species would be considered experimental and would only be implemented as part of the research or adaptive management programs until data show that maintaining a climax aggregation site with native species in Southern California is feasible. The City is fully committed to enhancing habitats within the Coverage Area for other wildlife, in addition to monarchs, but at least in the short term we expect the focus for native plantings to be on areas outside the eucalyptus groves. The precipitous decline of the monarch population, combined with the extraordinary importance of wintering habitat (and wintering habitat on Ellwood	Native Habitats

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				supportive of diverse insect and bird life.	Mesa in particular) for the species, necessitates placing the highest priority on butterfly habitat objectives. Proposed actions such as better researching the locations of historic seeps that could be suitable for restoration are could be conducted under the MBHMP's research program. As stated in MBHMP Action 12-1.2 and Table 2, the selective removal of standing dead trees is an option for active management of the eucalyptus groves and would be implemented where beneficial for habitat or necessary for safety reasons.	
257	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	We encourage the plan to provide for the gradual replacement of dead eucalyptus outside monarch aggregation areas with appropriately selected native trees	Transitioning eucalyptus habitat to a native tree habitat is not included in the MBHMP, because the eucalyptus groves are designated monarch butterfly ESHA and converting them to another habitat type is therefore inconsistent with the General Plan. An ESHA area to be converted to a different habitat type would first need to have the ESHA designation removed through a General Plan amendment.	Native Habitats
258	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	The concern of damage by unleashed dogs is not addressed in the MBHMP and conflicts with two program goals, Trail Management Program Goal 5 and Waste Management Program Goal 6.	While dogs are not addressed explicitly by the MBHMP, the City's municipal code requires that dogs be on-leash on Ellwood Mesa. Under MBHMP Policy 6-2 the City would take steps, including signage, informing visitors as to rules and restrictions that apply within the grove. Rules related to dogs, including proper leash use and cleanup of animal waste, could be addressed under this policy.	Dogs
259	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	The final plan, especially the Habitat Enhancement and Restoration Program (Section 14), should include an assessment of the impacts of all proposed actions on potentially affected downstream habitats, such as North Campus Open Space (NCOS) and Coal Oil Point Reserve (COPR).	The project's impacts were described in the IS/MND, which is available for public review and comment until February 24th. However, because all eucalyptus plantings and enhancement would be confined to the existing groves, which have been dominated by eucalyptus for decades, no	Environmental impacts

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
					adverse impacts related to the introduction or spread of eucalyptus are anticipated. Other impacts, such as those from native habitat restoration and signage to improve rules awareness, would be positive.	
260	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	The Coronado Seep is an important birding hot spot and the MBHMP should protect and preserve this spot.	The MBHMP does not recommend any actions that would disrupt the Coronado Seep.	Coronado Seep
261	8/31/18	Letter	Cherie Topper, Santa Barbara Audubon Society	The "Program Status" paragraph at the end of Section 14 states: "An Implementation Plan that describes work activities to occur each year will accompany this MBHMP." We applaud this element of the plan and trust it will be annually circulated for public review and comment well in advance of the work commencement date. This will ensure that it serves as an effective mechanism for public communication and feedback and for project monitoring and accountability.	Comment noted. We are hopeful that the approach of using specific Implementation Plans to further the goals of the overarching MBHMP will be successful, for all the reasons you've mentioned.	General Support
Comments Received during the Draft IS-MND Public Comment Period						
262	2/25/19	Letter	Jacqueline Phelps, District Supervisor, California Coastal Commission	The commenter describes the background and context for the MBHMP, noting that the health of eucalyptus groves at Ellwood Mesa has been compromised as a result of drought and pest infestation. The commenter further notes that the California Coastal Commission (CCC) issued an Emergency Coastal Development Permit (CDP) to the City in September 2017, authorizing removal of 29 dead or high-risk trees that posed a threat to public safety. As a condition of this Emergency CDP, the City is required to submit a complete CDP application addressing not only mitigation for the removed trees, but also aggregation site restoration, habitat management, and trail repair and maintenance strategies. The commenter states that the MBHMP, as written, lacks specific project details and implementation actions and recommends inclusion of detailed measures into the MBHMP to guide implementation of a comprehensive, ecosystem-based approach for management of Ellwood Mesa to fulfill the requirements of the Emergency CDP. The commenter adds that the plan should include alternatives for replacing removed and trimmed eucalyptus trees with native tree species and replacing them with a mixture of	The MBHMP provides a long-term conservation strategy built around broad objectives, outcomes, and management policies for Ellwood Mesa monarch butterfly habitat. Policy 1-4 of the MBHMP states that "periodic Implementation Plans shall identify and describe short-term actions needed to further the goals and objectives of the MBHMP, taking into consideration current conditions and funding levels at the time each Implementation Plan is prepared." The 2018 Implementation Plan was released along with the July 2018 draft of the MBHMP and includes activities aimed at satisfying conditions of Emergency CDP issued to the City by the CCC. The purpose of the 2018 Implementation Plan is to address previous emergency tree removals with restoration of the aggregation sites in the groves and to reopen trails. Primary	MBHMP Scope/Detail

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				native and non-native tree species as well as incorporating as many native nectar producing species in the planting palette as possible.	tasks identified in the 2018 Implementation Plan include conducting nesting bird and monarch butterfly surveys, installation of enhancement plantings and signage, removal of existing closure signs, and long-term replacement tree monitoring. The CCC is currently reviewing the 2018 Implementation Plan. The Draft IS-MND evaluates the 13 MBHMP programs with potential to result in environmental impacts, and includes the range of specific covered activities that could occur under these programs. Covered activities for each of these programs are listed in the Draft IS-MND, beginning on Page 10.	
263	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter recommends that the MBHMP be revised to specifically state that removed eucalyptus trees will be replaced in kind and identify blue gum and other eucalyptus species in the identified plant list.	This comment is noted. The MBHMP calls for maintaining a "living forest within the outline of pre-drought forest extent," and contains a number of policies and actions supporting eucalyptus growth within the boundaries of the existing eucalyptus groves. Such actions include Action 12-1.11, which calls for a pilot planting for any eucalyptus species considered for tree restoration that is not present in the MBHMP area as of 2018, and Action 12-2. 5, which calls for protecting blue gum saplings as necessary to encourage natural recruitment of trees in the eucalyptus forest. Finally, the 2018 Implementation Plan calls for planting of 63 eucalyptus trees within the existing grove boundaries as mitigation for the 27 trees removed and 2 trees trimmed in 2017. The 2018 Implementation Plan is currently under review by the CCC.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
264	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter recommends changes to Policy 12-1 of the MBHMP to state that eucalyptus trees in the groves hall be managed to ensure tree health and longevity throughout the Coverage Area, rather than just in groves containing aggregation sites.	The commenter's proposed changes to Policy 12-1 of the MBHMP have been accepted. Policy 12-1 of the MBHMP has been revised, as follows: "**Policy 12-1**. Eucalyptus trees in the groves ~~containing monarch butterfly aggregation sites~~ within the MBHMP coverage area shall be managed, as feasible, to ensure tree health and longevity."	Restoration
265	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter recommends a change to Action 12-1.2 of the MBHMP. Specifically, the commenter suggests that Table 2 of the MBHMP be revised to include "Planting eucalyptus trees or planting native trees" as a Potential Action/Tool for Management to correct habitat deficiencies.	This comment is noted. As currently written, Table 2 allows for planting of trees to correct habitat deficiencies, such as sparse overstory, strong winds in the groves, or tree death, toppling, or removal. Such trees may be eucalyptus or native, depending on the location within the Coverage Area, the conditions at this location, and the habitat deficiency to be corrected.	Restoration
266	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter recommends changes to Actions 12-1.6 and 12-1.10 of the MBHMP specifying maintenance of a living eucalyptus forest and replanting eucalyptus trees.	This comment is noted. The MBHMP calls for maintaining a "living forest within the outline of pre-drought forest extent," and contains a number of policies and actions supporting eucalyptus growth within the boundaries of the existing eucalyptus groves. Such actions include Action 12-1.11, which calls for a pilot planting for any eucalyptus species considered for tree restoration that is not present in the MBHMP area as of 2018, and Action 12-2. 5, which calls for protecting blue gum saplings as necessary to encourage natural recruitment of trees in the eucalyptus forest. Finally, the 2018 Implementation Plan calls for planting of 63 eucalyptus trees within the existing grove boundaries as mitigation for the 27 trees removed and 2 trees trimmed in 2017. The 2018 Implementation Plan is currently under review by the CCC.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
267	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter recommends changes to Action 10-1.1, Policy 10-2, Action 10-2.1, and Policy 10-4 expanding the application of these actions and policies to eucalyptus groves and windrows in the Coverage Area, as opposed to monarch butterfly aggregation sites.	This comment is noted. The MBHMP includes a number of policies and actions supporting eucalyptus growth within the existing grove boundaries. Additional protections included in the MBHMP are intended to provide an added layer of management directive to protect known aggregation sites in the Coverage Area. They do not preclude larger habitat restoration efforts from occurring throughout the Coverage Area, such as removal of dead trees and debris, planting trees as needed to maintain grove density and improve monarch habitat (Action 12-1.10), or monarch butterfly patrolling habitat enhancement efforts (Action 12-2.2).	Restoration
268	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter states that Action 2-2.2 allows for payments of compensatory mitigation fees to the Butterfly Fund for projects with limited impacts on monarch butterfly habitat. The commenter adds that the City should not allow projects that impact monarch butterfly habitat, and Action 2-2.2 should be revised to allow payment of compensatory mitigation fees only where projects have implemented all available measures to avoid impacts to monarch butterfly habitat, or to directly mitigate impacts on-site where appropriate.	This comment is noted. Action 2-2.2 allows for payments of compensatory mitigation fees into the Butterfly Fund, as deemed appropriate during project-specific CEQA analysis for projects with limited impacts on monarch butterfly habitat. Such projects would still be required to undergo the appropriate level of project-specific environmental review evaluating and mitigating impacts to monarch butterflies, as necessary.	Environmental Impacts and Mitigation
269	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter states that language in the Habitat Enhancement and Restoration Program is insufficiently clear and requires revision to ensure that restoration activities do not result in the destruction of eucalyptus and monarch habitat and associated potentially significant impacts. Specifically, the commenter suggests changes to the Overview language in the MBHMP clarifying that enhancement or restoration of the Devereux Creek corridor would occur in existing native riparian areas. The commenter adds that this language is consistent with the language in supporting Policy 14.3, which limits restoration actions to existing native riparian areas, and Policy 14-2, which states that, “areas between eucalyptus groves shall be considered for habitat enhancement and restoration	This comment is noted. The MBHMP is a long-term management plan intended to guide habitat restoration and enhancement efforts through management goals, policies, and supporting actions. Specific management activities, including the location and nature of riparian restorations, would be identified in annual Implementation Plans. Pursuant to Action 1-4.2, City staff shall present each annual Implementation Plan at a public hearing for stakeholder input and City Council approval.	Restoration

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
				alternatives."		
270	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter requests a map in the MBHMP showing the location of existing native riparian areas. Specifically, the commenter requests that the MBHMPM include Figure 2 from the Draft IS-MND showing drainages and vegetation communities in the Coverage Area. Additionally, the commenter recommends changes to Action 11-2.4 of the MBHMP to specify that restoration in the Devereux Creek riparian corridor would be for "existing native riparian areas."	This comment is noted. The commenter appears to be referring to Figure 7 of the Draft IS-MND, which is included in Section 4, *Biological Resources*, of the document. As described in the staff response to Comment 269, above, specific management activities, including the location and nature of riparian restorations, would be identified in annual Implementation Plans. Pursuant to Action 1-4.2, City staff shall present each annual Implementation Plan at a public hearing for stakeholder input and City Council approval.	Restoration
271	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter notes the importance of monitoring and reporting as key tools necessary to ensure that the MBHMP functions as intended and that provisions of the MBHMP relied on to self-mitigate impacts to monarch butterflies and their habitat are actually effective at reducing impacts to less than significant levels. The commenter recommends changes to Policy 20-3 and Action 20-3.1 to firmly require annual Monitoring Reports and present such reports at public workshops.	The commenter's proposed changes are noted. In addition to monitoring actions proposed in the MBHMP, the MBHMP IS-MND contains 15 mitigation measures incorporated to reduce potential impacts to the environment to a less than significant level. A Mitigation Monitoring and Reporting Program (MMRP), included as Appendix D of the Final IS-MND, requires the City to monitor the effectiveness of these mitigation measures and includes required actions, monitoring timing, frequency, responsible parties, and compliance verification steps.	Monitoring
272	2/25/19	Letter	Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs	The commenter requests changes to Action 1-2.1 of the MBHMP. Specifically, the commenter request that the action firmly require pre-activity surveys for nesting birds, monarch butterfly aggregations, and other wildlife, the presence of an environmental monitor during construction, and other protections, as deemed appropriate whenever vegetation removal, ground disturbance, construction, or other activities are proposed within the Coverage Area by the City or any other entity. Additionally, the commenter requests that the measure be revised to require the City to monitor such activities to ensure environmental protection measures are used and that activities are limited to those permitted.	The commenter's proposed changes to Action 1-2.1 of the MBHMP have been accepted. Action 1-2.1 now reads as follows: "**Action 1-2.1**. Whenever vegetation removal, ground disturbance, construction, or other activities with the potential to significantly disrupt habitat values are proposed within the MBHMP coverage area by the City or any other agency or utility, environmental protection measures shall be implemented. These measures shall be determined in coordination with a qualified	Monitoring

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
					biologist, and ~~should normally~~ shall include at a minimum pre-activity surveys for nesting birds or other wildlife, pre-activity surveys for monarch butterfly aggregations, presence of an environmental monitor during construction, and other protections, as deemed appropriate. The City will monitor these activities to ensure that environmental protection measures are used and that activities are limited to those permitted."	
273	2/22/19	Letter	Maeton Freel, Resident	The commenter states that the MBHMP provides a generic approach to managing the Coverage Area primarily for eucalyptus trees, while mentioning other existing wildlife resources and native riparian and upland habitats in and adjacent to the Coverage Area. The commenter recommends a more balanced approach to better support both butterflies and other native species. The commenter further recommends use of The Xerces Society's 2017 publication Protecting California's Butterfly Groves: Management Guidelines for Monarch Butterfly Overwintering Habitat and working with the United States Fish and Wildlife Service (USFWS) in their review of proposals to have the monarch butterfly listed as threatened or endangered.	The purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation. The publication recommended by the commenter was consulted and is included as a reference in the MBHMP. Additionally, the MBHMP notes the ongoing effort by the USFWS review the monarch butterflies candidacy for listing as threatened or endangered under the Federal Endangered Species Act. Policy 3-1 of the MBHMP states that the City shall pursue cooperative relationships with other agencies regarding regulatory goals and policies that the partners have in common concerning the Ellwood Mesa Open Space, in particular, goals and policies that have an impact on the management of the monarch butterfly aggregation sites. Supporting Action 3-1.1 specifically encourages such relationships with federal agencies such as the USFWS.	MBHMP Scope/Detail

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
274	2/22/19	Letter	Maeton Freel, Resident	The commenter states that the maps included in the MBHMP are general and need to be at a scale which provides for definition of tree densities, areas of dead and dying trees, and other factors critical to managing the habitat.	The MBHMP is a long-term planning document for the Coverage Area. Conditions such as tree density, areas of dead or dying trees, and other factors critical to managing the habitat, are subject to changes over time as MBHMP activities are implemented. Annual Implementation Plans prepared for the Coverage Area may contain more detailed maps or other materials to inform specific management actions.	MBHMP Scope/Detail
275	2/22/19	Letter	Maeton Freel, Resident	The commenter states that comments provided by Lisa Stratton, Director of Ecosystem Restoration at the University of California, Santa Barbara, provide additional factors which need to be included in a sound management plan in order to determine whether an area is actually meeting desired habitat characteristics for monarch butterflies and other wildlife and plants occurring in the area.	Comments received on the MBHMP, including those noted by the commenter, are included in this comment matrix. Please refer to the responses above.	Public Comments
276	2/24/19	Letter	Michael Mills, Resident	The commenter states that the MBHMP does not adequately address the extreme risks to property and human life that would occur due to a fire in the eucalyptus groves. The commenter notes that the plan was prepared by an environmental consulting firm with expertise in monarch butterfly habitat preservation, not fire risk assessment or the development of fire mitigation strategies. The commenter states that neighborhoods adjacent to the groves are at significant risk of fire, and concludes that the MBHMP should provide fire risk reduction strategies. Finally, the commenter states that such strategies should be made in consultation with fire risk experts, especially those with expertise in the specific risks posed by fires in eucalyptus groves.	The purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation. The MBHMP is not intended to be a wildfire protection or mitigation plan, though it does pledge support for the policies and activities contained in the CWPP, which includes policies intended to reduce fire hazards from fuel loads in the Coverage Area. The MBHMP is intended to fulfill its stated purpose of supporting habitat for monarch butterflies and other plant and animal species, coastal access, and recreation while not exacerbating wildfire risk in or around the Coverage Area.	Wildfire

No.	Date	Source	Name	Comment	Staff Response	Subject/Topic
277	2/25/19	E-mail	Laura Maskrey, Resident	The commenter notes that the MBHMP is not an emergency response plan, but that there exists a possibility that monarch butterflies may not return to the Coverage Area next year. The commenter recommends that there should be some urgent discussions about what should be done before the next year, since this plan may not take effect before then.	The commenter is correct that the MBHMP is not an emergency response plan. However, the City published the 2018 Implementation Plan in July 2018, which calls for conducting nesting bird and monarch butterfly surveys, installation of enhancement plantings and signage, removal of existing closure signs, and long-term replacement tree monitoring. The schedule in the 2018 Implementation Plan calls for installation of enhancement plantings, signage, and removal of trail closure signage as early as March 2019. However, the 2018 Implementation Plan is currently being reviewed by the CCC, and requires CCC approval prior to implementation.	MBHMP Scope/Detail

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Response to Comments

This section includes comments received during the circulation of the Draft Initial Study and Mitigated Negative Declaration (IS-MND) prepared for the Monarch Butterfly Habitat Management Plan (MBHMP).

The Draft IS-MND was circulated for a 30-day public review period that began on January 25, 2019 and concluded on February 24, 2019. The City received nine (9) comment letters on the Draft IS-MND. The commenter and the page number on which each commenter's letter appears are listed below.

The comment letters and responses follow. Each comment letter has been numbered sequentially and each separate issue raised by the commenter, if more than one, has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue (Response 1.1, for example, indicates that the response is for the first issue raised in comment Letter 1).

STATE OF CALIFORNIA -- CALIFORNIA NATURAL RESOURCES AGENCY

GAVIN NEWSOM, GOVERNOR

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Letter 1

February 25, 2019

Anne Wells
City of Goleta, Planning Division
130 Cremona Drive, Suite B
Goleta, CA 93117

RE: Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan Initial Study & Mitigated Negative Declaration

Dear Ms. Wells,

Commission staff has reviewed the Initial Study & Mitigated Negative Declaration (IS/MND) for the Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan, and we appreciate the opportunity to provide comments for your consideration. The purpose of the subject IS/MND is to assess the Monarch Butterfly Habitat Management Plan (MBHMP), which has been created to provide an approach to management of monarch butterfly seasonal aggregation habitat, additional species habitats, and public access and recreation. Within the subject MBHMP, 22 programs are identified to guide the overall management approach, and within each program a goal and several policies and objectives for implementation are outlined.

As described within the IS/MND, the eucalyptus trees at Ellwood Mesa are currently threatened by drought and pest infestation. The health of the trees has been compromised, which has resulted in the death of numerous trees and the degradation of aggregation sites. In July 2017, over 1,200 eucalyptus trees were dead, and hundreds more were highly degraded and dying. The IS/MND also describes that the monarch butterfly population at Ellwood Mesa has been in decline for several years. In 2018, the population at Ellwood declined to 230 butterflies, which is approximately 0.5 percent of the 30-year population high (47,500 butterflies in 2011). 1

In September 2017, in order to address 29 trees that were dead and/or at high risk of failure and hazardous to public safety due to their proximity to public trails, the Commission issued Emergency Coastal Development Permit (CDP) Number G-4-17-0048 to allow for removal of the trees. In recognition of the need for a comprehensive approach to habitat and access management at Ellwood, Condition Four of this Emergency CDP requires that the City submit a complete regular CDP application for an Ellwood Mesa Habitat Management Plan to not only address mitigation for the 29 trees removed, but also restoration of the aggregation sites and a strategy for re-opening and maintaining future use of all public trail segments in coordination with habitat management strategies.

The subject MBHMP identifies several goals, policies, and objectives for the comprehensive management of Ellwood, including directives to restore aggregation sites, enhance biodiversity, and maintain public access. However, the MBHMP lacks specific project details and implementing actions. Conditions at Ellwood seem to warrant expedited action as the heath of

the aggregation sites and monarch butterfly population appear to be degrading rapidly. As such, Commission staff recommends that the City incorporate detailed measures into the MBHMP to guide implementation of a comprehensive, ecosystem based approach for management of Ellwood, and that the plan be submitted to the Commission in the context of a CDP application to fulfill the requirements of Condition Four of Emergency CDP G-4-17-0048. The plan should include alternatives for replacing removed and trimmed eucalyptus trees with native tree species and replacing them with a mixture of native and non-native tree species as well as incorporating as many native nectar producing species in the planting palette as possible. A CDP for such a plan would provide the City with the ability to implement all project components expeditiously if necessary, or could be structured to allow for implementation on a programmatic or phased basis as funding sources become available. 1

Again, we appreciate the opportunity to provide comments for your consideration and we look forward to our continued coordination. If you have any questions regarding these comments, please contact me at 805-585-1800.

Sincerely,

Jacqueline Phelps
District Supervisor

Letter 1

COMMENTER: Jacqueline Phelps, District Supervisor, California Coastal Commission

DATE: February 25, 2019

Response 1.1

The commenter describes the background and context for the MBHMP, noting the health of eucalyptus groves at Ellwood Mesa has been compromised by drought and pest infestation. The commenter further notes the California Coastal Commission (CCC) issued an Emergency Coastal Development Permit (CDP) to the City in September 2017, authorizing removal of 29 dead or high-risk trees that posed a threat to public safety. As a condition of this Emergency CDP, the City is required to submit a complete CDP application addressing not only mitigation for the removed trees, but also aggregation site restoration, habitat management, and trail repair and maintenance strategies. The commenter states the opinion the MBHMP, as written, lacks specific project details and implementation actions and recommends inclusion of detailed measures into the MBHMP to guide implementation of a comprehensive, ecosystem-based approach for management of Ellwood Mesa to fulfill the requirements of the Emergency CDP. The commenter adds the plan should include alternatives for replacing removed and trimmed eucalyptus trees with native tree species and replacing them with a mixture of native and non-native tree species as well as incorporating as many native nectar producing species in the planting palette as possible.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content and composition of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Letter 2

Comments on the Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan (MBHMP)

Submitted by Deborah L. Williams

February 19, 2019

Attn: Anne Wells, Advance Planning Manager, City of Goleta

As a resident of Goleta, and as someone who both visits Ellwood Mesa/Sperling Preserve regularly and is deeply concerned about the future of monarch butterflies, I respectfully submit the following comments on the Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan (MBHMP).

My comments focus on four areas: (1) the use of insecticides, herbicides, and other pesticides in the areas; (2) the related provisions regarding invasive species eradication; (3) the potential tagging of monarch butterflies; and (4) a correction.

1. **The Management Plan Should be Modified to Preclude the Use of Chemical Insecticides, Herbicides, and other Pesticides, Unless It Is Clearly and Unambiguously Documented that Such Use is Absolutely Necessary for Monarch Survival.**

The Draft Initial Study correctly states that:

> The long-term decline of the monarch population in California may be attributed to the loss of milkweed and nectar plants (caused by herbicides, drought, and removal), loss and degradation of overwintering groves (removal and aging) and other factors including use of insecticides, disease, and fluctuations in weather and temperatures associated with climate change (The Xerces Society 2017). (p. 65)

1

Scientists have known for a long time that insecticides, herbicides and other pesticides are harmful to monarch butterflies. As a result, Ellwood Mesa should be designated an herbicide and pesticide-free area, unless it is clearly and unambiguously documented that use of herbicides and pesticides are absolutely necessary for monarch survival.

As currently written, this needed rigorous standard and approach is not adopted. On page 14, the study simply states: “Apply herbicides as needed to control invasive, non-native plant species.” (p.14) The use

of the phrase “as needed” is entirely too vague. It is very hard to imagine any circumstances that would require the use of herbicides. Fortunately, we live in a community where citizens enthusiastically volunteer for invasive species removal projects. This strategy should be implemented, where needed. Alternatively, given the $3.9 million in funds from the State of California, money could be used to hire people for this work. Mechanical removal is a much safer and more appropriate strategy.

Similarly, on page 14, the Study states: “Apply insecticides, herbicides, and other pesticides, as necessary.” The phrase “as necessary” is not defined. While it can be argued that Ellwood Mesa should be an insecticide, pesticide, and herbicide-free zone under all circumstances, at the very least “as necessary” needs to be defined as “it is clearly and unambiguously documented that use of pesticides or herbicides is absolutely necessary for monarch survival.” 1

On page 98 the Study states:

> The MBHMP recommends the use of biological control methods such as birds, lady beetles, spiders, and other predators, *as the use of chemical control such as pesticides and herbicides may be dangerous to butterflies*. Nevertheless, application, handling, and transport of chemical pesticides, herbicides, and fertilizers may be necessary to ensure the long-term viability of new plantings or eradication of invasive species. Chemical applications have the potential to create the unintended release of a hazardous material. (EMPHASIS ADDED) (p. 98).

This statement seems to suggest that it is more important to ensure the long-term viability of new plantings or the eradication of invasive species than ensure the safety of the monarchs. The priority must be the health of the monarch population, and as such, herbicides, insecticides and other pesticides should not be used. There are safer alternatives.

2. **The Goal of Eradicating Existing Stands of Invasive Species, Especially If It Requires the Use of Herbicides and is Harmful to Monarchs is Neither Desirable Nor Appropriate.**

On page 25 of the Study, the following goal and strategy are described:

> Goal: To eradicate existing stands of invasive non-native species and prevent or control new occurrence of invasive non-native plant species within the monarch butterfly habitat at Ellwood Mesa. 15-2: The City shall control all “High,” “Moderate,” and “Limited” priority invasive plant species within the monarch butterfly habitat, as except those species for which monarch butterflies are dependent, as feasible (p.25) 2

Notably, eucalyptus is a non-native species. During the California Gold Rush in the 1850s, eucalyptus trees were introduced to California by Australians. Just because a species is non-native, this certainly does not mean it is necessarily harmful to monarchs. While it is important to remove, by mechanical means, some unproductive non-native species in some areas to plant species that will help monarchs, it is an overreach, with negative consequences (such as the proposed application of herbicides) to seek to “eradicate existing stands of invasive non-native species.” This should be changed to be more realistic

and beneficial. Monarchs first. Monarchs should not be exposed to herbicides to meet a hypothetical, overstated and non-essential goal. 2

3. **Given the Extremely Small Size of the Current Monarch Population, It Is Likely Too Risky to Capture, Tag, and Release Monarch Butterflies for Tracking At This Time (p.15)**

As the Study notes: "recent data collected during the 2018 winter season showed an all-time low peak population of 230 monarch butterflies observed." (p. 65). Given this very small population, it is likely too risky and dangerous to capture, tag and release monarch butterflies for tracking at this time. There needs to be a sufficient population of monarchs to do this, and 230 is does not appear to be sufficient. There should be population parameters established before the goal, set out on page 15 of capturing, tagging and releasing monarch butterflies is allowed or implemented. 3

4. **Errata**: The Study states that "Goleta has six City parks and eight open spaces, totaling approximately 482 acres (City of Goleta 2018a)." Goleta has 16 parks. 4

Thank you for the opportunity to submit these comments.

Deborah Williams

Goleta Resident (451 Barling Terrace)

Lecturer UCSB

Deborah1518@gmail.com

Letter 2

COMMENTER: Deborah L. Williams, Resident

DATE: February 19, 2019

Response 2.1

The commenter requests the MBHMP be modified to preclude the use of chemical insecticides, herbicides, and other pesticides, unless it is clearly and unambiguously documented that such use is absolutely necessary for monarch survival. The commenter states the opinion insecticides, herbicides, and other pesticides are harmful to monarch butterflies and requests Ellwood Mesa be designated an herbicide and pesticide-free area. The commenter further requests the Project Description in the Draft IS-MND be more specific when discussing the potential use of insecticides, herbicides, or other pesticides, rather than stating such chemicals would be applied "as needed" or "as necessary." The commenter notes Page 98 of the Draft IS-MND states "application, handling, and transport of chemical pesticides, herbicides, and fertilizers may be necessary to ensure the long-term viability of new plantings or eradication of invasive species." The commenter concludes this language improperly prioritizes the long-term viability of new plantings over the safety of monarchs.

The purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation. In support of this purpose, new plantings would occur in the Coverage Area, including native species and non-native species critical to monarch butterfly seasonal aggregation areas. Ensuring the long-term viability of these new plantings is essential to fulfill the overarching purpose of the MBHMP. The MBHMP emphasizes the use of a range of pest management strategies to control or eradicate, as feasible, plant, animal, fungal, and other pests that would result in impacts on monarch butterflies or degrade monarch butterfly habitat. In particular, the MBHMP's Integrated Pest Management Program includes the use of biological control strategies, limiting stress-inducing activities to periods of reduced pest activity, and planting pest-resistant species. However, as noted by the commenter, the use of insecticides, herbicides, and other pesticides may be necessary to support new plantings and habitat restoration efforts. As such, insecticide, herbicide, and other pesticide application is included as a covered activity under the MBHMP, and is evaluated and addressed in the IS-MND.

Mitigation Measure HWQ-2 requires the preparation of a Chemical Application Control Plan prior to commencement of native planting, eucalyptus grove restoration, invasive species eradication, and pest control activities. As specified in the mitigation measure, the Chemical Application Control Plan would specify thresholds to determine when fertilizer, herbicide, or pesticide application would be necessary, as well as the potential chemicals to be used and the rate, timing, and placement of application. The measure further requires the use of chemical forms that are the least toxic to non-target organisms be employed in the event pesticides or herbicides are deemed necessary. Additionally, as noted in Section 4 of the Draft IS-MND, *Biological Resources*, Action 10-4.1 of the MBHMP requires all potentially invasive activities to occur between April 1 and September 30 unless authorized by a qualified biologist, which would minimize potential direct impacts to monarch butterflies as the species would not likely be present during this time. Action 10-4.1 of the MBHMP specifically identifies invasive species eradication, which may include application of herbicides, as one such activity subject to this restriction. Section 4 of the Draft IS-MND, *Biological Resources*,

concludes impacts to monarch butterflies would be less than significant with incorporation of Mitigation Measures HWQ-2, as well as BIO-1, BIO-2, and BIO-3, which require site housekeeping, biological monitoring during vegetation removal, and worker environmental awareness training. Long-term impacts to monarch butterflies associated with implementation of the MBHMP would be beneficial.

Response 2.2

The commenter restates the Goals, Policies, and Actions of the MBHMP's Invasive Plant Management Program. Specifically, the commenter states just because a species is non-native does not mean it is inherently harmful to monarch butterflies. The commenter opines eradicating existing stands of invasive non-native species is excessive and could result in negative consequences for monarch butterflies, particularly if doing so requires application of herbicides. The commenter further notes mechanical removal of non-native species should be used.

This comment is noted. Covered activities listed under the MBHMP's Habitat Enhancement and Restoration Program and the Invasive Plant Management Program on Pages 13 and 14 of the Draft IS-MND include both hand removal of invasive non-native plant species and application of herbicides, as needed. Section 4, *Biological Resources,* on Page 71 of the Draft IS-MND acknowledges that short-term impacts to monarch butterflies could occur due to disturbance of suitable habitat through restoration activities and application of pesticides, herbicides, and insecticides. However, as noted in this section and in Response 2.1 above, Action 10-4.1 of the MBHMP requires all potentially invasive activities be conducted between April 1 and September 30 unless authorized by a qualified biologist, which would reduce impacts to monarch butterflies since the species is generally not present in the Coverage Area during this period. Action 10-4.1 of the MBHMP specifically identifies invasive species eradication as one such activity subject to this restriction. Furthermore, Mitigation Measure HWQ-2 further restricts application of herbicides and pesticides by requiring a Chemical Application Control Plan prior to use of chemical fertilizers, herbicides, and pesticides. The Draft IS-MND concludes that impacts to monarch butterfly would be less than significant, and would be further reduced through implementation of the pesticide restrictions in Mitigation Measure HWQ-2 and the site housekeeping, biological monitoring, and worker awareness provided by Mitigation Measures BIO-1, BIO-2, and BIO-3.

Response 2.3

The commenter opines given the small population of monarch butterflies, it is likely too risky and dangerous to capture, tag, and release monarch butterflies for tracking, which is a covered activity under the MBHMP's Monarch Research Program. The commenter further requests population parameters be established for this covered activity to occur.

The MBHMP allows for capture, tagging, and release of monarch butterfly individuals in conjunction with approved research efforts to provide information helpful to MBHMP management programs. Such efforts would be subject to approval by the City and regulated by Scientific Research Permits, as noted in Action 21-1.1 of the MBHMP. Additionally, Action 21-1.2 of the MBHMP requires scientists to use non-invasive research methods at Ellwood Mesa.

The City of Goleta's Scientific Research Permit Application requires information such as estimated research project duration and dates, summary of proposed research, species and number of individuals to be held captive. The application process allows the City to review proposed research

efforts prior to their implementation to verify such methods would be non-invasive, consistent with Action 21-1.2 of the MBHMP above. Furthermore, the application includes a checklist to identify other permits required from CDFW or the U.S. Fish and Wildlife Service, including a scientific collecting permit for projects involving collection of vertebrate or invertebrate wild animals or plants, which would include any proposed capture and tagging of monarch butterflies. Review of proposed research methods by the City in addition to other applicable agencies would ensure such methods do not pose a threat to monarch populations at Ellwood Mesa. Therefore, covered activities under the MBHMP's Monarch Research Program would not result in a potentially significant impact to monarch populations, and impacts to the species would remain less than significant with mitigation incorporated, as noted in Section 4, *Biological Resources,* of the Draft IS-MND.

Response 2.4

The commenter states the City of Goleta has 16 parks, as opposed to the 6 parks and 8 open spaces noted in Section 16, *Recreation*, of the Draft IS-MND.

Page 125 of the Draft IS-MND has been revised as follows:

> Goleta has ~~six City~~16 public parks, 4 private parks, and ~~eight~~18 public open spaces, totaling approximately ~~482~~526 acres (City of Goleta 2006~~18~~a). This equates to approximately ~~15~~16.4 acres per 1,000 residents (based on a current [2018] population of 31,949 [DOF 2018]).

Letter 3

LAW OFFICE OF MARC CHYTILO, APC

ENVIRONMENTAL LAW

February 25, 2019

Anne Wells, Advanced Planning Manager
City of Goleta
130 Cremona Dr. #B
Goleta, CA 93117

By email to awells@cityofgoleta.org

RE: Mitigated Negative Declaration for the Ellwood Draft Monarch Butterfly Habitat Management Plan

Dear Ms. Wells:

This office represents the Friends of the Ellwood Monarchs (FOTEM), a community group formed in response to various threats to the Ellwood eucalyptus forest which is critical overwintering habitat for Monarch butterflies. We have reviewed the Draft Mitigated Negative Declaration and Revised Draft Monarch Butterfly Habitat Management Plan (MBHMP) and offer the following comments. Our suggested language changes are indicated in ~~strikethrough~~ and underline.

We appreciate that the revised MBHMP includes many of the revisions that we suggested in our 9/3/18 comment letter on the proposed Draft MBHMP. While we understand and accept that not all of our suggested changes were included, there are several – discussed below - that are critical to ensuring that the MBMHP does not result in potentially significant impacts to monarch butterfly habitat. Moreover, some other changes made in the revised MBHMP actually weaken previous protections for monarch habitat contained in the draft MBHMP. Since the revised MBHMP was prepared, the western monarch population has experienced a dramatic decline. Accordingly, it is more imperative than ever that the City take an extremely cautious approach toward management of the grove to ensure ongoing use by the monarch butterfly (see Goal 10), and only allow habitat restoration that focuses on other habitat values where it also enhances rather than diminishes habitat values for the monarch butterfly. Below we suggest specific language changes necessary to ensure that the MBHMP including restoration activities will not result in potentially significant impacts to the monarch butterfly and its habitat.

Additionally, there are several areas of the MND, including its discussion of aesthetics and historic/cultural resources, that require revision to be consistent with California Environmental Quality Act (CEQA) requirements. We request that the City address the issues raised herein in revisions to the MND and to the MBHMP.

1. CEQA Overview

"The foremost principle under CEQA is that the Legislature intended the act 'to be interpreted in such manner as to afford the fullest possible protection to the environment within the 1

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reasonable scope of the statutory language.'" (*Friends of Mammoth v. Board of Supervisors* (1972) 8 Cal.3d 247, 259). CEQA "creates a low threshold requirement for initial preparation of an EIR and reflects a preference for resolving doubts in favor of environmental review when the question is whether any such review is warranted." (*League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland* (1997) 52 Cal. App. 4th 896, 904-905; Pub. Res. Code § 21151.)

An MND may be prepared in lieu of an EIR *only* where feasible and specific mitigation measures are so clearly effective that no substantial evidence can be produced that the revised project may still have significant environmental effects. (California Environmental Law & Land Use Practice (Matthew Bender & Co., Inc., 2013) § 21.09; Pub. Res. Code § 21080 (c)(2); Guidelines §§ 15064 (f)(2), 15070 (b).) 1

Here, the MND relies largely on the policies and provisions of the MBHMP to self-mitigate potentially significant impacts including impacts to monarch butterflies and their habitat. As currently drafted, key provisions of the MBHMP are not so clearly effective that no substantial evidence of potentially significant impacts can be produced. Below, we identify areas for clarification and suggest specific policy language that would ensure potentially significant impacts to monarchs, and also to aesthetics and cultural resources, are mitigated to less than significant levels as CEQA requires.

2. Aesthetics

To enable an assessment of whether a project's environmental effects are likely to be significant, the environmental document must include an accurate description of the environmental setting. (*Communities for a Better Environment v. South Coast Air Quality Management Dist*. (2010) 48 Cal.4th 310, 315; CEQA Guidelines § 15125 (a).) The MND's aesthetic impact discussion begins with a description of the existing setting which describes views and scenic vistas in the area. (Pp. 31-32.) This description is incomplete however, because it omits any description of the existing Ellwood eucalyptus grove which is a dominant visual feature of the Project area landscape. Blue-gum eucalyptus with their substantial height and girth, is the main tree type that characterizes the grove's aesthetics, and must be expressly identified and included in the environmental setting to enable an adequate discussion of the Project's aesthetic impacts. 2

A Project that would "substantially damage scenic resources, including but not limited to, trees…" would result in significant environmental impacts to the aesthetic environment. (MND p. 32.) The MND's discussion of this potential impact focuses on removal of dead and diseased vegetation improving the eucalyptus grove as a visual resource, however does not discuss how the visual integrity of the grove will be preserved over time as dead and diseased trees are removed. The draft MBHMP had identified "Planting eucalyptus trees" "To correct habitat deficiencies such as: The overstory has become too sparse…" (draft MBHMP, p. 25, Table 1 (Identified Threats and Potential Response Actions).) However, the revised MBHMP refers only to "Planting trees". (p.

30, Table 2 (Identified Threats and Potential Response Actions).) The visual qualities of tree species are distinct, and especially here where no native tree species have similar height and evergreen qualities. (*See Monarch Butterfly Overwintering Sites in Santa Barbara County, California,* Meade, 1999.) Accordingly, without an express provision calling for replacing lost eucalyptus in kind, the visual character of the grove will eventually be lost, resulting in potentially significant impacts to aesthetics. 2

To ensure that the Project's aesthetic impacts are mitigated below significant levels, the MBHMP must be revised to reincorporate the planting of eucalyptus trees when the overstory has become too sparse (Identified Threats and Potential Response Actions Table), and as discussed in section 3 below, include a specific provision calling for the replacement of removed eucalyptus trees in kind and identification of blue gum and other eucalyptus species in the identified plant list. Additionally, Policy 12-1 should be modified to clarify that not only eucalyptus trees within the aggregation sites are included as follows: 3

> **Policy 12-1.** Eucalyptus trees in the groves ~~containing monarch butterfly aggregation sites~~ within the Coverage Area shall be managed, as feasible, to ensure tree health and longevity.

As modified, Policy 12-1 not only helps mitigate potential aesthetic impacts from excessive tree loss, but it also better accomplishes the Plan's goal of ensuring the ongoing use of Ellwood Mesa by the monarch butterfly (further discussion and other proposed changes to Program 12 in section 3.b. below).

3. Biological Resources

a. Importance of Eucalyptus Replacement

The MND and responses to comments on the draft MBHMP are clear that eucalyptus are critical for overwintering monarch butterflies, especially in this area. The MND explains "agencies and resource experts maintain that management of the eucalyptus trees that support the butterflies are paramount to continued overwintering by the species." (MND p. 65.) The MND relies on tree replacement identified in the MBHMP to conclude the Project would not result in potentially significant impacts to monarch habitat. For example, the MND states: 4

> "implementation of the Natural Resource Program in the MBHMP would maintain and enhance suitable habitat for the monarch butterfly. Replanting habitats where dead or dying eucalyptus trees are removed will help sustain the long-term viability of the eucalypts groves as monarch butterfly habitat."

(MND p. 71, *see also* p. 73 "The MBHMP calls for the replacement of the removed trees and enhancement of the groves with planting of eucalyptus in the historical grove footprint only . . . gaps or reductions in the grove caused by tree die off would be replenished").

However, as currently drafted, the revised MBHMP does not clearly call for the replacement of dead or dying eucalyptus trees with other eucalyptus trees. *A plan whose goal is to manage, preserve, maintain, and improve the eucalyptus forest that is monarch butterfly habitat should describe when and where planting or replanting eucalyptus trees, as well as native trees, may be necessary.* Below are specific changes to Program 12 that are necessary to ensure that the specific language of the MBHMP is consistent with the MND, and to ensure that the MBHMP self-mitigates any impacts from eucalyptus tree loss by clearly calling for replacement in kind. 4

Action 12-1.2. Table 2 should say *"*Planting eucalyptus trees or planting native trees*"* as Potential Actions/Tools for Management to "Correct habitat deficiencies" caused by death of trees or insufficient canopy or site protection. To remedy these threats there must be an option to plant eucalyptus trees when indicated to preserve habitat value. 5

Action 12-1.6 and **12-1.10** require clarification of the type of habitat that should be created within the outline of the pre-drought eucalyptus forest where dead zones have occurred due to tree die-offs. The re-establishment of eucalyptus forest monarch butterfly habitat in this area should be specified.

A map to clarify the outline of the historic pre-drought eucalyptus forest would facilitate preservation of monarch habitat.

> **Action 12-1.6.** Maintain a living eucalyptus forest within the outline of pre-drought forest extent as determined with historic aerial photographs. Replant sections of the eucalyptus forest where dead zones occur due to multiple tree die-offs.
>
> **Action 12-1.10.** Plant trees as needed to maintain grove density and improve monarch butterfly habitat. Plant in locations that improve aggregation site conditions as per the best available scientific analysis, and replant eucalyptus in areas within historic eucalyptus grove extent where gaps have occurred from drought die-back. 6

b. Importance of Unoccupied Groves

The MND states "Grove and windrow areas between aggregation sites have not been recorded to support monarch butterfly aggregations." (MND p. 53.) However, these areas are valuable to the monarch population, and are identified as monarch ESHA in the City's General Plan. Moreover the Ellwood-Devereux Coast Open Space and Habitat Management Plan explains the biological significance of the eucalyptus groves outside the aggregation sites and their designation as ESHA despite the fact that no known monarch aggregation sites exist as follows: "Unoccupied eucalyptus groves within the City of Goleta in areas adjacent to the overwintering sites that contain suitable conditions to support overwintering butterflies are also considered ESHAs because they could be used at any time in the future, and because they provide additional habitat in 7

the event that the occupied groves are damaged." (P. 21.)[1] The damaged conditions currently manifesting in and around the Ellwood Open Space aggregation sites underscores the importance of protecting the entire grove and not merely the aggregation areas.

While it appears that the MBHMP is intended to apply to the eucalyptus groves in the coverage area generally and not only the aggregation sites, it is not entirely clear from the document. In the Comment Matrix, the second from last comment on page 25 asks "Is the treatment different for "aggregation areas," "roosts," "trees supporting seasonal monarch butterfly aggregation sites," "aggregation site buffers" or "the eucalyptus forest beyond the buffer." The response is "There is no difference in the treatments for these various areas." However, that is not entirely clear from reading some parts of the MBHMP. 7

In particular, Program 10, Monarch Butterfly Management Program, refers only to the conservation of, the preservation of, and the timing of work in, only "aggregation sites." The below Program 10 actions and policies should be revised as indicated to clarify that they apply throughout the eucalyptus grove, which is necessary to ensure that the Project will not result in potentially significant impacts to monarch ESHA.

Figure 2 in the MBHMP, Monarch Butterfly Aggregation Sites, depicts the aggregation sites as small red circles. It could be understood that the protections for monarch habitat and eucalyptus trees only apply to these small areas, so this needs to be clarified, and a map such as Figure 7 in the MND which depicts the coverage of the grove should be included in the MBHMP itself for additional clarity.

Action 10-1.1. Implement Program 12, Tree Management Program, to help facilitate the conservation of the eucalyptus groves and windrows in the Monarch Butterfly Habitat Management Plan Coverage Area ~~monarch butterfly aggregation sites~~.

Policy 10-2. Preservation of the eucalyptus groves and windrows ~~aggregation sites~~ on Ellwood Mesa shall be the focus of management activities, ~~as feasible~~, and in coordination with Program 9, Catastrophic Event Response Program. 8

Action 10-2.1. Should one or more catastrophic events result in impacts on the sustainability of monarch butterfly aggregation sites, consider alternative management and recovery strategies

[1] As explained in our 9/1/18 comment letter on the draft MBHMP, these valuable unoccupied eucalyptus groves include the un-named City-owned open space, west and north of the Coronado site that that crosses Santa Barbara Shores Dr. and extends north to Hollister between Santa Barbara Shores Dr. and Pebble Beach Dr. which we called "Area S". To ensure maximum potential monarch habitat is protected, our preference is for the MBHMP to include Area S.

that incorporate goals for sustaining the eucalyptus groves and windrows ~~aggregation sites~~ at Ellwood Mesa.

Policy 10-4. To avoid impacts on monarch butterflies while they are present at the Ellwood aggregation sites, no maintenance or restoration work shall be conducted in the eucalyptus groves and windrows at Ellwood Mesa ~~aggregation sites~~ from October 1 through March 31 of each year, unless authorized by a qualified biologist. 8

Additionally, Action 2-2.2 allows payments of compensatory mitigation fees into the Butterfly Fund, for projects with "limited impacts on monarch butterfly habitat." It is critical that the City not allow projects that impact monarch butterfly habitat, especially now with the precipitous decline observed this past overwintering season. Action 2-2.2 should be revised to clarify that payment of compensatory mitigation fees are only allowed where projects have implemented all available measures to *avoid* impacts to monarch butterfly habitat, or to directly mitigate impacts on-site where appropriate, before projects may turn to compensatory mitigation. 9

c. Devereaux Creek Restoration Activities

Program 14, Habitat Enhancement and Restoration Program, calls for restoration activities including replacement with native plant species along the banks of Devereaux Creek. While it appears the intent of this Program is to limit its applicability to areas outside the eucalyptus grove, the language in the MBHMP is insufficiently clear and requires revision to ensure that restoration activities do not result in the destruction of eucalyptus and monarch habitat, and associated potentially significant impacts.

Language in the Overview describing areas where enhancement or restoration can take place should be consistent with language in the following Policies and Actions in this program. The Overview speaks about the "restoration of the Devereux Creek corridor along the northern margin of Ellwood West, Ellwood Main, and Ellwood East groves. However, the northern margins of Ellwood West and Ellwood East are not "existing native riparian areas," nor are they "areas between eucalyptus groves. "Restoration" is restricted in Action 14.3 to "existing native riparian areas," and in Action 14-2 to "areas between eucalyptus groves." In addition, the northern margin of Ellwood East is not within the MBHMPP coverage area because it is on private property. For consistency and accuracy, we suggest the following change to the language of the overview: 10

Overview: This program focuses on the enhancement of the eucalyptus groves from a native plant and wildlife habitat perspective and on the restoration of the Devereux Creek corridor in existing native riparian areas. ~~along the northern margin of Ellwood West, Ellwood Main, and Ellwood East groves.~~ The mid-canopy vegetation and understory of the eucalyptus groves is generally lacking or in some situations is composed of non-native invasive plant species. Enhancement of groves with native plant species would benefit native wildlife. Various native plants are present but scattered within the groves. Most of these plant species have fleshy fruits

> and are bird-dispersed. Restoration with native plants of portions of Devereux Creek in areas between ~~associated with~~ eucalyptus groves, as feasible, is consistent with the goal to restore Devereux Creek. This restoration would provide important habitat for native plant and animal species and would potentially improve water quality flowing downstream to Devereux Slough and the Pacific Ocean. 10

In addition, clarification is required to Policy 14.3, Action 11-2.4, as follows:

Policy 14.3 allows "restoration of Devereux Creek "only in areas that are "existing native riparian areas." However, there is no map that defines where those areas are. The MBHMP should include Figure 2 from the MND showing the Drainages and Vegetation Communities within the MBBHMP coverage areas to clarify this policy.

In Action 11-2.4, the Devereux Creek restoration language should be consistent with language in Policy 14.3, which restricts restoration of Devereux Creek to "the existing native riparian areas." Specifically, we suggest the following revision: 11

> **Action 11-2.4.** Implement restoration for the existing native riparian areas in the Devereux Creek riparian corridor to improve functions for wildlife, consistent with the goals of this MBHMP for monarch butterflies.

Without these changes, the MBHMP is insufficiently clear and does not clearly self-mitigate with respect to Program 14 without these changes.

d. Monitoring Activities

Monitoring and reporting are key tools necessary to ensure that the MBHMP functions as intended, and that provisions of the Plan relied on to self-mitigate impacts to monarch butterflies and their habitat are actually effective at reducing impacts below significant levels as CEQA requires. We suggest the following two changes to ensure that monitoring and public reporting are adequately incorporated into the Plan.

> Policy 20-3: Create a Monitoring Report, updated annually, ~~when feasible,~~ resulting from the information obtained during the implementation of the various policies and actions called for in this MBHMP. 12
>
> Action 20-3.1: Track the implementation of this MBHMP in the form of a Monitoring Report, ~~preferably~~ updated on an annual basis, and presented at a public workshop.

Additionally, the City of Goleta is not the only entity that may undertake activities within the MBHMP coverage area. For example, Southern California Edison (SCE) undertakes activities including tree limbing to reduce fire hazards associated with their lines. We appreciate that the 13

revised MBHMP includes reference to activities undertaken by other utilities and agencies in Action 1-2.1, however the monitoring component we suggested was not incorporated, and without that it the Plan lacks the enforceability necessary to avoid potentially significant impacts from the tree pruning, removal, and other activities of other entities. Last year, SCE undertook a limbing project which far exceeded the scope of their emergency permit, as noted by Dr. Meade at the September 2018 Council hearing on the draft MBHMP. Accordingly, we ask that you incorporate additional changes to Action 1-2.1, as follows: 13

> Action 1-2.1. Whenever vegetation removal, ground disturbance, construction, or other activities with the potential to significantly disrupt habitat values are proposed within the MBHMP coverage area by the City or any other agency or utility, environmental protection measures shall be implemented. These measures shall be determined in coordination with a qualified biologist, and ~~should normally~~ shall include at a minimum pre-activity surveys for nesting birds or other wildlife, pre-activity surveys for monarch butterfly aggregations, presence of an environmental monitor during construction, and other protections, as deemed appropriate. The City will monitor these activities to ensure that environmental protection measures are used and that activities are limited to those permitted. 14

4. Historical/Cultural Resources

As with visual resources, the environmental setting for historical/cultural resources is fundamentally flawed and incomplete for failing to recognize the historic and cultural value of the Ellwood eucalyptus groves. It is well recognized that landscapes may be historically or culturally significant – and eligible for listing on the national, state, and local registers of historic resources - including where, as here, they are associated with a historic event, activity, or person. The National Park Service defines a cultural landscape as *a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values*. (https://www.nps.gov/subjects/culturallandscapes/understand-cl.htm.) The City's General Plan also recognizes historical and cultural landscapes and states an objective "*to identify, preserve, protect, and enhance historic landscaping, gardens, and open spaces, including agricultural areas and heritage trees, which contribute to the setting or context of Goleta*." (Visual and Historic Resources Element, Policy VH 6.) Here, the Ellwood eucalyptus groves were planted by Ellwood Cooper in the 1870s, as described and recognized in the City's Tree and Landscape Study and the City's Historic Preservation Context Statement (3/5/18, available at https://www.cityofgoleta.org/projects-programs/historic-preservation and incorporated herein by reference.) The MND must describe the historical significance of the Ellwood grove to enable an adequate analysis of the Project's potentially significant impacts to cultural/historic resources. 15

A Project that causes a substantial adverse change in the significance of a historical resource results in a significant environmental impact. (MND p. 81; Pub. Res. Code § 21084.1.) Historical

resources include both listed resources, and resources determined to be eligible for listing. (*Id.*) It is imperative that the MND be revised to incorporate an analysis of whether the Ellwood grove is eligible for listing as a cultural landscape, and if so, whether the Project may result in potentially significant impacts to that resource. Plan revisions we identified above to ensure that aesthetic and biological resource impacts are adequately mitigated – in particular those clarifying that eucalyptus shall be replaced with eucalyptus – would also appear to mitigate potential cultural resource impacts. 15

5. Conclusion

We ask that the City incorporate the above identified changes in revisions to the MND and to the MBHMP to ensure that the documents are comprehensive, legally adequate, and that all potentially significant impacts are fully mitigated.

Respectfully submitted,

LAW OFFICE OF MARC CHYTILO, APC

Ana Citrin
For FOTEM

Letter 3

COMMENTER: Ana Citrin, Law Offices of Marc Chytilo, APC, for Friends of the Ellwood Monarchs

DATE: February 25, 2019

Response 3.1

The commenter provides background information on the intent of the California Environmental Quality Act (CEQA) and comments the Draft IS-MND relies largely on the policies and provisions of the MBHMP to self-mitigate potentially significant impacts, including impacts to monarch butterflies and their habitat. The commenter opines that, as drafted, key provisions of the MBHMP are not so clearly effective that no substantial evidence of potentially significant impacts can be produced.

The Draft IS-MND assesses the potential environmental impacts associated with implementation of the MBHMP, including covered activities with the potential to occur under the MBHMP's 22 programs. The purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation. In light of this purpose, implementation of the MBHMP would largely result in less than significant—and in some cases, beneficial—impacts to several of the resource concerns evaluated pursuant to CEQA, including biological resources, recreation, and wildfire. While many provisions of the MBHMP would result in less than significant or beneficial environmental impacts, the Draft IS-MND does not rely exclusively on such provisions to reduce impacts to a less than significant level. The Draft IS-MND contains Mitigation Measures AQ-1, BIO-1 through BIO-9, CUL-1, GEO-1, HWQ-1 and HWQ-2, and N-1 to reduce impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, and noise such that they would be less than significant with mitigation incorporated. The effectiveness of these measures in reducing impacts below the level of significance is demonstrated in the impact analyses contained in Section 1, *Aesthetics,* Section 4, *Biological Resources*, Section 5, *Cultural Resources*, Section 7, *Geology and Soils*, Section 10, *Hydrology and Water Quality,* Section 13, *Noise*, and Section 21, *Mandatory Findings of Significance*, of the Draft IS-MND. Any additional actions not covered by the IS-MND would require separate review under CEQA.

The remainder of this comment is general in nature and do not raise specific environmental concerns about the Draft IS-MND or the MBHMP. Therefore, no further response is required to this portion of the comment. (See Browning-Ferris Indus. v. City of San Jose (1986) 181 Cal.App.3d 852 [where a general comment is made, a general response is sufficient].) Responses to specific resource areas identified by the commenter as lacking substantial evidence of no potentially significant impacts are addressed in subsequent responses below.

Response 3.2

The commenter notes the Draft IS-MND's description of the existing setting with respect to aesthetics is incomplete because it omits any description of the existing Ellwood eucalyptus grove, which is a dominant visual feature of the Coverage Area. The commenter adds the Draft IS-MND's discussion of impacts to scenic resources focuses on the removal of dead and diseased vegetation improving the eucalyptus grove as a visual resource, however, the MBHMP only states that dead or diseased eucalyptus trees will be replaced with trees and does not specify that such trees will be

eucalyptus trees. The commenter notes this may alter the visual character of the groves over time if eucalyptus trees are not replaced with other eucalyptus trees.

The Draft IS-MND addresses potential impacts to the visual character of the Coverage Area in Section 1, *Aesthetics*. The existing setting on Page 31 of the Draft IS-MND has been revised to include discussion of the visual character of Coverage Area, as follows:

> The Coverage Area is located in Ellwood Mesa Open Space, an undeveloped open space area categorized in the General Plan as "Open Space/Passive Recreation" where "significant environmental values or resources, wildlife habitats, significant views, and other open space value" exists (City of Goleta 2006a). <u>The visual character of the Coverage Area is dominated by existing eucalyptus groves, creating a forested landscape. The generally evergreen nature of eucalyptus trees creates a patchy- to fully-shaded setting in the Coverage Area, with hanging bark, leaves, and vegetated understory protruding between tree trunks.</u>

As noted in that section and in the Aesthetic Resources Management Program of the MBHMP, the existing eucalyptus groves suffer from grove senescence, drought, pests, disease, or lack of formal management efforts to maintain consistent aesthetic values. As further noted in Section 1, *Aesthetics*, the removal of dead and diseased trees or deadfall would not be considered removal of any scenic resources on the Coverage Area as it would benefit the overall health of the groves. The MBHMP Tree Management Program calls for reforestation along with removal of dead and diseased specimens with covered activities that include "plant new eucalyptus trees, native and/or fire-resistant understory species, and native nectar sources" for migrating butterflies. The consistent management structure provided by the MBHMP would maintain the visual character of the Coverage Area by improving the health of the groves and supporting monarch butterfly habitat.

Response 3.3

The commenter recommends the MBHMP be revised to specifically state removed eucalyptus trees will be replaced in kind and identify blue gum and other eucalyptus species in the identified plant list. Additionally, the commenter recommends changes to Policy 12-1 of the MBHMP to state eucalyptus trees in the groves shall be managed to ensure tree health and longevity throughout the Coverage Area, rather than just in groves containing aggregation sites.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.4

The commenter states the Draft IS-MND relies on tree replacement identified in the MBHMP to conclude the MBHMP would not result in potentially significant impacts to monarch habitat. However, the commenter notes the MBHMP does not clearly call for the replacement of dead or dying eucalyptus trees with other eucalyptus trees. The commenter adds the plan should describe when and where planting or replanting eucalyptus trees, as well as native trees, may be necessary.

The MBHMP is a long-term management plan intended to guide habitat restoration and enhancement efforts through management goals, policies, and supporting actions. The covered

activities, including tree replanting actions, are general in nature to reflect the need for adaptive management in the face of changing conditions in the Coverage Area. However, the MBHMP contains actions supporting eucalyptus growth within the boundaries of the existing eucalyptus groves, including Action 12-1.11, which calls for a pilot planting for any eucalyptus species considered for tree restoration that is not present in the MBHMP area as of 2018, and Action 12-2. 5, which calls for protecting blue gum saplings as necessary to encourage natural recruitment of trees in the eucalyptus forest. Additionally, the Draft IS-MND does not rely solely on replanting of eucalyptus trees in its determination that impacts to the monarch butterfly would be less than significant with mitigation incorporated. In Section 4, *Biological Resources*, the Draft IS-MND also notes that planting native species, eradication of non-native species (excluding eucalyptus), and integrated pest management efforts to reduce pests that stress monarch butterflies or their habitat would further enhance suitable habitat for the species in the Coverage Area.

Response 3.5

The commenter recommends a change to Action 12-1.2 of the MBHMP. Specifically, the commenter suggests that Table 2 of the MBHMP be revised to include "Planting eucalyptus trees or planting native trees" as a Potential Action/Tool for Management to correct habitat deficiencies such as sparse overstory, strong wind speeds in the grove, and tree death, toppling, or removal.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.6

The commenter recommends changes to Actions 12-1.6 and 12-1.10 of the MBHMP specifying maintenance of a living eucalyptus forest and replanting eucalyptus trees.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.7

The commenter cites language on Page 53 of the Draft IS-MND, which states, "Grove and windrow areas between aggregation sites have not been recorded to support monarch butterfly aggregations." The commenter notes unoccupied groves are still valuable to the monarch population and identified as monarch Environmentally Sensitive Habitat Area (ESHA) in the City's General Plan. The commenter states it is not entirely clear in the MBHMP that the MBHMP is intended to apply to the eucalyptus groves in the Coverage Area generally and not only the aggregation sites. In particular, the commenter notes the Monarch Butterfly Management Program refers only to the conservation of, preservation of, and timing of work in aggregation sites, as opposed to the entire eucalyptus grove. Additionally, the commenter notes Figure 2 of the MBHMP depicts aggregation sites in small red circles, which could be interpreted to mean that protections

for monarch habitat and eucalyptus trees only apply to these small areas. The commenter recommends this point be clarified, and a figure similar to Figure 7 in the Draft IS-MND, which depicts the coverage of the grove, be included in the MBHMP.

The Draft IS-MND notes the extent of monarch butterfly ESHA within the Coverage Area in Section 4, *Biological Resources*. Certain supporting policies and actions of the MBHMP are intended to preserve aggregation sites in the Coverage Area, such as Policy 10-2 of the Monarch Butterfly Management Program, which states, "Preservation of aggregation sites on Ellwood Mesa shall be the focus of management activities, as feasible, and in coordination with Program 9, Catastrophic Event Response Program." Such policies and supporting actions provide an added layer of management directive to protect known aggregation sites in the Coverage Area; they do not preclude larger habitat restoration efforts from occurring throughout the Coverage Area, such as removal of dead trees and debris, planting trees as needed to maintain grove density and improve monarch habitat (Action 12-1.10), or monarch butterfly patrolling habitat enhancement efforts (Action 12-2.2). The application of certain MBHMP policies and actions to aggregation sites is accounted for in the analysis of potential environmental impacts, including those to monarch butterflies and their habitat, described in the Draft IS-MND. Given MBHMP management activities would improve habitat conditions throughout the Coverage Area, as discussed in the Draft IS-MND, it would also provide benefits in the areas outside of established aggregation sites.

Response 3.8

The commenter recommends changes to Action 10-1.1, Policy 10-2, Action 10-2.1, and Policy 10-4 expanding the application of these actions and policies to eucalyptus groves and windrows in the Coverage Area, as opposed to monarch butterfly aggregation sites.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.9

The commenter states Action 2-2.2 allows for payments of compensatory mitigation fees to the Butterfly Fund for projects with limited impacts on monarch butterfly habitat. The commenter adds the City should not allow projects that impact monarch butterfly habitat, and Action 2-2.2 should be revised to allow payment of compensatory mitigation fees only where projects have implemented all available measures to avoid impacts to monarch butterfly habitat, or to directly mitigate impacts on-site where appropriate.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.10

The commenter states language in the Habitat Enhancement and Restoration Program is insufficiently clear and requires revision to ensure restoration activities do not result in the destruction of eucalyptus and monarch habitat and associated potentially significant impacts. Specifically, the commenter suggests changes to the Overview language in the MBHMP clarifying enhancement or restoration of the Devereux Creek corridor would occur in existing native riparian areas. The commenter adds this language is consistent with the language in supporting Policy 14.3, which limits restoration actions to existing native riparian areas, and Policy 14-2, which states, "areas between eucalyptus groves shall be considered for habitat enhancement and restoration alternatives."

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.11

The commenter requests a map in the MBHMP showing the location of existing native riparian areas. Specifically, the commenter requests the MBHMP include Figure 2 from the Draft IS-MND showing drainages and vegetation communities in the Coverage Area. Additionally, the commenter recommends changes to Action 11-2.4 of the MBHMP to specify restoration in the Devereux Creek riparian corridor would be for "existing native riparian areas."

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.12

The commenter notes the importance of monitoring and reporting as key tools necessary to ensure the MBHMP functions as intended and provisions of the MBHMP relied on to self-mitigate impacts to monarch butterflies and their habitat are actually effective at reducing impacts to less than significant levels. The commenter recommends changes to Policy 20-3 and Action 20-3.1 to firmly require annual Monitoring Reports and present such reports at public workshops.

As noted in Response 3.1, above, the Draft IS-MND contains 15 mitigation measures incorporated to reduce potential impacts to a less than significant level. A Mitigation Monitoring and Reporting Program (MMRP), included as Appendix D, requires the City to monitor the effectiveness of these mitigation measures and includes required actions, monitoring timing, frequency, responsible parties, and compliance verification steps. The remainder of this comment, notably recommended changes to Policy 20-3 and Action 20-3.1 of the MBHMP, does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP

Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.13

The commenter states the City is not the only entity that may conduct activities in the Coverage Area, noting previous tree pruning, removal, and other activities by SCE.

Vegetation and tree removal efforts conducted by SCE in the Coverage Area occur pursuant to permits obtained by the utility. While the City may conduct covered activities in the existing SCE easements in the Coverage Area, it cannot prevent SCE from conducting tree topping, trimming, or removals if such activities are consistent with its easement rights and SCE has obtained necessary permits, such as those issued by the CCC.

Response 3.14

The commenter requests changes to Action 1-2.1 of the MBHMP. Action 1-2.1 of the MBHMP states that pre-activity surveys for nesting birds, monarch butterfly aggregations, and other wildlife, the presence of an environmental monitor during construction, and other protections, as deemed appropriate, should normally occur whenever vegetation removal, ground disturbance, construction, or other activities are proposed within the Coverage Area by the City or any other entity. The commenter requests that this language be revised to indicate that such measures always occur. Additionally, the commenter requests the measure be revised to require the City to monitor such activities to ensure environmental protection measures are used and activities are limited to those permitted.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 3.15

The commenter states the opinion the environmental setting for historical/cultural resources contained in the Draft IS-MND is fundamentally flawed and incomplete for failing to recognize the historic and cultural value of the Ellwood eucalyptus groves. The commenter adds that the Draft IS-MND must describe the historical significance of the Ellwood grove to provide adequate analysis of the MBHMP's potentially significant impacts to cultural/historical resources, including an analysis of whether the Ellwood grove is eligible for listing as a cultural landscape and, if so, whether the MBHMP would result in potentially significant impacts to that resource.

The existing setting in Section 5, *Cultural Resources*, acknowledges the history of the eucalyptus groves, stating, "In the 1870s, Ellwood Cooper introduced eucalyptus trees to Ellwood Mesa and by the mid-1870s had successfully planted approximately 50,000 trees of more than 50 varieties. The groves have matured and become useful for windbreaks. Today the eucalyptus groves present on Ellwood Mesa are a remnant of Cooper's early attempt at eucalyptus forestry."

The MBHMP prescribes management directives to enhance, restore, and maintain monarch butterfly habitat within the Coverage Area, including the existing eucalyptus groves. As discussed in

Response 3.4 above, the MBHMP contains actions targeted at supporting eucalyptus growth within the existing grove boundaries and maintaining a healthy forest system. Covered activities would improve the health and vibrancy of the deteriorating groves and, therefore, would not adversely change the historical or cultural significance of the groves. The MBHMP Tree Management Program calls for reforestation along with removal of dead and diseased specimens with covered activities that include "plant new eucalyptus trees, native and/or fire-resistant understory species, and native nectar sources" for migrating butterflies. In addition, without implementation of the MBHMP, additional eucalyptus trees would deteriorate and the overall health of the grove would decline. Because of this provision and the ability to manage the health of the grove, no impact to a cultural landscape, if present, would occur.

Letter 4

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FEB 25 2019
City of Goleta
Planning & Environmental Svcs.

February 22, 2019

City of Goleta Planning and Environmental Review
130 Cremona Drive, Suite B
Goleta,CA 93117

Comments on Draft Initial Study-Mitigated Negative Declaration for the Monarch Butterfly Habitat Management Plan (MBHMP)

Attention: Ms. Anne Wells, Advance Planning Manager

Dear Ms. Wells,

In reviewing the draft MBHMP it provided a fairly focused yet generic approach to managing the area primarily for eucalyptus trees while giving some mention for other existing wildlife resources and native riparian and upland habitats in and adjacent to the study area. There is a need for a more balanced approach to truly provide for a "healthy riparian habitat area" which will better support the butterflies along with the other native species which exist here.

There is a need for more specific descriptions of what constitutes the primary constituent elements of habitat critical for the overwintering butterflies, not just planting and watering more eucalyptus trees (which in themselves provide a significant source of fuel for potential wildfires). Use of the Xerces Society 2017 publication: Protecting California's Butterfly Groves: Management Guidelines for Monarch Butterfly Overwintering Habitat would be one source from which to gain said information. Working with the U.S. Fish and Wildlife Service in their review of proposals to have the species listed as threatened or endangered would be another recommendation. 1

The few maps provided are extremely general and need to be of a scale which provides for definition of densities of trees; areas with dead and dying trees and other factors critical to managing the habitat. 2
The comment letter provided by Lisa Stratton, Director of Ecosystem Restoration at UC Santa Barbara, provides added factors which need to be included in a sound management plan in order to be able to determine if the area is actually meeting desired habitat characteristics for the butterflies and other unique and sensitive wildlife and plants which may occur in the area. 3

Both the Community Wildfire Protection Plan(CWPP) and MBHMP address habitat management activities to protect, maintain and enhance the Monarch Butterfly Management Area, except neither of them mention the presence of or maintenance needs relative to the SCE power lines and the potential that these power lines hold to become a significant ignition source for wildfire, which poses the greatest threat to the Monarchs and their habitat in addition to the residents and properties which exist adjacent to the management area. 4

The following comments are respectfully submitted to address what should qualify as a significant issue which I believe has been overlooked in both the Goleta Community Wildfire Protection Plan (CWPP) of 2012, and the current Draft Monarch Butterfly Habitat Management Plan (MBHMP) and related Draft Mitigated Negative Declaration of 2019.

The issue of concern is the management of Southern California Edison power lines which exist adjacent to and within the designated MBHMP area as depicted on page 3, Figure 2 of the IS/MND.

The following is provided to point out information and direction which exists in the Draft MBHMP but which has not been tied to the SCE power lines and the ongoing vegetative maintenance work that SCE is required to conduct relative to State of California Public Resources Code 4293; and California Public Utilities Commission General Order 95, Section III, Rule 35 covering Vegetation Management of power lines.

General Order 95, Section III, Rule 35 includes direction for all power lines including: "When a supply or communication company has actual knowledge, obtained either through normal operating practices or notification to the company, that dead, rotten or diseased trees or dead, rotten or diseased portions of otherwise healthy trees overhang or lean toward and may fall into a span of supply or communication lines, said trees or portions thereof, should be removed."

California Public Resources Code 4293 further mandates, "the mitigation of the hazard created by dead, dying and diseased or weakened trees which hold the potential to damage or cause downing of power lines."

Due to the ever increasing number, size and intensity of wildland fires in California, and the documented cause of a number of these fire starts being tied to downed power lines, the California State Legislature enacted Senate Bill 901 in 2018. This bill created an Order instituting rulemaking to implement "Electric Utility Wildfire Mitigation Plans" by all utility companies in California. Southern California Edison submitted its company's U338-E 2019 Wildfire Mitigation Plan (WMP) on February 6, 2019. A portion of that plan, below states: 4

WMP Section 4.4.2.4 Vegetation Management Program Re-Design: Paragraph 2, "SCE's vegetation management program is currently undergoing a comprehensive redesign and restructuring. The staged deployment of the revised vegetation management program is anticipated to commence in early 2019 and continue into 2020. Enhancements reflected in SCE's revised vegetation management program include, but are not limited to:...increased focus on hazard tree removals/mitigation; and increased identification and removal of vegetation overhangs."

Section 4.4.2.4 Paragraph 5: ..."In addition, the area between the outer-most conductors and the ROW border will be cleared of brush and trees that have the potential to strike electric facilities. . . SCE will use LiDAR technology to identify trees along the ROW border that can potentially contact conductors during high wind events."

SCE undertook hazard tree pruning activities, under permit from the Coastal Commission and City, during the summer of 2018 along the eastern boundary of the Ellwood North MBF Aggregation area, just west of Pebble Beach Drive to comply with the above State mandated regulations. Although SCE wound up cutting/pruning more trees than originally identified they did so in order to fully comply with the above legal mandates. This pruning/topping activity has had no known affect on the use of the aggregation site and has removed the significant safety problem related to falling trees or limbs being any threat to the treated section of SCE line.

The small grove of eucalyptus just east of this treated section, (Between Pebble Beach Dr. and Santa Barbara Shores Dr) which is bounded on both the east and west by SCE lines, has since experienced the

falling of two large green and apparently healthy eucalyptus which narrowly missed the power lines and adjacent homes. A third tree farther down stream also fell taking down the SCE line and damaging one home severely enough that the occupants had to vacate until the roof, ceilings and other structural damage is repaired. Fortunately no one was injured...this time!

The above information hopefully provides adequate information to validate the significant issue that unmaintained eucalyptus trees have, in and adjacent the MBFHMP area, to cause the downing of SCE power lines with the potential to start a wildland fire which could easily threaten or destroy not only the MBHMP area but the residents and homes adjacent to the management area.

4

In order to provide meaningful protection of public safety, property and the sensitive biological habitats and species which exist in the planning area, the above issue needs to be amended to the Draft Mitigated Negative Declaration and appropriate management direction provided to mitigate the Significance of this Issue.

Such mitigation should include, but not be limited to: added tree maintenance standards tied specifically to the power line maintenance activity; allowance of and support for SCE to conduct their State mandated vegetation management program; and actions by the City itself to address any further needed vegetation management actions which would help preclude hazard trees from contacting or striking SCE power lines within the Ellwood Mesa area.

Other existing management direction and comments:

Page 4 –Background Information: " Drought has compromised the health of eucalyptus trees in Ellwood Mesa exacerbating wildfire risk and increasing vulnerability to pest infestations."

"The study by Althouse and Meade, Inc. 2017, identified over 1,200 dead and hundreds of dying eucalyptus trees within the MBHMP study area." Therefore, any wildfire which may occur in or adjacent to this area has the heightened potential to not only adversely affect but to completely consume the highly stressed and highly flammable stands of eucalyptus which comprise a majority of the study area.

5

Due to the above factors, wildfire poses the greatest threat to the very existence of the management area and the Monarch butterflies for which it was established and every effort should be undertaken by the City to avoid or minimize potential sources of fire in this sensitive area.

Page 5 - Referencing the Goleta Community Wildfire Protection Plan (CWPP) of 2012. Second paragraph, line 6:

"The protection of human life and safety is the highest priority for all fire management strategies in Goleta, followed by the protection of property. Given that the CWPP has been approved, activities under the CWPP would occur in Ellwood Mesa Open Space regardless of the MBHMP because the CWPP was developed with consideration of the Monarch butterfly aggregation sites in Ellwood Mesa."

6

One of the primary causes of major wildfires in recent years has been downed power lines within heavily vegetated areas. This has led the California Public Utilities Commission to enact more and more stringent guidelines and regulations relating to management of vegetation which has the potential to have contact with, or be blown into, or fall upon power lines. General Order 95, Title 18, Section 4293

of the California Resources Code mandates that the utility companies, or other agencies responsible for said power lines, undertake actions to preclude contact with or damage to power lines caused by vegetation.

In order for the City to be in compliance with its own Community Wildfire Protection Plan and with the mandates of the Public Utilities Commission, it should be taking every opportunity to provide support for Southern California Edison to conduct needed pruning, topping or removal of any trees which have the potential to grow into or fall upon and strike SCE power lines within our community. 6

Page 7 – Defining activity zones: Primary defense zone is 0 to 30 feet from structures; and fuel reduction zone is 30 to 100 feet from structures. The focus of activity in these zones is to remove understory and ground cover which poses a threat of fire from ground ignition sources. Table 1 of the CWP: Prescription Guidance for Butterfly Aggregation areas. For areas within 100 feet of residences and structures. **."Only trees that do not provide protection of monarch butterfly aggregation sites should be trimmed or thinned."**

Fuel Reduction Zone (30 – 100 ft) from structures: "Thin or trim trees that do not provide protection to Monarch butterfly aggregation sites.""Leave larger trees – unless toppling hazard"* *As defined by the City arborist. The main problem with this directive is that neither the City Arborist nor any arborist can fully predict which large tall eucalyptus trees are likely to fall. Yes, dead and dying trees are identifiable but due to the poor root systems and moist soils which occur along the creek areas, even green, healthy eucalyptus trees have fallen and continue to fall even without severe wind events. Given the above State mandates to SCE and recent felling of at least three large trees within the grove between Pebble Beach Dr and Santa Barbara Shores Dr, the City should be proactive and support the topping, trimming or removal of all trees which hold the potential to fall and strike SCE power lines in this and similar areas. 7

Page 12: Tree Management Program: This program includes the following covered activities.

"Selectively prune or remove standing dead, dying, or vulnerable trees that pose a threat to public safety or monarch aggregation sites". As stated above, the trees between Pebble Beach and Santa Barbars Shores Drives would fall into the class of "vulnerable trees" as evidenced by their actively falling within the past couple weeks.

Page 13: Habitat Enhancement and Restoration Program. "Plant native species of ground cover and woody species of bushes and nectar sources (See UCSB comment letter of Aug 30, 2018).

Page 16: Table 2 MBHMP program policies and actions with potential effects on the environment 8

Program 4 Community Wildfire Protection Plan. Goal: Provide management practices that support healthy MB Habitat "and are compatible with the Community Wildfire Protection Plan."

4.1 Policies: "The Goals, Policies and Actions of the MBHMP shall be consistent with the intent of the CWPP to reduce the ignitability of homes and structures." Here again downed power lines pose a high risk of ignitability of homes and structures which are usually less than 30 feet from them.

Page 20: Tree Management: Goal.....(5) Sensitivity to Wildfire Hazards

12.1.2 – Identify potential threats to aggregation sites including: fire. Here again the potential for SCE power lines to fall and ignite vegetation. 8

Note: Areas between existing groves of eucalyptus should NOT be planted with eucalyptus as this only provides a continuous interconnected supply of highly flammable vegetation likely to carry fire from a source into the aggregation sites. Having gaps "fuel breaks" is a much better way to ensure the long term viability of the aggregation sites, not just planting more fuel. 9

Another unique factor of the small grove of eucalyptus between Pebble Beach and Santa Barbara Shores is a forestry factor known as "wind throw". This small stand of very tall senescent trees being only two to three trees wide in places is highly susceptible to wind throw due to the extreme height and mass of their canopies coupled with direct exposure to high winds, and the weakened root anchorage resulting from years of drought make them very susceptible to falling. Having the creek run nearby also results in saturated soils which add to the instability of the root systems. This wind throw factor adds to the definition of these trees as hazard trees with a high potential to fall and strike the power lines which run along both the east and west boundary of this grove. 10

Page 28: Second Paragraph: Some species of eucalyptus trees found on Ellwood Mesa, including blue gum, have deciduous bark, which is shed annually and presents a fire hazard. The bark catches fire readily and streamers from the lose bark tend to carry fire into the canopy and cast firebrands ahead of the main fire front. The leaf litter, which is the accumulation of dead, dry and oily leaves, is also a fire hazard as it is extremely flammable.

This statement again confirms the hazardous nature of the eucalyptus trees which comprise almost 100 percent of the aggregation and other groves of trees in the study area. The CWPP documents that eucalyptus is the hottest burning tree species in the Ellwood Mesa area and the potential for this highly flammable fuel to be ignited by a falling power line is one of the most significant sources of wildfire in this area. Again begging the City to take action to help minimize or prevent such an event from happening by properly managing the eucalyptus groves in and adjacent the MBHMP area. Allowing and supporting SCE to trim or remove all trees deemed by them to be a hazard with the potential to contact or strike their power lines! 11

Thank you for the opportunity to provide input to this important planning effort. We all want to maintain and protect the Monarchs and their "critical habitat areas", but this should not preclude any actions deemed to pose a threat to public safety or loss of property. These are not mutually exclusive goals but can and should be managed as a combined goal of the City's management of this unique and valuable habitat area.

Sincerely,

Maeton Freel
273 Santa Barbara Shores Dr
Goleta, CA

Letter 4

COMMENTER: Maeton Freel, Resident

DATE: February 22, 2019

Response 4.1

The commenter opines the MBHMP provides a generic approach to managing the Coverage Area primarily for eucalyptus trees, while mentioning other existing wildlife resources and native riparian and upland habitats in and adjacent to the Coverage Area. The commenter recommends a more balanced approach to better support both butterflies and other native species. The commenter further recommends use of The Xerces Society's 2017 publication *Protecting California's Butterfly Groves: Management Guidelines for Monarch Butterfly Overwintering Habitat* and working with the United States Fish and Wildlife Service (USFWS) in its review of proposals to have the monarch butterfly listed as threatened or endangered.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 4.2

The commenter provides the opinion the maps included in the MBHMP are general and need to be at a scale which provides for definition of tree densities, areas of dead and dying trees, and other factors critical to managing the habitat.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 4.3

The commenter draws attention to comments provided by Lisa Stratton, Director of Ecosystem Restoration at the University of California, Santa Barbara, which provide additional factors for consideration in a sound management plan to determine whether an area is actually meeting desired habitat characteristics for monarch butterflies and other wildlife and plants occurring in the area.

This comment does not relate to the content or adequacy of the Draft IS-MND, but instead to the content of the MBHMP. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Response 4.4

The commenter states neither the Community Wildfire Protection Plan (CWPP) nor the MBHMP mention the presence or maintenance needs of existing Southern California Edison (SCE) power lines in the Coverage Area. The commenter notes power lines are an ignition source for wildfire and discusses State policies requiring vegetation maintenance work along power lines, specifically Public Resources Code 4293 and California Public Utilities Commission General Order 95. The commenter mentions hazard tree pruning activities during the summer of 2018 along the eastern boundary of the Ellwood North aggregation site were necessary to comply with State regulations and have had no known effect on the use of the aggregation site. The commenter adds the Draft IS-MND should include specific tree maintenance standards tied to the power line maintenance activities, allowance of and support for SCE to conduct State-mandated vegetation management programs, and actions by the City to address any further needed vegetation management actions which would preclude hazard trees from contacting or striking SCE power lines in the Ellwood Mesa area.

The Draft IS-MND discusses potential wildfire impacts in Section 20, *Wildfire*. The discussion contained in this section notes implementation of the MBHMP would reduce potential wildfire risk in the Coverage Area by removing dead, dying, or otherwise hazardous trees and re-planting the understory around aggregation sites with fire-resistant, native plant species. The Draft IS-MND concludes implementation of the MBHMP would result in no impact related to wildfire, and may result in a beneficial effect.

Vegetation and tree removal efforts conducted by SCE in the Coverage Area occur pursuant to permits obtained by the utility. While the City may conduct covered activities in the existing SCE easements in the Coverage Area, it cannot prevent SCE from conducting tree topping, trimming, or removals if such activities are consistent with its easement rights and SCE has obtained necessary permits, such as those issued by the CCC. Such activities would continue as deemed necessary by SCE to reduce wildfire risks associated with its electrical facilities in the Coverage Area. Section 20, *Wildfire*, of the Draft IS-MND has been amended to include this information, with the following language added:

The MBHMP does not propose construction or maintenance of any new infrastructure which may pose a fire risk. The Coverage Area contains existing power lines owned and operated by SCE. SCE has previously conducted vegetation removal efforts to reduce fuel loads and hazardous trees in the vicinity of these lines. These vegetation removal efforts would continue, subject to SCE's own permits and easement rights.

The MBHMP would not involve construction of any structures, and therefore would not expose any additional people or structures to risk of wildfire. <u>As noted in Section 9, *Hazards and Hazardous Materials*, the project would not interfere with an adopted emergency response or evacuation plan.</u> Given its gentle sloping topography, the Coverage Area would not be susceptible to post-fire flooding, landslides, or slope instability. There would be no impact.

Response 4.5

The commenter cites language in the Draft IS-MND's Background section stating drought has compromised the health of eucalyptus trees in Ellwood Mesa exacerbating wildfire risk. The commenter states wildfire poses the greatest threat to the Coverage Area and every effort should be undertaken by the City to avoid or minimize potential sources of fire in the Coverage Area.

This comment is noted. Please refer to Response 4.4, above, for discussion of how the MBHMP would affect wildfire risk and hazard mitigation efforts.

Response 4.6

The commenter cites language from the CWPP stating the protection of human life and safety is the highest priority for all fire management strategies in Goleta, followed by the protection of property. The commenter states this language supports efforts by SCE to conduct needed pruning, topping, and removal of any trees with potential to grow into or fall on power lines and that the City should support these efforts.

As discussed in Section 20 of the Draft IS-MND, *Wildfire*, the MBHMP pledges support for the policies and activities contained in the CWPP, which includes policies intended to reduce fire hazards from fuel loads in the Coverage Area. Please refer to Response 4.4 for discussion of how the MBHMP relates to efforts by SCE to prune, top, or remove trees along power lines in the Coverage Area.

Response 4.7

The commenter notes the CWPP states larger trees in the Fuel Reduction Zone (30-100 feet from structures) should be left in place unless they pose a toppling hazard as defined by the City arborist. This directive is noted in Table 1 of the Draft IS-MND. The commenter states no arborist can fully predict which trees are likely to fall, and the City should be proactive and support the topping, trimming, and removal of all trees with potential to fall and strike SCE power lines.

As noted by the commenter and described in the Draft IS-MND, the directive to leave larger trees in the Fuel Reduction Zone in place unless they pose a toppling hazard is contained in the CWPP, not the MBHMP. The CWPP was previously approved in 2012, and the MBHMP proposes no changes to the CWPP. Please refer to Response 4.4 for discussion of how the MBHMP relates to efforts by SCE to prune, top, or remove trees along power lines in the Coverage Area.

Response 4.8

The commenter notes Goals, Policies, and Actions, as well as covered activities identified for the MBHMP's programs support the need to reduce wildfire hazards associated with SCE power lines in the Coverage Area.

This comment is noted. Please refer to Response 4.4 for discussion of how the MBHMP relates to efforts by SCE to prune, top, or remove trees along power lines in the Coverage Area.

Response 4.9

The commenter recommends areas between existing groves of eucalyptus should not be planted with eucalyptus, as this only provides a continuous interconnected supply of highly flammable vegetation. The commenter further states gaps between groves, or fuel breaks, would better support the long-term viability of the aggregation sites by reducing wildfire risk.

As described in Section 20, *Wildfire*, of the Draft IS-MND, replacement trees would be planted within the boundaries of the existing eucalyptus groves, and no expansion of the existing eucalyptus groves would occur. As a result, implementation of the MBHMP would not increase the supply of

highly flammable vegetation in the Coverage Area, and would reduce fuel by replacing dead, dying, or otherwise hazardous trees with less fire-prone healthy trees.

Response 4.10

The commenter notes the small grove of eucalyptus trees between Pebble Beach Drive and Santa Barbara Shores Drive is highly susceptible to wind throw due to the extreme height and mass of their canopies coupled with direct exposure to high winds. The commenter adds these trees have weakened root systems due to years of drought and are located on unstable, saturated soils given their proximity to Devereux Creek, making them susceptible to falling. The commenter states the opinion this further qualifies these trees as hazard trees with potential to fall on power lines along the eastern and western boundary of this grove.

The eucalyptus grove between Pebble Beach Drive and Santa Barbara Shores Drive is not located in the Coverage Area, and covered activities of the MBHMP would not occur in this grove. SCE's tree pruning, topping, and removal efforts may continue in this grove under permits obtained by the utility, as long as such efforts are consistent with SCE's existing easement rights. Please refer to Response 4.4 for discussion of efforts by SCE to prune, top, or remove trees along power lines in the Coverage Area.

Response 4.11

The commenter cites language in the Draft IS-MND noting some species of eucalyptus on Ellwood Mesa, such as blue gum, have deciduous bark, which poses a fire hazard as streamers from loose bark carry fire into the canopy and cast firebrands ahead of the main fire front. The commenter states this language confirms the hazardous nature of eucalyptus trees and encourages the City to take action to help minimize or prevent a wildfire event by managing the eucalyptus groves in and adjacent to the Coverage Area, including supporting SCE in efforts to trim or remove all trees deemed by them to be a hazard with the potential to contact or strike their power lines.

The MBHMP contains management actions intended to restore and enhance habitat in the Coverage Area, including the existing eucalyptus groves. The Draft IS-MND concludes implementation of the MBHMP would result in no impact related to wildfire, and may result in a beneficial effect by removing dead, dying, or hazardous trees and restoring understory with native, fire-resistant species. Furthermore, as discussed in Response 4.4 above, Section 20, *Wildfire*, has been revised to indicate that SCE tree pruning, trimming, and removal activities may continue to occur as long as such activities obtain all necessary permits and are consistent with SCE's existing easement rights.

Letter 5

To: Ann Wells, Planning Manager, City of Goleta, awells@cityofgoleta.org

From: Michael Mills, Goleta resident, 7628 Carmel Beach Circle, memills@gmail.com

Re: Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan

The Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan (or "Plan") does not adequately address the extreme risks to property and human life that would occur due to a fire in the eucalyptus groves. The author of the Plan, Rincon Associates, is an environmental consulting firm with expertise on preserving Monarch butterfly habitat. They are not experts in fire risk assessment, or the development of fire mitigation strategies. As a result, their Plan does not adequately address these fire risks. Nor does it prioritize human life and property above butterfly habitat preservation.

The neighborhoods adjacent to the groves are at significant risk of fire. Many home fire insurance companies will not underwrite fire insurance in these areas, and, those that have previously are dropping existing policies.

The 1991 Oakland Hills firestorm was largely driven by the extreme flammability of eucalyptus trees. As noted by Wikipedia, the firestorm: 1

> ...ultimately killed 25 people and injured 150 others. The 1,520 acres (620 ha) destroyed included 2,843 single-family dwellings and 437 apartment and condominium units. The economic loss from the fire was estimated at $1.5 billion (1991 USD).

Should a similar conflagration occur here, the City risks very significant legal liability for its failure to mitigate known fire risks posed by the eucalyptus groves.

The Plan needs significant revisions to provide fire risk reduction strategies. Those revisions should be made in consultation with fire risk experts, especially those with expertise in the specific risks posed by fires in eucalyptus groves.

Letter 5

COMMENTER: Michael Mills, Resident

DATE: February 24, 2019

Response 5.1

The commenter states the opinion the MBHMP does not adequately address the extreme risks to property and human life that would occur due to a fire in the eucalyptus groves. The commenter notes the plan was prepared by an environmental consulting firm with expertise in monarch butterfly habitat preservation, not fire risk assessment or the development of fire mitigation strategies. The commenter states the opinion neighborhoods adjacent to the groves are at significant risk of fire, and concludes the MBHMP should provide fire risk reduction strategies. Finally, the commenter states that such strategies should be made in consultation with fire risk experts, especially those with expertise in the specific risks posed by fires in eucalyptus groves.

This comment relates to the content of the MBHMP and does not relate to the content or adequacy of the Draft IS-MND. Therefore, this comment has been included in the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

The Draft IS-MND does, however, include discussion of the relationship between the MBHMP and fire protection. As discussed under the Community Wildfire Protection Program subheading on page 10 of the Draft IS-MND, the MBHMP is not intended to be a wildfire protection or mitigation plan, though it does pledge support for the policies and activities contained in the CWPP, which includes policies intended to reduce fire hazards from fuel loads in the Coverage Area. Instead, the MBHMP is intended to fulfill its stated purpose of supporting habitat for monarch butterflies and other plant and animal species, coastal access, and recreation while not exacerbating wildfire risk in or around the Coverage Area. The Draft IS-MND addressed potential impacts of the MBHMP related to wildfire in Section 20, *Wildfire*, and found that the MBHMP would result in no impact related to wildfire and may have a beneficial effect by removing dead, dying, or otherwise hazardous trees and re-planting understory vegetation with native, fire-resistant species.

Letter 6

Santa Barbara Audubon Society

A Chapter of the National Audubon Society

PO Box 5508
Santa Barbara, CA 93150
www.santabarbaraaudubon.org

Date: February 25, 2019

To: City of Goleta Planning & Environmental Review and Public Works Staff

Re: MBHMP Initial Study – Mitigated Negative Declaration

Dear City of Goleta Planning & Environmental Review and Public Works Staff,

This letter provides comments of the Santa Barbara Audubon Society (SBAS) regarding the City's January 2019 Initial Study – Mitigated Negative Declaration (IS-MND) for the Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan (MBHMP). This is a follow-up to our comments on the July 2018 Draft MBHMP provided in a letter to the City of August 31, 2018.

SBAS works to connect people with birds and nature through education, science-based projects, and advocacy. SBAS has been a voice for the natural world in the Santa Barbara area for more than 50 years and has over 1,100 members, including hundreds in the City of Goleta.

SBAS continues to be supportive of the City's approach toward protection and enhancement of the historical monarch butterfly aggregation sites in the Ellwood eucalyptus groves, while balancing the multiple, complex, and interactive elements of the MBHMP in a way that serves the long-term interests not only of monarchs, but of wildlife in general and the wide array of migratory, wintering, and breeding birds that find sustenance at Ellwood. As indicated in our comments of August 31st, we believe this is best accomplished through restoration efforts designed to create a diverse ecosystem comprised of a carefully planned mix of eucalyptus and natives that would enhance the long-term value of this habitat for both monarch aggregation sites and other wildlife. We are most appreciative of the City's detailed and thoughtful responses to our comments that appear in Appendix B of the IS-MND.

We offer the following additional comments on the IS-MND:

1. The first full paragraph on p. 67 acknowledges nearby Devereux Slough as an important migratory bird annual stopover location, and Ellwood Mesa Open Space as a National-Audubon-designated IBA (Important Bird Area). It would be appropriate and helpful to explicitly note that these descriptions apply as well to the Devereux Creek riparian corridor within the project Coverage Area. This would provide a stronger context for the project's Habitat Enhancement and Restoration Program, as outlined on pp. 13-14 and in section 14 of Table 2, and for demonstrating awareness of the need to ensure that the proposed program activities do not negatively impact the value of this corridor as a migratory bird stopover. As it stands, the generality of the language around planned habitat enhancement/restoration actions ("remove vegetation along Devereux Creek riparian corridor, as needed," p. 14; "restoration activities include establishment of a riparian area along the banks of Devereux Creek composed of native riparian tree species," p. 23) leaves unclear, for example, whether such activities could include eucalyptus removal or other elements (e.g., reduction/elimination of water catchment areas within the corridor) that could undermine the migratory stopover value of the area. 1

2. Many of the proposed mitigations (and other project activities) are qualified by language regarding their "feasibility" or "practicality." Within just the Biological Resources section, examples include BIO-5 ("Any ground disturbing activities in riparian and wetland habitats shall be conducted when the channel is dry to the maximum extent feasible"), BIO-6 ("To the maximum extent feasible, tree trimming activities must occur in September…"), and BIO-9 ("Impacts to vernal pools, wetlands, and streambeds shall be avoided to the maximum extent practicable, unless they are affected for the purpose of habitat enhancement. If avoidance is not feasible…"). Such language opens the door to allowing exceptions to critical environmental protections, without any clear definition of "feasibility" or the process by which it would be evaluated. It is crucial that any such contemplated project modifications or exceptions be fully specified and subject to public review and comment prior to their implementation. 2

3. Regarding the City's response to our August 31st comment concerning potential downstream project impacts (see item #259 in IS-MND Appendix B), even if the City believes that such impacts would be neutral, negligible, or only positive, we suggest that it would be appropriate to make this view explicit in the study, given that these immediately adjacent areas (North Campus Open Space, Coal Oil Point Reserve, Devereux Slough) are of high value, sensitivity, and public interest. 3

4. The various study references to bird nesting season dates are internally inconsistent (stated as March 15 to August 15 on pp. 12, 19, and 73; stated as February 1 to September 15 on p. 78). We have suggested March through mid-August in our *Protect Our Nesting Birds* brochure. For more detailed guidance on impact avoidance, see California Department of Fish and Wildlife (CDFW) website section https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds) or the attached CDFW document. 4

SBAS appreciates the opportunity to comment on this project. Please do not hesitate to contact us if further clarification on any of these points is desired.

Sincerely,

Cherie Topper, Santa Barbara Audubon Society Executive Director

Appendix I

CDFW's Conservation Measures for Biological Resources That May Be Affected by Program-level Actions

Table I-1. California Department of Fish and Wildlife's Conservation Measures for Biological Resources that May Be Affected by Program-level Actions

Conservation Measure	Description
GC	**General Conservation Measures**
GC-1. Conduct contractor environmental awareness training	a. For any project activity that involves construction or ground-disturbing activities, all construction workers will be required to participate in environmental awareness training. The training will educate workers on: (1) special-status species that may occur in the work area, (2) procedures to follow in the event a species is observed, and (3) other environmental BMPs and emergency spill response protocols.
GC-2. Work hours	a. All non-emergency work activities will be confined to daylight hours (i.e., sunrise to sunset), unless necessary for assessing or protecting biological resources.
GC-3. Best Management Practices	a. Prior to conducting work in streams, CDFW will identify the limits of the required access routes and encroachment into the stream. CDFW will restrict access routes and encroachment into the stream to the maximum extent while still allowing for necessary activities to be completed. CDFW will take care to prevent trampling riparian vegetation during daily visits to Project sites; as necessary, multiple routes to in-channel Project sites will be identified and used. Disturbance of riparian vegetation will be avoided to the greatest extent practicable. Access routes will not be overtly flagged, to prevent drawing attention to Project equipment and possible damage to related riparian habitat by persons not related to the Project. b. A spill prevention plan will be prepared describing measures to be taken to minimize the risk of fluids or other materials used during construction (e.g., oils, transmission and hydraulic fluids, cement, fuel) from entering streams or contaminating adjacent riparian areas. In addition to a spill prevention plan, a cleanup protocol will be developed before construction begins and will be implemented in case of a spill. c. Stockpiling of materials, including portable equipment, vehicles and supplies (e.g., chemicals), will be restricted to the designated construction staging areas, exclusive of any riparian and wetland areas. d. A qualified biological monitor will be present during construction activities that include clearing, grubbing, pruning and /or trimming of vegetation. The qualified biological monitor will also visit each job site during construction initiation, midway through construction, and at the close of construction to monitor implementation of conservation measures and water quality.
DBC	**Delta button-celery**
DBC-1. Avoid and minimize loss of habitat and risk of take for implementation of construction activities	a. Prior to conducting ground-disturbing activities, suitable habitat within the footprint and a 250-foot buffer around of the proposed activity will be surveyed by a qualified botanist for Delta button-celery in accordance with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009 or current version). Floristic surveys will include the use of a reference population to increase the likelihood of detection and will be performed during the appropriate bloom period(s). b. If Delta button-celery plants are found on or adjacent to the Project site, in consultation with the CDFW Regional botanist, a minimum 50-foot no disturbance buffer will be placed around individual plant(s) or population(s) during activities that could result in disturbance. A greater no disturbance buffer may be warranted to ensure the hydrology of the site is not disrupted and the plants and seed bank will not be impacted. The no disturbance buffer will be clearly identified in the field by staking, flagging, or fencing around depressions, swales, or other features containing Delta button-celery plants. Project activity will avoid buffer areas to ensure that the buffer area is not being encroached upon and that effects are being avoided.
PALM	**Palmate-bracted bird's beak**

Conservation Measure	Description
PALM-1. Avoid and minimize effects to species	a. Prior to conducting ground-disturbing activities, suitable habitat within the footprint and a 250-foot buffer around the proposed activity will be surveyed by a qualified botanist for palmate-bracted bird's in accordance with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009 or current version). Floristic surveys will include the use of a reference population to increase the likelihood of detection and will be performed during the appropriate bloom period(s). b. If palmate-bracted bird's beak plants are found on or adjacent to the Project site, in consultation with the CDFW Regional botanist, a minimum 50-foot no disturbance buffer will be placed around individual plant(s) or population(s) during activities that could result in disturbance and consistent with recommendations in the *Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS 1998). A greater no disturbance buffer may be warranted to ensure the hydrology of the site is not disrupted and the plants and seed bank will not be impacted. The no disturbance buffer will be clearly identified in the field by staking, flagging, or fencing. Project activity will avoid buffer areas to ensure that the buffer area is not being encroached upon and that effects are being avoided.
PLANTS	
PLANTS-1. Avoid and minimize effects to special-status plants	a. Within one year prior to the commencement of ground-disturbing activities, habitat assessment surveys for the special-status plants listed in Table J-1 of Appendix J, will be conducted by a qualified botanist, in accordance with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009 or current version) and at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. b. Locations of special-status plant populations will be clearly identified in the field by staking, flagging, or fencing a minimum 100-foot wide buffer around them prior to the commencement of activities that may cause disturbance. No activity will occur within the buffer area. c. Some special-status plant species are annual plants, meaning the plant completes its entire lifecycle in one growing season. Other special-status plant species are perennial plants that return year after year until they reach full maturity. Due to the differences in life histories, all general conservation measures will be developed on a case-by-case basis and will include strategies that are species and site-specific to avoid or minimize impacts to special-status plants. d. Minimization measures may include transplanting perennial species, seed collection and dispersal for annual species, and other conservation strategies that will protect the viability of the local population. If minimization measures are implemented, monitoring of plant populations will be conducted annually for 5 years to assess the mitigation's effectiveness. The performance standard for the mitigation will be no net reduction in the size or viability of the local population.
VP	**Vernal pool habitats, fleshy (succulent) owl's clover, Hoover's spurge, Bogg's Lake hedge-hyssop, Colusa grass, San Joaquin Valley Orcutt grass, hairy Orcutt grass, Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad**
VP-1. Avoid effects to species and habitat	a. If vernal pools have the potential to be disturbed by a project activity, a qualified biologist will identify and map vernal pools and seasonal wetland habitat potentially suitable for listed vernal pool plants, invertebrates, and western spadefoot toad within the footprint. A 250-foot no disturbance buffer will be established from the high water mark of the vernal pool or wetland habitat and will be delineated by staking, flagging or fencing. b. Access, egress, and ground-disturbing activities will be sited to avoid vernal pools.

Conservation Measure	Description
VP-2. Minimize effects to species and habitat	a. If vernal pools are present, a 250-foot no disturbance buffer will be established from the high water mark of vernal pools and seasonal wetlands that provide suitable habitat for vernal pool crustaceans or vernal pool plants. This buffer will be established prior to ground-disturbing activities, and remain until ground-disturbing activities in that area are completed. Vernal pool habitat and buffer areas will be clearly identified in the field by staking, flagging, or fencing.
VP-3. Compensate for temporary or permanent loss of habitat	a. If activities occur within the microwatershed or 250-foot buffer for vernal pool habitat, a wetland delineation will be submitted to USACE for verification and mitigation requirements will be determined. CDFW will develop a compensatory mitigation plan consistent with USACE's and EPA's April 10, 2008 *Final Rule for Compensatory Mitigation for Losses of Aquatic Resources* (33 CFR Parts 325 and 332 and 40 CFR Part 230) and other applicable regulations and rules at the time of implementation that will result in no net loss of acreage, function, and value of affected vernal pool habitat. Unavoidable effects will be compensated through a combination of creation, preservation, and restoration of vernal pool habitat or purchase of credits at a mitigation bank approved by the applicable regulatory agency/agencies. b. As applicable, Project effects and compensation will be determined in consideration of the *Vernal Pool Recovery Plan* goals for core areas, which call for 95% preservation for habitat in the Grasslands Ecological Area and Madera core areas, and 85% habitat preservation in the Fresno core area (USFWS 2005). c. Appropriate compensatory ratios for loss of habitat both in and out of core areas would be determined during coordination and consultation with USFWS, as appropriate. d. If off-site compensation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures will be developed as part of the USFWS coordination and consultation process. The plan will include information on responsible parties for long-term management, holders of conservation easements, long-term management requirements, and other details, as appropriate, for the preservation of long-term viable populations. Any impacts that result in a compensation purchase will be required to do so with an endowment for land management in perpetuity prior to any project groundbreaking activities.
VELB	**Valley elderberry longhorn beetle**
VELB-1. Avoid and minimize effects to species	a. Prior to conducting all project-related activities, a qualified biologist will identify any elderberry shrubs within the footprint and a 100-foot buffer around of the proposed activity. The qualified biologist will survey potentially affected shrubs for valley elderberry longhorn beetle (VELB) exit holes in stems greater than 1- inch in diameter. b. If elderberry shrubs are found on or adjacent to the site, a 100-foot wide avoidance buffer (measured from the dripline of the plant) will be established around all elderberry shrubs with stems greater than 1-inch diameter at ground level and will be clearly identified in the field by staking, flagging, or fencing. No construction activities involving mechanized equipment will occur within the buffer areas. Human access may be permitted in the buffer, provided that it does not cause disturbance to the shrubs. Elderberry shrubs cannot be used as an anchor for any in-channel project equipment. Project workers shall receive training prior to installing any such equipment, to allow them to identify and avoid elderberry shrubs.

Conservation Measure	Description
VELB -2. Compensate for temporary or permanent loss of habitat	a. If impacts to VELB habitat cannot be avoided, CDFW will consult with USFWS to determine appropriate compensation ratios. Compensatory mitigation measures will be consistent with the C*onservation Guidelines for Valley Elderberry Longhorn Beetle* (USFWS 1999), or current guidance. b. Compensatory mitigation for adverse effects may include the transplanting of elderberry shrubs during the dormant season (November 1 to February 15), if feasible, to an area protected in perpetuity as well as required additional elderberry and associated native plantings as approved by the USFWS. c. If off-site compensation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures will be included in the mitigation plan and must occur with full endowments for management in perpetuity. The plan will include information on responsible parties for long-term management, holders of conservations easements, long-term management requirements, and other details, as appropriate, for the preservation of long-term viable populations.
BNLL	**Blunt-nosed leopard lizard**
BNLL-1. Avoid and minimize effects to species	a. Three locations in the Restoration Area have been identified as having potential blunt-nosed leopard lizard habitat based on aerial maps. These areas include approximately 2,460 acres along the southwest side of the San Joaquin River in Reach 2, approximately 490 acres in a portion of the Eastside Bypass and adjacent lands near Reach 4A of the San Joaquin River, and approximately 2,938 acres encompassing the northern side of the Mariposa Bypass and parcels north of the Mariposa Bypass and west of the Eastside Bypass. Prior to conducting work in these areas, CDFW will perform a focused habitat assessment for blunt-nosed leopard lizard. Prior to any ground-disturbing activities in any area of potentially suitable habitat (e.g., grassland and shrub scrub habitat that contains required habitat elements such as small mammal burrows; open space patches between suitable habitat elements including disturbed sites and unpaved access roadways) qualified CDFW biologists will conduct protocol-level surveys in accordance with the *Approved Survey Methodology for the Blunt-nosed Leopard Lizard* (CDFG 2004). If blunt-nosed leopard lizard are detected, in any area where ground-disturbing activities will occur, suitable burrows within and adjacent to potential habitat for blunt-nosed leopard lizard will be avoided by a minimum 50 foot no disturbance buffer and an appropriate number of qualified CDFW biologists will be present during all ground-disturbing activities to ensure that blunt-nosed leopard lizards above ground are not impacted. Any blunt-nosed leopard lizard(s) that may enter an area of Project activity will be allowed to leave unobstructed on its own. If a blunt-nosed leopard lizard is detected in habitat adjacent to an unpaved road that will serve as ingress and egress routes for motorized transport of equipment and staff, exclusion fencing, qualified CDFW biological monitors, and reduced speed limits will be used to guide vehicles to the site and reduce the probability of vehicle strikes. All survey and monitoring results will be provided to the USFWS; negative finding results of the protocol level surveys will be good for one year.
CTS	**California tiger salamander**
CTS-1. Avoid effects to species	a. Prior to commencing any ground-disturbing activities, the work area will be assessed by CDFW or a qualified biologist for potential California tiger salamander (CTS) habitat. All potential CTS breeding ponds and upland habitat with 1.3 miles of a potential breeding pond will be considered suitable habitat. Ground-disturbing activities will avoid areas that contain suitable breeding and upland habitat for CTS, whenever possible.

Conservation Measure	Description
CTS-2: Minimize effects to species	a. Prior to conducting ground-disturbing activities in suitable CTS habitat, CDFW will conduct a minimum of 2 years of surveys to determine the presence/absence of CTS in accordance with the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (USFWS 2003). In consultation with the USFWS, CDFW may modify survey protocols to reflect site conditions and known utilization of habitat by CTS. In the absence of protocol surveys, CDFW will assume presence of CTS in all potential breeding and upland refugia habitat. b. To the extent feasible, all ground-disturbing activities will be designed to avoid impacts to suitable CTS upland habitat. Such avoidance measures may include adjusting access routes or choosing alternate locations. c. In the absence of conducting 2 years of protocol surveys or in the event protocol surveys detect CTS, CDFW will consult with the USFWS and after consultation will implement the following minimization measures during construction in suitable CTS habitat: ▪ Prior to commencing ground disturbing activities, construction workers will be educated regarding CTS, and the measures intended to protect this species. ▪ When feasible, there will be a 50-foot no-disturbance buffer around burrows that provide suitable upland habitat for CTS. Burrows considered suitable for CTS will be determined by a qualified biologist, approved by USFWS. ▪ All suitable burrows directly impacted by construction will be hand excavated under the supervision of a qualified wildlife biologist. If CTS are found, the biologist will relocate the organism to the nearest burrow that is outside of the construction impact area. ▪ All ground-disturbing work will occur during daylight hours in coordination with USFWS, and depending on the level of rainfall and site conditions. CDFW will monitor the National Weather Service (NWS) 72-hour forecast for the work area. If a 70% or greater chance of rainfall is predicted within 72 hours of project activity, all activities in areas within 1.3 miles of potential or known CTS breeding sites will cease until no further rain is forecast. If work must continue when rain is forecast, a qualified biologist will survey the Project site before construction begins each day rain is forecast. If rain exceeds 0.25 inch during a 24-hour period, work will cease until no further rain is forecast. This restriction is not applicable for areas located greater than 1.3 miles from potential or known CTS breeding sites once they have been encircled with CTS exclusion fencing. However, even after exclusion fencing is installed, this condition would still apply to construction related traffic moving though areas within 1.3 miles of potential or known CTS breeding sites but outside of the salamander exclusion fencing (e.g. on roads). ▪ For work conducted during the CTS migration season (November 1 to May 31), exclusionary fencing will be erected around the construction site during ground-disturbing activities after hand excavation of burrows has been completed. A qualified biologist will visit the site weekly to ensure that the fencing is in good working condition. Fencing material and design will be subject to the approval of the USFWS. If exclusionary fencing is not used, a qualified biological monitor will be on-site during all ground disturbance activities. Exclusion fencing will also be placed around all spoils and stockpiles. ▪ For work conducted during the CTS migration season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no CTS are in the work area. ▪ Prior to beginning work each day, underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter will be inspected for CTS. If any are found they will be allowed to move out of the construction area under their own

Conservation Measure	Description
	accord. ▪ Trenches and holes will be covered and inspected daily for stranded animals. Trenches and holes deeper than 1 foot will contain escape ramps (maximum slope of 2:1) to allow trapped animals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling. ▪ All food and food-related trash will be enclosed in sealed trash containers at the end of each workday and removed completely from the construction site once every three days to avoid attracting wildlife. ▪ A speed limit of 15 mph will be maintained on dirt roads. ▪ All equipment will be maintained such that there are no leaks of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly. ▪ Plastic monofilament netting (erosion control matting) or similar material will not be used at the Project site because CTS may become entangled or trapped. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. ▪ Hazardous materials such as fuels, oils, solvents, etc. will be stored in sealable containers in a designated location that is at least 100 feet from wetlands and the San Joaquin River channel. If it is not feasible to store hazardous materials 100 feet from wetlands and the river channel, then spill containment measures will be implemented to prevent the possibility of accidental discharges to wetlands and waters.
WST	**Western spadefoot toad**
WST-1. Avoid effects to species	a. For work conducted during the western spadefoot toad migration and breeding season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no spadefoot toads are in the work area. b. When feasible, there will be a 50-foot no-disturbance buffer around burrows that provide suitable upland habitat for western spadefoot toad. Burrows considered suitable for spadefoot will be identified by a qualified CDFW biologist. The biologist will delineate and mark the no-disturbance buffer. c. If western spadefoot toad is found within the construction footprint, it will be allowed to move out of harm's way of its own volition or a qualified biologist will relocate the organism to the nearest burrow that is outside of the construction impact area. d. Prior to beginning work each day, a qualified biologist will inspect underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter for western spadefoot toad. If any are found they will be allowed to move out of the construction area under their own accord. e. Trenches and holes will be covered and inspected daily for stranded animals. Trenches and holes deeper than one foot deep will contain escape ramps (maximum slope of 2:1) to allow trapped animals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling.
GGS	**Giant garter snake**
GGS-1. Avoid effects to species	a. Prior to commencing any ground-disturbing activities, a qualified biologist will assess the footprint and a 100-foot buffer around of the proposed activity for potential giant garter snake (GGS) habitat. Potential GGS habitat in the Project Area includes burrows and crevices in which GGS could be present.

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	b. If the suitable habitat is present, then CDFW will avoid ground-disturbing activities, whenever possible. Avoidance of suitable GGS habitat, as determined by USFWS and CDFW, will occur by demarcating and maintaining a 300-foot-wide no disturbance buffer around these areas.
GGS-2. Minimize effects to species	a. If impacts to GGS habitat cannot be avoided, pre-construction surveys will be completed by a qualified biologist within a 24-hour period before any ground disturbance of potential giant garter snake habitat. If construction activities stop on the Project site for a period of 2 weeks or more, a GGS survey will be repeated no more than 24 hours before the restart of construction activities b. For Project activities within potential GGS habitat, all activity involving disturbance of potential GGS habitat will be restricted to the period between May 1 and October 1, the active season for the species. The construction site will be re-inspected when a lapse in construction activity of two weeks or greater has occurred. c. Clearing will be confined to the minimal area necessary to facilitate construction activities. GGS habitat within or adjacent to the Project site will be flagged, staked, or fenced and designated as an Environmentally Sensitive Area. No activity will occur within this area and USFWS-approved biological monitoring will be conducted to ensure that avoidance measures are being implemented. Construction activities will be minimized within 200 feet of the banks of GGS habitat. Movement of heavy equipment will be confined to existing roadways to minimize habitat disturbance. d. Vegetation will be hand cleared in areas where GGS are suspected to occur. e. If a GGS is found during construction activities, the USFWS will be immediately notified. The biological monitor, or his/her assignee, will stop construction in the vicinity of the find and allow the snake to leave on its own. The monitor will remain in the area for the remainder of the work day to ensure the snake is not harmed. Escape routes for GGS should be determined in advance of construction and snakes will be allowed to leave on their own. If a GGS does not leave on its own within one working day, USFWS will be consulted. f. All construction-related holes will be covered to prevent entrapment of individuals. Where applicable, construction areas will be dewatered two weeks prior to the start of activities to allow giant garter snakes and their prey to move out of the area prior to any disturbance. g. For installation of research and monitoring equipment, t-posts used for anchoring will be placed within the channel when feasible, to minimize impacts to GGS in burrows along the river banks. Prior to t-post installation in the river bank, workers shall inspect the area for burrows and crevices in which GGS could be present. Fyke nets shall be inspected daily to ensure no GGS individuals are caught in the net mesh. If GGS is detected at any time during project activities, workers shall cease working and the individual shall be allowed to leave the site of its own volition before Project activity continues.

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GGS-3. Compensate for temporary or permanent loss of habitat.	a. Temporarily affected GGS aquatic habitat will be restored in accordance with criteria listed in the USFWS *Mitigation Criteria for* Restoration and/or Replacement of Giant Garter Snake Habitat (Appendix A to *Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, and Yolo Counties, California* (USFWS 1997)) or the most current criteria from USFWS or CDFW. b. Permanent loss of GGS habitat will be compensated at a ratio and at a manner agreed upon in consultation with the USFWS. Compensation may include preservation and enhancement of existing populations, restoration or creation of suitable habitat, or purchase of credits at a regulatory agency approved mitigation bank in a sufficient quantity to compensate for the effect. Credit purchases, land preservation or enhancement to minimize effects to giant garter snakes should occur geographically close to the impact area. If off-site compensation is chosen, it will include dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, and the details of these measures will be included in the mitigation plan and must occur with full endowments for management in perpetuity. The plan will include information on responsible parties for long-term management, holders of conservations easements, long-term management requirements, and other details, as appropriate, for the preservation of long-term viable populations.
FYLF	**Foothill yellow-legged frog**
FYLF-1. Avoid and minimize loss of individuals	a. If foothill yellow-legged frog (FYLF) has the potential to be present within a work area, a qualified biologist will make an initial site visit to determine if suitable habitat for the species exists within the vicinity of the work area. b. If work activities occur between April 1 and August 31, CDFW will conduct surveys for FYLF eggs and tadpoles. If FYLF eggs or tadpoles are identified in the work area or within 250 feet downstream of the work area, CDFW will modify the activity to ensure it does not directly or indirectly disturb eggs or tadpoles. c. For research, monitoring and broodstock collection activities, instream sampling equipment (e.g., fyke nets, screw traps) will be inspected daily to ensure no FYLF individuals are caught in the equipment. If FYLF are found in sampling equipment, a biologist will relocate frogs to suitable habitat downstream of the work area.
WPT	**Western pond turtle**
WPT-1. Avoid and minimize loss of individuals	a. Pre-construction surveys for western pond turtle (WPT) shall be conducted by a qualified biologist 14 days before and 24 hours before the start of ground-disturbing activities where suitable habitat exists (e.g., along riparian areas and freshwater emergent wetlands). b. If WPT or their nests are observed during pre-construction surveys, a qualified biologist shall be on-site to monitor construction in suitable WPT habitat. WPT found within the construction area will be allowed to leave of its own volition or it will be captured by a qualified biologist and relocated out of harm's way to the nearest suitable habitat immediately upstream or downstream from the Project site. c. If WPT nests are identified in the work area during pre-construction surveys, a 300-foot no disturbance buffer shall be established between the nest and any areas of potential disturbance. Buffers shall be clearly marked with temporary fencing. Construction will not be allowed to commence in the exclusion area until hatchlings have emerged from the nest, or the nest is deemed inactive by a qualified biologist. d. For research, monitoring and broodstock collection activities, instream sampling equipment (e.g., fyke nets, screw traps) will be inspected daily to ensure no WPT individuals are caught in the equipment. If WPT are found in sampling equipment, a biologist

Conservation Measure	Description
	will relocate WPT to suitable habitat downstream of the work area.
EAGLE	**Bald eagle and golden eagle**
EAGLE-1. Avoid and minimize effects to bald and golden eagles (as defined in the Bald and Golden Eagle Protection Act)	a. Surveys for bald and golden eagle nests will be conducted within 2 miles of any construction areas supporting suitable nesting habitat and important eagle roost sites and foraging areas. Surveys will be conducted in accordance with the *USFWS Interim Golden Eagle Inventory and Monitoring Protocols* (USFWS 2010a), and *CDFW's Bald Eagle Breeding Survey Instructions* (CDFG 2010), or current guidance. b. If an active eagle's nest is found, project disturbance will not occur within 0.5 mile of the active nest site during the breeding season (December 30 through July 1) or any disturbance if that action is shown to disturb the nesting birds. The 0.5 mile no disturbance buffer will be maintained throughout the breeding season or until the young have fledged and are no longer dependent upon the nest or parental care for survival.
SWH	**Swainson's hawk and White Tailed Kite**
SWH-1. Avoid and minimize impacts to Swainson's Hawk	a. If construction activities occur between February 1 and August 31, CDFW will conduct surveys for Swainson's hawk and white tailed kite in accordance with the Swainson's Hawk Technical Advisory Committee 2000 guidelines (SHTAC 2000), or current guidance. Surveys will cover a minimum of a 0.5-mile radius around the construction area. If nesting Swainson's hawks or white tailed kites are detected, CDFW will establish a 0.5 mile no disturbance buffer. Buffers will be maintained until a qualified CDFW biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
SWH-2. Compensate for loss of nest trees	a. If potential nesting trees are to be removed during construction activities, removal will take place outside of Swainson's hawk and white tailed kite nesting season and CDFW will develop a plan to replace known nest trees at a ratio of 3:1. If replacement planting is implemented, monitoring will be conducted annually for 5 years to assess the mitigation's effectiveness. The performance standard for the mitigation will be 65% survival of all replacement plantings.
RAPTOR	**Other nesting raptors**
RAPTOR-1. Avoid and minimize loss of individual raptors	a. Construction activity, including vegetation removal, will only occur outside the typical breeding season for raptors (September 16 to December 31), if raptors are determined to be present. b. If construction occurs between February 1 and August 31, CDFW will conduct surveys for nesting raptors in accordance with established CDFW raptor survey protocols. Surveys will cover a minimum of a 0.5-mile radius around the construction area. If nesting raptors are detected, CDFW will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active raptor nests will be 500 feet for non-listed raptors, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting raptors. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified CDFW biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.
RAPTOR-2. Compensate for loss of nest trees	a. If potential nesting trees are to be removed during construction activities, removal will take place outside of the raptor nesting season and CDFW will develop a plan to replace known nest trees at a ratio of 3:1. If replacement planting is implemented, monitoring will be conducted annually for 5 years to assess the mitigation's effectiveness. The performance standard for the mitigation will be 65% survival of all replacement plantings.
BRO	**Burrowing owl**

Conservation Measure	Description
BRO-1. Avoid and minimize impacts to species	a. Pre-construction surveys for burrowing owls will be conducted in areas supporting potentially suitable habitat and within 30 days prior to the start of construction activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site will be resurveyed. CDFW will conduct surveys for burrowing owls in accordance with protocols established in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012 or current version). b. If burrowing owls are detected, disturbance to burrows will be avoided during the nesting season (February 1 through August 31). CDFW will establish buffers around occupied burrows in accordance with guidance provided in the *Staff Report on Burrowing Owl Mitigation*. Buffers around occupied burrows will be a minimum of 656 feet (200 meters) during the nesting season, and 160 feet (100 meters) during the non-breeding season. c. Outside of the nesting season (February 1 through August 31), passive owl relocation techniques will be implemented. Owls would be excluded from burrows in the immediate impact zone within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors will be in place at least 48 hours prior to excavation to insure the owls have departed. d. The work area will be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. e. Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe will be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.
BRO-2. Compensate for impacts to species	a. If occupied burrows cannot be avoided during the non-breeding season, CDFW will enhance or create burrows in adjacent habitat at a 1:1 ratio of burrow destroyed to created at least one week prior to implementation of passive relocation techniques. If burrowing owl habitat enhancement or creation takes place, CDFW will develop and implement a monitoring and management plan to assess the effectiveness of the mitigation. If monitoring indicates that the actions have not adequately mitigated for the Project's impacts, CDFW will implement remedial actions (e.g., enhancing or creating additional burrows) that compensate for these impacts.
RNB	**Riparian nesting birds: Western yellow-billed cuckoo, least Bell's vireo, and willow flycatcher**
RNB-1. Avoid effects to species	a. If western yellow-billed cuckoo, least Bell's vireo, or willow flycatcher has the potential to be present within a work area, a qualified biologist will make an initial site visit to determine if suitable habitat for the species exists within the vicinity of the project footprint. b. Where suitable habitat is present, surveys will be conducted by biologists adhering to guidance offered in *Western Yellow-billed Cuckoo Natural History Summary and Survey Methodology* (Halterman et al. 2009)*; Least Bell's Vireo Survey Guidelines* (USFWS 2001); and/*or A Survey Protocol for Willow Flycatcher in California* (Bombay et al. 2003). c. If nests are detected, CDFW will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. No-disturbance buffers around active nests will be a minimum of 500 feet, unless a qualified CDFW biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified CDFW biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.
RNB-2. Minimize effects to species	a. If western yellow-billed cuckoo, least Bell's vireo, or willow flycatcher are detected or suspected to be present in the vicinity of the work area based on information collected in RNB-1, then no activities that involve clearing of vegetation, generation of mechanical noise, or ground disturbance will take place during the nesting season of the species that may be present.
MBTA	**Other birds protected by the Migratory Bird Treaty Act**

Conservation Measure	Description
MBTA-1. Avoid and minimize effects to species	a. Whenever possible, impacts to native nesting birds will be avoided by not conducting Project activities that involve clearing of vegetation, generation of mechanical noise, or ground disturbance during the typical breeding season (February 1 to September 1), if species covered under the Migratory Bird Treaty Act and Fish and Game Code sections 3503, 3503.5, and 3513 are determined to be present. b. If Project activities must be conducted during the nesting bird season, CDFW will conduct surveys for nesting birds within a 1,000-ft radius of the construction area. If nests are detected, CDFW will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active nests will be a minimum of 250 feet, unless a qualified CDFW biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until young have fledged or the nests become inactive.
BAT	**Special-status bats**
BAT-1: Avoid and minimize loss of species	a. If suitable roosting habitat for special-status bats will be affected by Project construction (e.g., removal or buildings, modification of bridges), a qualified wildlife biologist will conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). Visual surveys will include trees within 0.25 mile of Project construction activities. The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required. b. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. c. If roosts are determined to be present and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not re-enter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).
BAT-2: Compensate for loss of habitat	a. If roosts cannot be avoided or it is determined that construction activities may cause roost abandonment, such activities may not commence until permanent, elevated bat houses have been installed outside of, but near the construction area. Placement and height will be determined by a qualified wildlife biologist, but the height of bat house will be at least 15 feet. Bat houses will be multi-chambered and be purchased or constructed in accordance with CDFW standards. The number of bat houses required will be dependent upon the size and number of colonies found, but at least one bat house will be installed for each pair of bats (if occurring individually), or of sufficient number to accommodate each colony of bats to be relocated.
BAD	**American Badger**
BAD-1: Avoid and minimize loss of species	a. No less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, CDFW will conduct a survey to determine if American badger den sites are present at the site. If dens are found, they will be monitored for badger activity. If CDFW determines that dens may be active, the entrances of the dens will be blocked with soil, sticks, and debris for three to five days to discourage the use of these dens prior to project disturbance activities. The den entrances will be blocked to an incrementally greater degree over the 3 to 5-day period. After the qualified CDFW biologist determines that badgers

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	have stopped using active dens, the dens will be hand-excavated with a shovel to prevent re-use during construction. No disturbance of active dens will take place when cubs may be present and dependent on parental care, as determined by a qualified CDFW biologist.
SJAS	**San Joaquin antelope squirrel**
SJAS-1: Avoid and minimize loss of individuals	a. If San Joaquin antelope squirrels have the potential to be present within a work area, a qualified biologist will make an initial site visit to determine if suitable habitat for the species may exist within and adjacent to the vicinity of the project footprint. If suitable habitat is present, daytime visual surveys will be conducted using line transects with 10 to 30 meter spacing when temperatures are between 68°- 86° F (20°- 30° C). Focused live trapping may also be required when visual surveys are inconclusive. b. Where suitable habitat is present and neither surveys nor trapping has not been conducted, a 50-foot minimum no disturbance buffer will be maintained from all small mammal burrows of suitable size for San Joaquin antelope squirrel.
FKR	**Fresno kangaroo rat**
FKR-1: Avoid and minimize effects to species	a. Focused surveys will be conducted by a qualified biologist within 60 days prior to ground-disturbing activities. The biologist will conduct burrow searches by systematically walking transects, which will be adjusted based on vegetation height and topography. Transects will be used to identify the presence of kangaroo rat burrows. When burrows suitable for use by Fresno kangaroo rat are found within 100 feet of the Proposed Project footprint, focused live trapping surveys will be conducted by a qualified and permitted biologist following a methodology approved in advance by USFWS. b. In all areas of potentially suitable Fresno kangaroo rat habitat, a 50-foot no disturbance buffer will be implemented around small mammal burrows when live trapping is not conducted or when, in consultation with the USFWS, live trapping results are inconclusive in determining presence/absence for the species.
SJKF	**San Joaquin kit fox**
SJKF-1: Avoid and minimize effects to species	a. A qualified biologist will conduct pre-construction surveys no less than 14 days and no more than 30 days before the commencement of activities to identify potential dens more than 5 inches in diameter. CDFW will implement USFWS' *Standardized Recommendations for Protection of San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011 or current version). CDFW will notify USFWS in writing of the results of the pre-construction survey within 30 days after these activities are completed. b. If potential dens are located within the Proposed Project's work area and cannot be avoided during construction activities, a USFWS-approved biologist will determine if the dens are occupied. c. If occupied dens are present within the work area, their disturbance and destruction will be avoided. Exclusion zones will be implemented following the most current USFWS procedures (currently USFWS 2011). d. CDFW will notify USFWS immediately if a natal or pupping den is found in the survey area, and will present the results of pre-activity den searches within 5 days after these activities are completed and before the start of construction activities in the area. e. Construction activities will be conducted at a time that is least likely to affect the species (i.e., after the normal breeding season of December through September) (Ahlborn 1999). This timing will be coordinated with USFWS.
SJKF-2: Compensate for loss of habitat	a. CDFW, in coordination with USFWS, will determine if kit fox den removal is appropriate. If unoccupied dens need to be removed, the USFWS-approved biologist will remove these dens by hand-excavating them in accordance with USFWS procedures (USFWS 2011). b. Additional conservation measures will be coordinated with USFWS and DFW, and may include replacing dens, installing off-site

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	artificial dens, acquisition of compensatory habitat, or other options to be determined. Compensation may include dedicating conservation easements, purchasing mitigation credits, or other off-site conservation measures, and the details of these measures will be included in the mitigation plan and must occur with full endowments for management in perpetuity. The plan will include information on responsible parties for long-term management, holders of conservations easements, long-term management requirements, and other details, as appropriate, for the preservation of long-term viable populations.
DS	**Delta smelt**
DS-1: Avoid and minimize effects to species	a. All work within waters where there is potential for Delta smelt to occur, as defined by the most recent USFWS guidance, will be confined to a seasonal work window of August 1 through November 30 when Delta smelt are least likely to be present. Because this species does not regulate its movements strictly within this time frame, modifications to the work windows may be approved by the USFWS prior to project implementation based on information from the various in-Delta monitoring programs. b. If activities occur within Delta smelt habitat, measures will be taken to maintain or increase shading of suitable willow water habitat. The project will also avoid areas deemed suitable for Delta smelt habitat that have established aquatic vegetation or have not been previously disturbed.
GS	**Green sturgeon (Southern Distinct Population Segment)**
GS-1. Avoid and minimize loss of habitat and individuals	a. Weir and fish sampling equipment placed in the San Joaquin River will be operated in a manner that will allow for passage of green sturgeon, where applicable. To reduce stress on captured fish, all trapping devices will be checked at least once per day. Untargeted species caught in traps will be released into suitable habitat for the species. Traps will be checked more frequently during times when conditions are stressful (e.g., high temperatures, large amounts of debris during high flow events) to reduce the time that fish are subject to trap-related stress.
CVS	**Central Valley steelhead**
CVS-1. Minimize loss of habitat and risk of take of species	a. In-channel construction activities that could affect designated critical habitat for Central Valley steelhead will be limited to the low-flow period between June 1 and October 1 to minimize potential for adversely affecting federally listed anadromous salmonids during their emigration period. b. If individual Central Valley steelhead are observed within a work area, NMFS will be notified. NMFS personnel will have access to construction sites during construction, and following completion, to evaluate species presence and condition and/or habitat conditions.
PL	**Pacific lamprey**
PL-1: Avoid and minimize effects to species	a. A qualified biologist will conduct pre-construction surveys as outlined in Attachment A of *Best Management Practices to Minimize Adverse Effects to Pacific Lamprey (Entosphenus tridentatus)*(USFWS 2010b). b. Work in documented areas of Pacific Lamprey presence will be timed to avoid in-channel work during typical lamprey spawning (March 1 to July 1).
RHSNC	**Riparian habitat and other sensitive natural communities**
RHSNC-1. Avoid and minimize loss of riparian habitat and other sensitive natural communities	a. If effects occur to riparian habitat, emergent wetland, or other sensitive natural communities associated with streams, CDFW will comply with Section 1602 of the California Fish and Game Code; compliance may include measures to protect fish and wildlife resources during the project.

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RHSNC-2: Compensate for loss of riparian habitat and other sensitive natural communities	a. If losses of other sensitive natural communities (e.g., recognized as sensitive by CNDDB, but not protected under other regulations or policies) would not be offset by the benefits of the Proposed Project, then additional compensation will be provided through creating, restoring, or preserving in perpetuity in-kind communities at a sufficient ratio for no net loss of habitat function or acreage. If habitat enhancement or creation takes place, CDFW will develop and implement a monitoring and management plan to assess the effectiveness of the mitigation. If monitoring indicates that the actions have not adequately mitigated for the Project's impacts, CDFW will implement remedial actions that compensate for these impacts.
WUS	**Waters of the United States/waters of the State**
WUS-1. Identify and quantify wetlands and other waters of the United States	a. Before implementing Proposed Project actions that may affect waters of the United States or waters of the State, CDFW will map the distribution of wetlands (including vernal pools and other seasonal wetlands) in the vicinity of the work area. b. CDFW will determine, based on the mapped distribution of these wetlands and waters, the acreage of effects, if any, on waters of the United States. If it is determined that wetlands will be affected by the Proposed Project, CDFW will conduct a delineation of waters of the United States, and submit the delineation to USACE for verification. The delineation will be conducted according to methods established in the USACE *Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Arid West Supplement* (Environmental Laboratory 2008). c. Construction will be designed to minimize effects on waters of the United States and waters of the State and will employ best management practices to avoid indirect effects on water quality.
WUS-2. Obtain permits and compensate for any loss of wetlands and other waters of the United States/waters of the State	a. CDFW, in coordination with USACE, will determine the acreage of effects on waters of the U. S. and waters of the State that will result from implementation of the Proposed Project. b. CDFW will obtain Section 404 and Section 401 permits and comply with all permit terms. The acreage, location, and methods for compensation will be determined during the Section 401 and Section 404 permitting processes. c. CDFW will adhere to a "no net loss" basis of the acreage of wetlands and other waters of the U. S. and waters of the State that will be removed and/or degraded. Wetland habitat will be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, the Central Valley RWQCB, as appropriate, depending on agency jurisdiction. The replacement of waters or wetlands will be equivalent to the nature of the habitat lost, and will be provided at a suitable ratio to ensure that, at a minimum, there is no net loss of habitat acreage or value. The replacement habitat will be set aside in perpetuity for habitat use.
CH	**Critical habitat**
CH-1. Avoid and minimize effects to critical habitat	a. Designated critical habitat within the vicinity of project activities will be identified. All Proposed Project actions will be designed to avoid direct and indirect adverse modifications to these areas. Minimization measures, such as establishing and maintaining buffers around areas of designated critical habitat will be implemented in the event that avoidance is not feasible.
CH-2. Compensate for unavoidable adverse effects on Federally designated critical habitat	a. If critical habitat may be adversely modified by the implementation of Proposed Project actions, the area to be modified will be evaluated by a qualified biologist to determine the potential magnitude of the project effects (e.g., description of primary constituent elements present and quantification of those affected) at a level of detail necessary to satisfy applicable environmental compliance and permitting requirements b. CDFW will implement compensatory conservation measures developed through consultation with USFWS or NMFS. If off-site compensation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures. The plan will include information on responsible parties for long-term management, holders of conservation easements, long-term management requirements, and other details, as appropriate, for the preservation of long-term viable

Conservation Measure	Description
	populations. Any impacts that result in a compensation purchase will be required to do so with an endowment for land management in perpetuity prior to any project groundbreaking activities.
EFH	**Essential Fish Habitat (Pacific salmonids)**
EFH-1. Minimize loss of habitat and risk of take	a. In-channel construction activities which could affect habitat for Pacific salmonids will be limited to the low-flow period between June 1 and October 1 to minimize potential for adversely affecting federally listed anadromous salmonids during their emigration period. b. In-channel construction activities which could affect habitat for Pacific salmonids will be limited to daylight hours during weekdays, leaving a nighttime and weekend period of passage for federally listed fish species. c. Construction BMPs for off-channel staging and storage of equipment and vehicles will be implemented to minimize the risk of contamination of the waters of the San Joaquin River by spilled materials. BMPs will also include minimization of erosion and stormwater runoff, as appropriate. d. Riparian vegetation removed or damaged will be replaced at a ratio, coordinated with the NMFS, within the immediate area of the disturbance to maintain habitat quality. e. If individuals of listed species are observed present within a work area, then NMFS must be notified. NMFS personnel will have access to construction sites during construction and following completion in order to evaluate species presence and condition and/or habitat conditions. f. If bank stabilization activities should be necessary, then such stabilization will be constructed to minimize predator habitat, minimize erosion potential, and contain material suitable for supporting riparian vegetation.

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Conservation Measure	Description

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Key:
° C = degrees Celsius
° F = degrees Fahrenheit
BMP = best management practice
BO = Biological Opinion
CFR = Code of Federal Regulations
cfs = cubic feet per second
CNDDB = California Natural Diversity Database
CVP = Central Valley Project
DFW = California Department of Fish and Wildlife
DWR = California Department of Water Resources
EPA = Federal Environmental Protection Agency
NMFS = National Marine Fisheries Service
Reclamation = U.S. Department of the Interior, Bureau of Reclamation
RWQCB = Regional Water Quality Control Board
Settlement = Stipulation of Settlement in NRDC, et al,. v. Kirk Rodgers, et al.
State = State of California
SWP = State Water Project
USACE = U.S. Army Corps of Engineers
USFWS = U.S. Fish and Wildlife Service

Letter 6

COMMENTER: Cherie Topper, Executive Director, Santa Barbara Audubon Society

DATE: February 25, 2019

Response 6.1

The commenter notes Page 67 of the Draft IS-MND acknowledges nearby Devereux Slough as an important migratory bird annual stopover location and Ellwood Mesa Open Space as a National-Audubon-designated Important Bird Area (IBA). The commenter recommends that the Draft IS-MND explicitly note these descriptions apply as well to the Devereux Creek riparian corridor within the Coverage Area, in order to provide a stronger context for the project's Habitat Enhancement and Restoration Program and demonstrate awareness of the need to ensure the proposed program activities do not negatively impact the value of this corridor as a migratory bird stopover. The commenter adds that, as written, the generality of covered activities (e.g., removing vegetation along the Devereux Creek riparian corridor as needed, or establishing riparian area along the banks of Devereux Creek composed of native riparian tree species) leaves uncertainty as to whether such activities could undermine the value of the Coverage Area as a migratory bird stopover.

The commenter is correct that the Devereux Creek riparian corridor within the Coverage Area is part of the Goleta Coast IBA. Page 67 of the Draft IS-MND has been revised as follows:

> Ellwood Mesa Open Space<u>, including the Devereux Creek riparian corridor within the Coverage Area,</u> is also part of the Goleta Coast Important Bird Area, designated by the National Audubon Society. It is considered to be globally important due to its location on the Pacific Flyway.

The MBHMP is a long-term management plan intended to guide habitat restoration and enhancement efforts through management goals, policies, and supporting actions. The covered activities are general in nature to reflect the need for adaptive management in the face of changing conditions in the Coverage Area. However, the Draft IS-MND identifies mitigation measures to protect riparian, wetland, and other natural habitat areas in the Coverage Area under the range of covered activities that could occur under the MBHMP. Mitigation Measure BIO-8 would prohibit all staging and temporary stockpiling from occurring in riparian habitats, wetlands, vernal pools, native grasslands, and active nest buffers. Mitigation Measure BIO-9 would require covered activities to avoid impacts to vernal pools, wetlands, and streambeds to the maximum extent practicable. In instances where avoidance is infeasible, Mitigation Measure BIO-9 notes any vegetation trimming or removal or ground disturbance activities would be subject to all applicable permit requirements, including CDFW Streambed Alteration Agreements or Clean Water Act Section 404 requirements.

Response 6.2

The commenter states many proposed mitigation measures and project activities are qualified by language regarding their practicality or feasibility (e.g., "Any ground disturbing activities in riparian and wetland habitats shall be conducted when the channel is dry to the maximum extent feasible"). The commenter specifically notes examples of such language in Mitigation Measures BIO-5, BIO-6, and BIO-9. The commenter adds this language can undermine critical environmental protections and exceptions to these protections should be fully specified and subject to public review prior to their implementation.

As discussed in Response 6.1, the MBHMP is a long-term management plan intended to guide habitat restoration and enhancement efforts through management goals, policies, and supporting actions. Qualifying language is necessary at this time to provide some level of adaptive capacity for the MBHMP over the course of its planning horizon. However, where mitigation measures use such language, the measures also specify the environmental protections to occur in the event an avoidance measure is determined to be infeasible. This includes detailed requirements for nesting bird surveys when ground disturbance or vegetation removal must occur during the nesting season (Mitigation Measure BIO-6) or not allowing work within 50 feet of pools if ground disturbing activities occur in wetland or riparian areas when ponded water is present (Mitigation Measure BIO-5).

The MBHMP also requires the preparation of annual Implementation Plans specifying specific actions to occur under the MBHMP over the coming year. As detailed in Policy 1-4 of the MBHMP, the Implementation Plans shall identify and describe short-term actions needed to further the goals and objectives of the MBHMP, taking into consideration current conditions and funding levels at the time each Implementation Plan is prepared. Pursuant to Action 1-4.2, City staff shall present each annual Implementation Plan at a public hearing for stakeholder input and City Council approval.

Response 6.3

The commenter refers to their previous comment made on August 31 (Item 259 in Appendix B) suggesting the final plan, particularly the Habitat Restoration and Enhancement Program, include an assessment of the impacts of all proposed actions on potentially affected downstream habitats, such as North Campus Open Space (NCOS) and Coal Oil Point Reserve (COPR). The commenter reiterates that even if the City believes such impacts would be neutral, negligible, or only positive, it would be appropriate to make this view explicit in the study, given that these immediately adjacent areas are of high value, sensitivity, and public interest.

As this comment is general in nature and does not provide any specifics regarding which impacts may potentially affect downstream habitats, a general response to these concerns is provided. (See Browning-Ferris Indus. v. City of San Jose (1986) 181 Cal.App.3d 852 [where a general comment is made, a general response is sufficient].) In general, discussion of impacts to downstream habitats relates to the topics of biological resources and hydrology and water quality. As discussed in Section 4 of the Draft IS-MND, *Biological Resources*, Mitigation Measures BIO-8 and BIO-9 would reduce impacts to riparian and wetland habitats by prohibiting stockpiling or temporary materials storage and avoiding activities in these areas unless it is for the purpose of habitat enhancement. Additionally, Mitigation Measures in Section 10, *Hydrology and Water Quality*, require erosion control practices for all ground disturbing activities and preparation of a Chemical Application Control Plan to reduce the potential for migration of fertilizers, herbicides, or pesticides into waterbodies on-site and downstream. As determined in the impact analyses for these sections, the MBHMP would result in less than significant impacts with mitigation incorporated.

Response 6.4

The commenter notes references to the bird nesting season dates are internally inconsistent throughout the Draft IS-MND document, indicating that the season is marked as March 15 to August 15 on Pages 12, 19, and 73 but February 1 to September 15 in Mitigation Measure BIO-6 (Page 78). The commenter suggests March through mid-August as a nesting bird season, and also attaches

CDFW's Conservation Measures for Biological Resources That May Be Affected by Program-level Actions (n.d.) for reference.

The March 15 to August 15 nesting season is noted in the MBHMP in Action 11-1.3 under the Wildlife Habitat Management Program, which seeks to "avoid removal of or disturbance to trees or other woody vegetation during nesting bird season (March 15 to August 15), when feasible." The instances of these dates appearing in the Draft IS-MND noted by the commenter occur when referencing Action 11-1.3 of the MBHMP. However, the guidance attached by the commenter from CDFW recommends conducting nesting bird surveys for raptor species between February 1 and August 31. The February 1 to September 15 season where nesting bird surveys would be required by Mitigation Measure BIO-6 encompasses the March to mid-August season requested by the commenter, the February 1 to August 31 season suggested by CDFW, the March 15 to August 15 season indicated in Action 11-1.3 of the MBHMP, and includes some additional buffer to provide more conservative environmental protections for nesting birds in the Coverage Area.

Subject: Comments on DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION for Monarch Butterfly Habitat Management Plan Case No. 13-087

Planning and Environmental Review
Attention: Anne Wells
Advance Planning Manager

Letter 7

February 25, 2019

Re: Draft IS/MND for Monarch Butterfly HMP

Dear Ms. Wells,

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I am writing in support of comments provided by Friends of the Ellwood Monarch/FOTEM as provided by Ana Citrin of the Law Office of Marc Chytilo.

Respectfully,
Christina Lange
Friends of the Ellwood Coast

Letter 7

COMMENTER: Christina Lange, Friends of the Ellwood Coast

DATE: February 25, 2019

Response 7.1

The commenter notes their support of comments submitted by Ana Citrin of the Law Offices of Marc Chytilo on behalf of the Friends of the Ellwood Monarchs (Letter 3).

This comment is noted. Please refer to Responses 3.1 through 3.15 above.

Letter 8

Response from The Bluffs Communit
to the
Monarch Butterfly Habitat Management Plan (MBHMP)

Background:
The Bluffs Community is located on the Western Side of the Ellwood Mesa Eucalyptus Forest, with the Sandpiper Golf Course to the West and Ellwood Preserve to the West, South and East. The Sandpiper and Ellwood North Monarch Butterfly aggregation sites are both in close proximity to this community. Specifically:

- We are a community of 62 homes that was established following the 2004 land-swap between the City of Goleta and the builder of the community.

- The homeowners in the community are passionate about maintaining the beauty, health and integrity of the preserve that surrounds our homes. We want to make sure that it is there for everyone to enjoy for decades, if not centuries, to come. It is one of the primary reasons that we live here. 1

- The Bluffs community is committed to working with the City of Goleta to ensure that a workable Monarch Butterfly Habitat Management Plan is approved and implemented that protects the forest and all of the natural plant species and wildlife that make it their home. Along with this, there needs to be a balance with the safety, security and fire-mitigation needs of the communities that reside within the Ellwood Mesa Preserve boundaries.

Introduction:
The Bluffs was built in this location so that residents of the community would be able to enjoy the natural beauty of the preserve surrounding us. Homes were built, starting in 2005 and the community was completed by the end of 2013. Since that time, we have been able to enjoy the natural migration patterns of the butterflies and have had hundreds of them flying through our neighborhood during the winter and early Spring. Over the years, the condition of the preserve around us has become more and more a concern for homeowners and there has been a steady decline in the number of butterflies visiting our gardens.

This community did not need the Ellwood Monarch Habitat Assessment Report to inform us that the grove was steadily deteriorating with virtually no steps to manage it being done by the City of Goleta. We could see this progressive change on a constant basis. It is for this reason that we anticipated the arrival of the MBHMP as we felt it could help finally outline a plan for the ongoing maintenance, management and improvement efforts of the Ellwood Mesa Eucalyptus Forest surrounding us. 2

Residents of The Bluffs community, therefore, read through the MBHMP with the following basic questions in mind.

1. Does the implementation of this plan help reduce the risk of fire to the communities living within the boundaries of the Ellwood Mesa Preserve?

2. Does this plan provide improved management of dead/dying and diseased trees and reduce the safety hazards to recreational users and our communities? 2

3. Will this plan restore the health of the Ellwood Mesa Eucalyptus Preserve in both the short and longer term for the enjoyment of all?

Overall, we think the plan provides us with a lot of information about how work will be completed and what will be done to protect the plants and living creatures in the area. There are a number of overarching questions, however, that do not seem to be addressed. We believe they are critical to our being able to answer our three foundational questions listed above. Since we already know that a significant number of trees have been identified as needing to be removed (1,260+), it is important to understand the following:

1. What is the timeframe for the implementation of this plan? If the plan is approved this March, will work begin once the butterfly overwintering period is over (April 1st). How will the bird nesting period impact this work? 3

2. What is the plan with respect to the number of trees that the City is planning on trimming, cutting or removing per year? How much of the understory in areas can be cleaned up and removed at the same time? 4

3. What is the ratio of trees removed to new trees planted during this period of time? 5

4. How long does the City of Goleta feel it will need to restore the health to the most critical monarch butterfly aggregation areas? 6

5. What near term steps will the City of Goleta take to reduce the potential for fire posed by the dead and fallen trees in the preserve that could potentially devastate both the butterfly preserve and endanger the residents in the area? 7

We want to encourage the City of Goleta to begin the work of maintaining and improving the Ellwood Mesa Preserve as quickly as possible. It has taken the City nine years to get the MBHMP to this stage during which time minimal maintenance or improvements have been made to the Preserve. The condition of the Eucalyptus forest is not getting better with each passing day. We continue to lose trees in the areas surrounding our community at a frightening rate (seven more trees down in the past few months along the Western Trail alone). Fortunately, none fell towards any of our homes. Although we are thrilled to have had an average amount of rainfall this year, we are always concerned with the overall condition of the preserve around us, the instability of the current trees, and the risk of fire when the dry season arrives. 8

Specific responses to MBHMP

Mitigation of Fire Risk to the communities living within the boundaries of the Ellwood Mesa Preserve

1. *"Goleta is prone to large wildfires and the combination of hot, dry weather and ignitable vegetation adjacent to structures creates a fire environment that could potentially threaten public safety. In March 2012 the City adopted the Community Wildfire Protection Plan (CWPP). Protection of Human life and safety is the highest priority for all fire management strategies in Goleta, followed by the protection of property." (MBHMP - Page 5)*

   The MBHMP includes the Community Wildfire Protection Program to be consistent with the intent of the City's CWPP and ensure fire safety and habitat protection are balanced. This program includes actions supporting the implementation of the CWPPs 100-foot-wide fire buffer around homes and structures in the Ellwood Mesa eucalyptus groves. The MBHMP states that implementation of this plan poses no additional fire risk and in fact reduces fire hazard, improves public safety and eliminates trees that threaten the sustainability of the butterfly aggregation sites.

   <u>We would like to understand what the City of Goleta will do annually to mitigate the fire risk the grove poses for our community</u>.
   While the plan mentions the CWPP there are limited details provided that highlight what is included in this plan. Members of The Bluffs community have worked annually (Since 2010) with the City of Goleta Public Works Department (Bob Morgenstern) to highlight vegetation abatement needs, to inform them of downed trees and branches blocking the trails and/or to report dead/dying or diseased trees that we feared were unstable and could pose a risk to the public or community should they fall or burn. This has frequently resulted in a very modest level of activity, usually the mowing of the perimeter of the community and Open Space Lot 69 to manage the non-native dry grasses growing there or the dragging of a fallen branch or two into the debris-filled understory. In some years, we have had to get the fire department (Fred Tan, Captain/Pre-Fire Engineer of the SBCFD Fire Prevention Division) to further highlight the fire risk that the grasses and dead wood located on the City property posed to our community before action was taken.

   The CWPP map that designates the areas that should have vegetation abatement does not include Open Space LOT 69 which is the large open space area between the community and the Western Trail. That area is filled with non-native grasses and a small patch of ice plant and is the area that needs to be mowed or cut back annually. Without some form of treatment, this area grows to a height of 6-9 ft and poses a high fire-risk to that side of The Bluffs Community. The City of Goleta had initially planned on planting low height, drought-resistant native plants in this area but the plans were never approved

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and implemented by the City. In addition, the first part of the western trail, immediately abutting the homes nearest Hollister, does not seem to have any abatement or fuel reduction indicators on the map. These are BOTH high areas of concern for our community. A separate attachment of the map with these areas identified for the City will be provided with this response. 9

2. *"The large trees are not the primary fuel of concern in the spread potential of wildfires. Instead., the greater threat is from the understory vegetation, dead-downed trees, and fuels that can create fire ladders. Therefore, fuel treatment activities focus on removing hazardous fuels rather than large trees." (MBHMP - Page 7).*

   "Some species of Eucalyptus trees found on Ellwood Mesa, including Blue Gum, have deciduous bark, which shed annually and present a fire hazard. The bark catches fire readily and streamers from those loose bark tend to carry fire into the canopy and cast firebrands ahead of the main fire front. The leaf litter, which is the accumulation of dead, dry and oily leaves, is also a fire hazard as it is extremely flammable." (MBHMP - Pages 28 & 98)

   We are not clear about how the understory in the groves surrounding us will be cleared out and what will be done with the debris.
   Not only is it extremely flammable but it also burns hotter than most other vegetation. It is also known that due to their oil content, leaves and bark will decay at slower rates than other vegetation. An acre of Eucalyptus trees can accumulate 8-12 tons of debris. Because of its slower level of decay, this can easily build to around 30 tons per acre unless active management of the forest is done. This is a lot of flammable debris. As we look at the groves around our community, there are piles of debris that rise 5-8 feet in places. 10

   To further complicate the fire risk, non-native annual grasslands dominate in areas without tree canopy, and are located immediately adjacent to the trees and the large volume of debris described above. In the open spaces surrounding The Bluffs, these grasses can grow to a height of 6-9 ft, especially in years with extensive rainfall. By April, these grassy areas begin to dry out and are the perfect fire-starter unless mowed down to a height of 4" or less. The entire circumference of The Bluffs Community is surrounded by these types of grasses. Lot 69 in particular, highlighted above, is one of those areas.

Improved management of dead/dying and diseased trees to reduce the safety hazards to recreational users and members of our communities?

1. *The goal of the Trail Management Program is to develop and maintain public access trails that provide a safe and meaningful experience for visitors while limiting impacts to habitats and wildlife, in particular monarch butterflies and their seasonal aggregation sites." (MBHMP – Page 10)* 11

When looking at the trails around The Bluffs this is not being done. Trails are covered with fallen trees and branches and have been this way for several years despite calls to Public Works to clear them for the public. As a result, recreational users are making their own trails through the trees and grasslands to avoid stepping or tripping on these obstacles. This seems to pose a higher risk to the plant and wild life we are all trying to protect. 11

2. *"Taking down dead or dying eucalyptus trees could involve the staging or placement of debris piles, equipment, or personnel in areas where special-status plant species have a potential to occur and would impact these species." (MBHMP - Page 70).*

   Large debris piles placed around the base of trees removed could not only impact native species of plants but could also increase fire risk as they are combined with the already debris-filled understory. This is further exacerbated if the grasslands are not properly mowed or maintained. We would like to better understand how all of these risks will be maintained and managed on an annual basis. There are many large piles of debris that have been eft behind by the City for years within the preserve. These piles MUST be a temporary situation, to help with the aggregation and removal efforts, and not left behind as kindling for months or years to come. 12

3. *"The risk management program in the GUFMP ensures proper management of trees to allow for healthy attractive communities while reducing risk. Implementation of the MBHMP would result in the removal of eucalyptus trees that pose an unacceptable risk to <u>recreational users</u> on the Coverage Area."* (MBHMP – Page 75)

   Recreational users? <u>What about residents who live within this area. We have trees within 5-6 feet of the perimeters of our homes.</u> This is true at The Bluffs, Santa Barbara Shores and all Communities adjacent to Ellwood West, Ellwood Main and Ellwood East. The City seems to be listening to those "recreational users" who visit the preserve from time to time and not those who live in the shade of these trees and are in the preserve on a daily basis. Let's make sure that we are clear about who currently has the "biggest threat to their safety" in this environment. 13

   <u>When the 27 trees were removed in 2018, which posed a public safety risk, NONE were removed within the proximity of our homes at The Bluffs. Only trees on trails that the City wanted to reopen were removed.</u> Homeowners contacted the City Arborist and were told that they did not have the funds to remove those along the Western trail. At the request of a homeowner, a tagged tree was finally removed. Homeowners concerned for their safety petitioned the city to get permits to have the trees pruned at their own expense. ALL permits were granted as it was deemed that the branches did 14

in fact pose a threat to their homes. These owners had arborists complete the work at their own expense. 14

4. *Many trails in the coverage area have been closed indefinitely since July 2017 due to safety hazards posed by dead or dying trees. Implementation of the MBHMP would remove these hazards, in turn restoring access to trails and improving active transportation opportunities in the Coverage Area. (MBHMP - Page 129)*

   This is an interesting statement to make considering the Western Trail was one of the trails closed and is within feet of the Common walls of our community. <u>How is it that trails are closed for the protection of recreational users and yet nothing is done to protect the homeowners living within feet of these trees</u>. It was also just announced that the trails are now reopened with ABSOLUTELY NO WORK DONE BY THE CITY TO MITIGATE RISK TO THE COMMUNITY. Seven trees have fallen this year, many branches are down, the path continues to be blocked in areas by fallen branches and trees, and there is more tree debris and garbage than ever in these locations. Along the top of the western trail, nearest Hollister Avenue there are rusting metal pipes, concrete blocks and other hazardous obstacles along this walkway as well. If anything, the situation is worse and more volatile than when the trail was originally closed to the public. 15

Restored health of the Ellwood Mesa Eucalyptus Preserve in both the short and longer term for the enjoyment of all?

1. *Replanting habitats where dead or dying eucalyptus trees are removed will help sustain the long-term viability of the Eucalyptus groves as monarch butterfly habitats. (MBHMP - Page 71)*

   Maintain and revegetate moderate cover of understory in and around aggregation sites with fire-resistant native plant species (The Xerces Society 2017 – Appendix 3.) 16

   We agree with this and would love to see a combination of trees planted (not just eucalyptus trees) so that the entire forest becomes more stable. Additionally, we encourage the planting of the appropriate native ground cover, shrub and mid canopy species of plants. We know there were plans to plant a number of Eucalyptus trees, equal to the 27 removed last year, across from Ellwood School. To our knowledge this was never done, and we have lost almost an entire rainy season which would have helped these trees become initially established in the area.

   There were also plans made by the City of Goleta to plant and maintain "native grassland areas" in immediate proximity/adjacent to the homes in our community. These plans were never implemented as committed to. The 17

funds for this project were reapportioned to other initiatives within the preserve. The Coastal Commission was of the opinion that these improvements were completed and that based on the plan the area was cultivated and maintained so that no mowing would be required. We need to make sure that it is well documented that no planting or improvements were ever done to Open Space Lot 69 so that it can become part of the CWPP vegetation aggregation plans. 17

2. *The goal of Trail Management is to maintain public access trails that provide a safe and meaningful experience for visitors while also limiting impacts to habitats and wildfires, in particular monarch butterflies and their seasonal aggregation sites. (MBHMP – Page 16)*

   We strongly support this initiative as the trails today are not maintained and have weathered poorly. In addition, many of them are covered with downed branches, fallen trees or are overgrown with grasses. In some places, the trails seem to almost disappear, and their signage is either damaged or no longer visible with the debris. New trails have been formed by users using the area when the original one is blocked or covered. The new trails and even some of the existing trails are not designed to be trails and many have hazardous obstacles on them that could cause injury if not navigated carefully. A well-managed trail system will do a lot to enhance the beauty and enjoyment of this preserve by the public visiting it. 18

We hope that this project gets quick approval and that the work can start as soon as possible. The City of Goleta and the Planning Department have spent far too much time and energy getting "the reports and plans right on paper" with no actual action taking place to start to turn this situation around. We cannot let 2019 go by without having made significant forward progress towards the improved safety and health of this preserve. We hope the City Council understands this and acts to more forward soon! 19

Thank you!

Chuck Davis
Len and Cathleen Grabowski
Matt Graham
Carolyn Grenier

Letter 8

COMMENTER: Chuck Davis, Len and Cathleen Grabowski, Matt Graham, and Carolyn Grenier, Residents

DATE: February 25, 2019

Response 8.1

The commenters provide background information on The Bluffs community, located on the western side of the Ellwood Mesa. The commenters state The Bluffs community is committed to working with the City to ensure a workable MBHMP is approved and implemented and the plan balances safety, security, and fire-mitigation needs of the communities surrounding Ellwood Mesa.

This comment will be forwarded to City decision-makers for consideration.

Response 8.2

The commenters provide additional information regarding when The Bluffs community was constructed and note the decline of the surrounding preserve and the number of butterflies. The commenters add they reviewed the MBHMP to see how it would reduce the risk of fire to communities surrounding Ellwood Mesa; provide improved management of dead, dying, or diseased trees; and restore the health of the Ellwood Mesa preserve in the short and long term.

Background information regarding the state of the eucalyptus groves and monarch butterfly populations are included in the Draft IS-MND, beginning on Page 4.

Response 8.3

The commenters request clarification regarding the timeframe for implementation of the MBHMP. The commenters asked if the MBHMP is approved this March, will work begin once the butterfly overwintering period is over. Additionally, the commenters asked how the bird nesting period would impact work.

The MBHMP provides a long-term conservation strategy built around broad objectives, outcomes, and management policies for Ellwood Mesa monarch butterfly habitat. However, the MBHMP calls for preparation of annual Implementation Plans to identify activities to occur over the coming year. The 2018 Implementation Plan was released along with the July 2018 draft of the MBHMP and calls for conducting nesting bird and monarch butterfly surveys, installation of enhancement plantings and signage, removal of existing closure signs, and long-term replacement tree monitoring. The schedule in the 2018 Implementation Plan calls for installation of enhancement plantings, signage, and removal of trail closure signage as early as March 2019. However, the 2018 Implementation Plan is currently being reviewed by the CCC, and requires CCC approval prior to implementation.

Certain actions under the MBHMP call for avoidance of vegetation removal or ground disturbance during the nesting bird season. However, vegetation removal or ground disturbance may occur, as necessary, following completion of nesting bird surveys within the identified nesting bird period. Additionally, Mitigation Measure BIO-6 described in the Draft IS-MND requires surveys for nesting birds and raptors prior to any ground disturbance or vegetation removal work conducted in the nesting season, defined to be February 1 to September 15.

Response 8.4

The commenters request clarification regarding the number of trees the City is planning on trimming, cutting, or removing per year. Additionally, the commenters request information regarding how much of the understory in areas can be cleaned up and removed at the same time.

As stated above, the MBHMP provides a long-term conservation strategy built around broad objectives, outcomes, and management policies for Ellwood Mesa monarch butterfly habitat. The MBHMP does not prescribe numbers of trees which can be removed or trimmed per year, nor does it limit the amount of understory that can be cleaned up and removed at the same time. Instead, the MBHMP calls for annual Implementation Plans to be prepared identifying activities to occur over the course of the upcoming year. Pursuant to Action 1-4.2, City staff shall present each annual Implementation Plan at a public hearing for stakeholder input and City Council approval.

Response 8.5

The commenters query the ratio of trees removed to new trees planted during this period of time.

The commenter does not specify the period of time to which they are referring. However, specific tree trimming, removal, and replanting information is not contained in the MBHMP and would be provided in subsequent Implementation Plans prepared pursuant to Policy 1-4. The 2018 Implementation Plan currently calls for planting of 63 trees to replace the 27 trees removed and 2 trees trimmed in 2017.

Response 8.6

The commenters asked how long the City will need to restore the health to the most critical monarch butterfly aggregation areas.

The MBHMP includes policies and actions aimed at improving grove health near existing aggregation sites. Restoration of grove health in these areas is dependent on approval of the MBHMP and Implementation Plans, availability of funding, and success of habitat restoration efforts.

Response 8.7

The commenters asked what near term steps the City will take to reduce potential for fire posed by the dead and fallen trees in the preserve that could devastate both the butterfly preserve and endanger residents in the area.

As noted in Response 5.1, the MBHMP is not intended to be a wildfire protection or mitigation plan, though it does pledge support for the policies and activities contained in the CWPP, which includes policies intended to reduce fire hazards from fuel loads in the Coverage Area. The MBHMP is intended to fulfill its stated purpose of supporting habitat for monarch butterflies and other plant and animal species, coastal access, and recreation while not exacerbating wildfire risk in or around the Coverage Area. As noted in Section 20, *Wildfire*, of the Draft IS-MND, the MBHMP would result in no impact related to wildfire and may have a beneficial effect by removing dead, dying, or otherwise hazardous trees and re-planting understory vegetation with native, fire-resistant species.

Response 8.8

The commenters encourage the City to begin work maintaining and improving the Ellwood Mesa Preserve as quickly as possible, noting ongoing deterioration in the Preserve such as falling trees and growing fire risk.

This comment will be forwarded to City decision-makers for consideration.

Response 8.9

The commenters ask what the City will do annually to mitigate the fire risk posed by the grove. The commenters note the MBHMP lacks details on this front and mention work by members of The Bluffs community with the City's Public Works Department to highlight vegetation abatement needs; inform the City of downed trees and branches; and report dead, dying, or diseased trees. The commenters add this has resulted in modest fire abatement activity. The commenters further note the CWPP-related fuel reduction zones within the Coverage Area map (Figure 3 of the MBHMP) does not include Open Space Lot 69, a large open space area between the community and the Western Trail filled with non-native grass that needs to be mowed or cut annually. Additionally, the commenters note areas of the Western Trail immediately abutting homes nearest Hollister Avenue also appear to lack any abatement or fuel reduction indicators on the map.

This comment relates to the content of the previously-approved CWPP. It does not relate to the content or adequacy of the Draft IS-MND. The MBHMP does not propose any changes to the CWPP. Additionally, the areas noted by the commenter do not show fuel reduction zones on Figure 3 of the MBHMP because these areas are not located within the Coverage Area for the MBHMP.

Response 8.10

The commenters request clarification regarding how the understory in the groves will be cleared and what will be done with debris. The commenters note this debris is extremely flammable and burns hotter than most other vegetation. The commenters further note non-native annual grasslands dominate in areas without tree canopy immediately adjacent to the trees. The commenters particularly note that Lot 69 contains these grasses, which serve as a potential ignition source.

The Draft IS-MND discusses treatment of potential greenwaste, or debris from understory clearing and tree trimming or removals, in Section 19, *Utilities and Service Systems*. Greenwaste would either be repurposed on-site (e.g., using downed trees for seating or slope stability) or disposed of at the South Coast Recycling and Transfer Station, which was determined to have an adequate maximum permitting capacity to accommodate greenwaste generated by MBHMP activities. As noted in Response 9.9, Open Space Lot 69 is not included in the MBHMP Coverage Area.

Response 8.11

The commenters cite language from Page 10 of the Draft IS-MND, which states, "The goal of the Trail Management Program is to develop and maintain public access trails that provide a safe and meaningful experience for visitors while limiting impacts to habitats and wildlife, in particular monarch butterflies and their seasonal aggregation sites." The commenters note this is not being done, and trails are covered with fallen trees and branches. The commenters add this has led to recreational users making their own trails through trees and grassland areas.

The Trail Management Program noted by the commenters is a component of the MBHMP, evaluated in the Draft IS-MND. The MBHMP has not yet been adopted and, therefore, Trail Management Program activities have not yet occurred.

Response 8.12

The commenters cite language from Page 70 of the Draft IS-MND, which states, "Taking down dead or dying eucalyptus trees could involve the staging or placement of debris piles, equipment, or personnel in areas where special-status plant species have a potential to occur and would impact these species." The commenters state large debris piles around the base of removed trees could also increase fire risk. The commenters add they would like to better understand how all of these risks will be maintained and managed on an annual basis. The commenters note there are large piles of debris that have been left behind by the City for years in the Preserve, and any piles must be temporary to help with aggregation site restoration and tree removal efforts.

In consideration of this concern, Mitigation Measure BIO-8 has been revised to clarify any stockpiling and staging associated with covered activities would be temporary in nature. Mitigation Measure BIO-8 has been revised, as follows:

Staging and stockpiling of debris associated with covered activities shall be temporary in nature, the duration of which shall be specified in the annual Implementation Plan prior to commencement of the covered activity. All staging and temporary stockpiling shall be limited to areas outside of riparian habitats, wetlands, vernal pools, native grasslands, and active nest buffers on site. Absolutely no staging and/or stockpiling of any materials shall be allowed in these buffers at any time. Locations to be avoided must be clearly identified with fencing, flagging, rope, or other conspicuous material, and the contractor(s) conducting vegetation maintenance activities must be trained on the limits of work prior to commencing work. Placement of chipped woody materials must avoid impacting native grasslands, riparian, and wetland vegetation. The biological monitor would ensure avoidance for the duration of activities near these areas.

Additionally, Section 20, *Wildfire,* of the Draft IS-MND has been revised to include discussion of stockpiling of debris and greenwaste, with the following language added:

Mitigation measure BIO-8 would require any stockpiling of potentially ignitable debris or greenwaste to be temporary in nature, with the duration of debris stockpiling specified in the annual Implementation Plan prior to commencement of covered activities. Removed dead or dying trees would be replaced with healthy trees, which are less fire-prone, and which, pursuant to mitigation measure BIO-7, would be monitored annually for a period of five years to ensure they remain healthy. Both of these measures would further address community concerns about wildfire impacts associated with implementation of the MBHMP. No expansion of the existing eucalyptus groves would occur.

As noted in Response 8.10 above, greenwaste such as downed trees and understory debris, would either be repurposed on-site (e.g., mulched for trail cover, downed trees or logs serving as seating or erosion control) or disposed of off-site. Furthermore, as previously noted, the MBHMP is not intended to serve as a fire mitigation or abatement plan; however, the MBHMP is intended to support the previously-adopted CWPP and would reduce fire risk by removing dead, dying, or hazardous trees and replanting understory with native, fire-resistant species. For additional analysis of potential wildfire impacts associated with implementation of the MBHMP, please refer to Section 20, *Wildfire*, of the Draft IS-MND.

Response 8.13

The commenters cite language from Page 75 of the Draft IS-MND, which states, "The risk management program in the Goleta Urban Forest Management Plan ensures proper management of trees to allow for healthy attractive communities while reducing risk. Implementation of the MBHMP would result in the removal of eucalyptus trees that pose an unacceptable risk to recreational users on the Coverage Area." The commenters note nearby residents, not just recreational users, face risks from falling trees in the Coverage Area.

Removal of dead, dying, or otherwise hazardous trees would improve safety for residents adjacent to the Coverage Area, as well as recreational users. Page 75 of the Draft IS-MND has been revised as follows:

Implementation of the MBHMP would result in the removal of eucalyptus trees that pose an unacceptable risk to residents and recreational users ~~on~~ within and adjacent to the Coverage Area.

Response 8.14

The commenters note when 27 trees were removed previously, none were removed in proximity to homes in The Bluffs community. The commenters add homeowners contacted the City Arborist and ultimately had trees pruned at their own expense.

As described above, the MBHMP does not identify specific trees to be removed or replanted. Such activities would be identified in subsequently prepared annual Implementation Plans, drafted pursuant to MBHMP Policy 1-4 and presented at public hearings for stakeholder input and City Council approval.

Response 8.15

The commenters cite language from Page 129 of the Draft IS-MND, which states many trails in the Coverage Area have been closed indefinitely since July 2017 due to safety hazards posed by dead or dying trees. The commenters question why more was not done to protect homeowners living within feet of hazardous trees. The commenters also question why trails have reopened, particularly as there is more tree debris and garbage along trails now. The commenters specifically note rusting pipes, concrete blocks, and other hazardous obstacles at the top of the Western Trail nearest Hollister Avenue.

This comment does not directly relate to the content or adequacy of the Draft IS-MND. The portion of the Western Trail near Hollister Avenue is not located within the Coverage Area of the MBHMP. As noted throughout the Draft IS-MND, covered activities under the MBHMP would continue to improve safety for recreational users by removing dead, dying, or otherwise hazardous trees. As noted in Response 8.13, above, such activities would also improve safety for residents adjacent to the Coverage Area.

Response 8.16

The commenters support efforts to plant a combination of trees (not just eucalyptus) to improve the stability of the groves. Additionally, the commenters encourage the planting of appropriate native ground cover, shrub, and mid-canopy species of plants. The commenters note there were plans to replace the 27 trees removed in 2017 across from Ellwood School, but indicate this was not done.

The commenters support for the replanting components of the MBHMP is noted. Additionally, the 2018 Implementation Plan details efforts to plant 63 replacement trees in the Coverage Area to mitigate the impacts of removing 27 trees in 2017. According to Figure 4, Enhancement Plan, of the 2018 Implementation Plan, these plantings would be located on 0.58 acre of existing eucalyptus grove south of Hollister Avenue/Ellwood School and east of the existing parking lot. The CCC is currently reviewing the 2018 Implementation Plan.

Response 8.17

The commenters note the City planned to plant and maintain native grassland areas in the immediate vicinity of homes in The Bluffs community, but such plans were never implemented. The commenters seek to make the City aware no such planting or improvements have occurred in Open Space Lot 69.

This comment does not relate to the content or adequacy of the Draft IS-MND. The Open Space Lot 69 is not included within the Coverage Area for the MBHMP, and the MBHMP does not propose any grassland restoration or maintenance efforts on this parcel, nor does it preclude such efforts from occurring.

Response 8.18

The commenters support initiatives noted in the Trail Management Program of the MBHMP to maintain public access trails that provide a safe and meaningful experience for visitors while limiting impacts to habitats and wildlife, in particular monarch butterflies and their seasonal aggregation sites. The commenters note the deterioration of trails in the Coverage Area and support a well-managed trail system.

The commenters support for the trail management activities in the MBHMP is noted and will be forwarded to City decision-makers for consideration.

Response 8.19

The commenters state they hope the project is approved quickly and that work begins as soon as possible. The commenters reiterate the urgency of improving safety and health of the preserve and urge the City Council to act.

The commenters support for approval is noted and will be forwarded to City decision-makers for consideration.

Letter 9

From: Laura Maskrey <lmmaskrey88@gmail.com>
Sent: Monday, February 25, 2019 4:58 PM
To: Anne Wells <awells@cityofgoleta.org>
Subject: Comments - Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Ellwood Mesa/Sperling Preserve Monarch Butterfly Habitat Management Plan (MBHMP

My Name it is Laura Maskrey, I am a Goleta Resident address 7484 Sea Gull Drive,

I can be reached at 805-455-1653

I have the following general comment on this document: It seems like we are in an emergency with regards to the Monarch population and this is not an emergency response plan, I understand that this is what we have and where we are at, but there seems like a good possibility the monarchs could possibly not come back next year - so at the very least there should be some urgent discussions being had about what we should be doing before the next year - since clearly this plan will not being taking effect before then. 1

I unfortunately have just not had time to review the specifics of the plan.

Thank you for your consideration

Laura Maskrey

Letter 9

COMMENTER: Laura Maskrey, Residents

DATE: February 25, 2019

Response 9.1

The commenter notes the MBHMP is not an emergency response plan, but there exists a possibility monarch butterflies may not return to the Coverage Area next year. The commenter recommends there should be some urgent discussions about what should be done before the next year, since this plan will not take effect before then.

This comment relates to the content and timing of the MBHMP and does not relate to the content or adequacy of the Draft IS-MND. Therefore, this comment has been moved to the MBHMP Comment Matrix in Appendix B that was prepared to address comments related specifically to the MBHMP, and a response was provided in the matrix. The MBHMP Comment Matrix will be provided to City Council for its review prior to considering adoption of the MBHMP.

Mitigation Monitoring and Reporting Program

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). This mitigation monitoring and reporting program (MMRP) is designed to ensure compliance with adopted mitigation measures during implementation of the Monarch Butterfly Habitat Management Plan. For each mitigation measure outlined in the Final Initial Study-Mitigated Negative Declaration, specifications are made herein that identify the action required and the monitoring that must occur. In addition, a responsible agency is identified for verifying compliance with individual conditions of approval contained in this MMRP.

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
Air Quality							
AQ-1 Dust Control							
All covered activities shall incorporate the following dust control measures to reduce potential PM10 emissions during implementation of the MBHMP. ▪ Covered activities shall minimize the amount of disturbed area to the extent feasible ▪ Onsite vehicle speeds shall be limited to 5 miles per hour or less ▪ The City or City-approved contractor shall install gravel pads at the access points to Ellwood Mesa Open Space to prevent tracking of dirt/mud onto public roads ▪ After a ground-disturbing activity is completed, the City or City-approved contractor shall treat the disturbed area by watering, revegetating, or spreading soil binders	The City shall comply with the requirements of this measure.	Throughout ground-disturbing activities	Periodically during and at completion of ground-disturbing activities	City of Goleta Public Works			
Biological Resources							
BIO-1 General Housekeeping							
General requirements that shall be followed by all personnel are listed below. ▪ MBHMP-related vehicles shall observe a 5-mile-per-hour speed limit in the Coverage Area at all times ▪ MBHMP-related vehicles and equipment shall restrict off-road travel to approved routes, which shall be sited by the City to minimize environmental impacts ▪ All food-related trash items, such as wrappers, cans, bottles, and food scraps, generated during implementation of the MBHMP shall be removed from the site daily ▪ No deliberate feeding of wildlife shall be allowed ▪ No pets shall be allowed on in the Coverage Area	The City shall comply with the requirements of this measure.	Throughout MBHMP activities	Periodically during MBHMP activities	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
▪ No firearms shall be allowed in the Coverage Area ▪ If vehicle or equipment maintenance is necessary including refueling of equipment, it shall be performed outside the buffers of ESHAs, bird nests, and monarch aggregation sites ▪ Any worker who inadvertently injures or kills a special status species or finds one dead, injured, or entrapped shall immediately report the incident to the biological monitor. The monitor shall immediately notify City of Goleta staff. The City of Goleta shall follow up with written notification to USFWS and CDFW as appropriate, depending on the species. The biological monitor shall also independently notify USFWS of any unanticipated harm to any federally listed endangered species associated with implementation of the MBHMP. All observations of federally or State-listed threatened or endangered species shall be recorded on CNDDB field sheets and sent to CDFW by City of Goleta or the biological monitor.							

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
BIO-2 Qualified Biological Monitor							
A qualified biological monitor shall be present during all vegetation removal and ground disturbing activities to ensure compliance with all mitigation measures, applicable permit conditions, and any conditions required by federal and State agencies. The monitor shall be responsible for: ▪ Ensuring that procedures for verifying compliance with environmental mitigation measures are followed. ▪ Lines of communication and reporting methods. ▪ Daily and weekly reporting of compliance. ▪ MBHMP crew training regarding environmentally sensitive areas. ▪ Authority to stop work. ▪ Action to be taken in the event of non-compliance.	The City shall retain a qualified biological monitor.	Prior to ground-disturbing and/or vegetation removal activity	Once	City of Goleta Public Works			
BIO-3 Biological Resources Awareness Training							
Before any ground-disturbing work or vegetation removal/trimming occurs in the Coverage Area, a qualified biologist shall conduct a mandatory biological resources awareness training for all MBHMP personnel about federally and State listed species that could occur on site. The training shall include the natural history, representative photographs, and legal status of each federally listed species. Proof of personnel attendance shall be kept on file. If new MBHMP personnel are added to the crew, the contractor shall ensure that the new personnel receive the mandatory training before starting work. The subsequent training of personnel can include videotape of the initial training and/or the use of written materials rather than in-person training by a biologist.	The qualified biologist shall conduct the pre-activity training for all MBHMP personnel, and record and maintain a record of all those who have attended this training. The City shall review records.	Prior to ground-disturbance or vegetation removal (conduct training; maintain attendance record); as needed (with the addition of new personnel; maintain attendance record); following trainings (review records)	Once prior to work (conduct training); as needed during MBHMP activities (with the addition of new personnel; maintain attendance record); periodically (review records)	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
BIO-4 Special-Status Plants							
To avoid impacts to special-status plants, periodic rare plant surveys the Coverage Area must occur at least once every five years during a normal rainfall year, following current standard practice for botanical surveys (CDFW 2018), which may require multiple passes to detect or rule out all potential species. If special-status plants remain absent from work areas, no further action is required. If special-status plants are detected in work areas, locations must be mapped, and the plants must be avoided during MBHMP activities. A pre-work training must be provided to the contractor(s) conducting vegetation maintenance activities that identifies special-status plants in and near the work area and locations to be avoided. If weed control is required in areas supporting special-status plants, this work must be conducted with hand tools. Vegetation control in these areas must emphasize control of non-native species, avoid flowering and fruiting seasons of the identified special-status plants to the maximum extent possible, and ensure that activities do not remove special-status plant individuals.	The City shall retain a qualified biologist to conduct surveys and trainings, and shall review surveys and training records.	During a normal rainfall year (conduct and review surveys); as needed (review training records)	At least every five years (conduct and review surveys); as needed (review training records)	City of Goleta Public Works			
BIO-5 California Red-legged Frog							
Any ground disturbing activities in riparian and wetland habitats shall be conducted when the channel is dry to the maximum extent feasible. Additionally, within seven days prior to start of work, a biologist must conduct a survey prior to any ground disturbance to verify that riparian and wetland areas do not contain ponded water and that no California red-legged frogs are present. If ponded water is present, no work may occur within 50 feet of pools. If suitable resident frog habitat is present or frogs are noted during the surveys, a biological monitor must be present during vegetation clearing	The City shall comply with the requirements of this measure. The qualified biologist shall conduct a survey and a biological monitor will be present when required per this measure. The City shall coordinate with USFW/CDFW as needed.	Prior to ground-disturbing activity (retain biologist and, if needed, biological monitor); No more than seven days prior to ground disturbance (perform/review surveys); as needed (field monitoring for compliance and	Once (retain biologist and, if needed, biological monitor); once prior to ground disturbance (perform/review surveys); as needed (field monitoring for compliance and coordinate with	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
and removal activities in riparian and wetland habitats. The biologist will have the authority to stop work and identify areas that must be avoided. Listed species must be fully avoided unless take permits are obtained from the USFWS and/or CDFW. Only handheld tools shall be used. Removal of native vegetation shall be limited to dead, damaged, and diseased material.		coordinate with USFWS/CDFW)	USFWS/CDFW)				
BIO-6 Nesting Bird Survey							
To the maximum extent feasible, tree trimming activities must occur in September to ensure that raptor nests and monarchs are not active in the work area. Surveys for nesting birds and raptors are required prior to any ground disturbance or vegetation removal work conducted in the nesting season, defined to be February 1 to September 15. If ground-disturbing or vegetation removal work does occur during the nesting season, then not more than three (3) days before ground disturbance and/or vegetation removal commences, a bird and raptor survey must be conducted by a City-approved biologist in the disturbance footprint plus a 300-foot buffer, as feasible. If the MBHMP activity is phased, a subsequent nesting bird and raptor survey is required in the Coverage Area before each phase of the activity. If no raptor or other bird nests are observed no further mitigation is required. Nesting bird and raptor surveys must be conducted during the time of day when bird species are active and be of sufficient duration to reliably conclude presence/absence of nesting birds and raptors in the 300-foot buffer. If active nests of species protected by CFG Code 3503 or the MBTA Migratory Bird Treaty Act are found within 300 feet of the Coverage Area, their locations must be flagged and then mapped onto an aerial photograph of the Coverage Area at a scale no	The City shall comply with the requirements of this measure. The qualified biologist shall conduct surveys and a biological monitor will be present when required per this measure.	No more than three days prior to start of tree trimming, ground disturbance, and/or vegetation removal (perform surveys); as needed (ensure compliance)	Once per commencement of tree trimming, ground-disturbing, and/or vegetation removal activities, if necessary (perform survey); as needed (ensure compliance)	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
less than 1" =200' and/or recorded with the use of a GPS unit. If active raptor nests are detected, the map will include topographic lines, parcel boundaries, adjacent roads, known historical nests for protected nesting species, and known roosting or foraging areas, as required by Conservation Element Policy 8.3 of the Goleta General Plan. If feasible, the buffer must be 300 feet in compliance with Conservation Element Policy CE 8.4 of the Goleta General Plan. If the 300-foot buffer is infeasible, the City approved biologist may reduce the buffer distance as appropriate, dependent on the species and the proposed work activities. If any active non-raptor bird nests are found, a suitable buffer area (varying from 25-300 feet), depending on the species, must be established by the City-approved biologist. No ground disturbance can occur in the buffer until the City-approved biologist confirms that the breeding/nesting is completed, and all the young have fledged. Alternately, a City-approved biologist must monitor the active nest full-time during MBHMP activities in the buffer to ensure MBHMP activities are not indirectly impacting protected nesting birds and raptors.							
BIO-7 Tree Replacement							
All replacement trees planted in the Coverage Area must be monitored annually for a minimum period of 5 years. At the end of the 5-year monitoring period, replacement trees shall be inspected by a City approved arborist to determine the successful establishment of the trees. The arborist may extend the monitoring period as deemed necessary. If a replacement tree dies during the monitoring period, it shall be replaced and monitored as required by this mitigation measure.	The City Council shall review and approve annual implementation plans, which will include the tree replacement plan; The arborist shall inspect trees and The City shall replace dead trees as needed.	Prior to tree planting (approve plan); ongoing (inspection and replacement)	Once (approve plan); periodic (inspection and replacement)	City Council; City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
BIO-8 Native Habitats							
Staging and stockpiling of debris associated with covered activities shall be temporary in nature, the duration of which shall be specified in the annual Implementation Plan prior to commencement of the covered activity. All staging and temporary stockpiling shall be limited to areas outside of riparian habitats, wetlands, vernal pools, native grasslands, and active nest buffers on site. Absolutely no staging and/or stockpiling of any materials shall be allowed in these buffers at any time. Locations to be avoided must be clearly identified with fencing, flagging, rope, or other conspicuous material, and the contractor(s) conducting vegetation maintenance activities must be trained on the limits of work prior to commencing work. Placement of chipped woody materials must avoid impacting native grasslands, riparian, and wetland vegetation. The biological monitor would ensure avoidance for the duration of activities near these areas.	The City Council shall review and approve annual implementation plans, which shall include staging/stockpiling plans; The biological monitor will be present when required per this measure.	Prior to stockpiling (approve plan) ; as needed (ensure compliance)	Once (approve plan); as needed (ensure compliance)	City Council; City of Goleta Public Works			
BIO-9 Riparian/Wetland Areas							
Impacts to vernal pools, wetlands, and streambeds shall be avoided to the maximum extent practicable, unless they are affected for the purpose of habitat enhancement. If avoidance is not feasible, the City shall acquire and comply with regulatory permits for any vegetation trimming, removal, or ground disturbing activities to be completed in potentially jurisdictional areas including in the vicinity of Devereux Creek or other riparian/wetland habitats in the Coverage Area. The CDFW shall be notified and a Streambed Alteration Agreement shall be obtained for any activities that will result in impacts to a streambed or riparian vegetation. In addition, authorizations from the U.S. Army Corps of	The City shall review activities and acquire permits from USFW/CDFW as needed.	Prior to approving ground-disturbing and/or vegetation removal activities	Once	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
Engineers and Central Coast Regional Water Quality Control Board (RWCB) will be secured for any activities involving discharges of fill material into a wetland or streambed.							
Cultural Resources							
CR-1 Archaeological and Native American Monitoring							
Ground-disturbing activities associated with the MBHMP, including but not limited to trail modification and vegetation and tree removal, shall be observed by a qualified archaeological monitor under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology (National Park Service 1983) and a local Native American monitor. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find evaluated for significance. Archaeological and/or Native American monitoring may be reduced or halted at the discretion of the monitors as warranted by conditions including, but not limited to, negative findings during the first 60 percent of ground disturbance. If monitoring is reduced to spot-checking, spot-checking shall occur when ground-disturbing activities occur in a new location in the Coverage Area or when ground disturbance would extend to depths not previously reached (unless those depths are within bedrock). If archaeological resources are identified during ground disturbance, they shall be left in place and avoided when feasible. If avoidance is infeasible, a Phase II testing and evaluation program shall be implemented. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific measures shall be identified in the Phase II evaluation. These	The City shall retain a qualified archaeologist and local Native American monitor, and comply with the requirements of this measure. The archaeologist and local Native American monitor shall ensure compliance.	Prior to ground-disturbing activities (retain archaeologist and Native American monitor) ; throughout ground-disturbing activities (ensure compliance)	Once (approve archaeologist and retain Native American Monitor); as needed (ensure compliance)	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
measures may include, but would not be limited to, a Phase III data recovery program, capping, or other appropriate actions to be determined by a qualified archaeologist in consultation with the Native American monitor.							
Geology and Soils							
GEO-1 Unanticipated Discovery of Paleontological Resources							
In the event of an unanticipated discovery of a paleontological resource during ground disturbance from the implementation of the MBHMP, work in the immediate area shall be temporarily halted and a qualified paleontologist (per Society of Vertebrate Paleontology standards 2010) shall be contacted to evaluate the find. If the discovery proves to be significant and cannot be avoided, additional work, such as salvage excavation, may be required to address any significant impacts.	The City shall comply with the requirements of this measure.	Immediately upon discovery of resource	As needed	City of Goleta Public Works			
Hydrology and Water Quality							
HWQ-1 Erosion Control Best Management Practices							
Prior to commencement of any ground-disturbing activities not covered by a SWPPP prepared in compliance with the requirements of the NPDES Construction General Permit, the City or City-authorized contractor shall implement the following erosion control BMPs: ▪ Ground-disturbing activities shall occur between April 1 and September 30 to coincide with the dry season and avoid impacts to overwintering monarch butterflies. ▪ Silt fencing, straw bales composed of rice straw (that are certified to be free of weed seed), fiber rolls, gravel bags, mulching erosion control blankets, soil stabilizers, and storm drain filters shall be used, in conjunction with other methods,	The City shall implement the erosion control BMPs.	Prior to and during ground-disturbing activity	Periodic	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
to prevent erosion throughout the Coverage Area and siltation of stream channels and detention basins. ▪ Temporary berms and sediment basins shall be constructed to avoid unnecessary siltation into local waterways during ground-disturbing activities. ▪ Erosion controls which protect and stabilize exposed soils shall be used to prevent movement of materials. Potential erosion control devices include plastic sheeting held down with rocks or sandbags over exposed soils and use of silt fences or berms of hay bales. ▪ Frequency of sediment removal from detention basins, locations and types of erosion and sediment control structures, and materials that would be used in the Coverage Area during MBHMP activities shall be specified. ▪ All exposed soils present in and around the disturbed area shall be stabilized within seven days of ground disturbance using mulch, geotextile binding fabrics, and/or native, drought-tolerant revegetation, as necessary.							
HWQ-2 Chemical Application Control Plan							
Prior to commencement of native planting, eucalyptus grove restoration, invasive species eradication, and pest control activities, the City shall prepare and implement a Chemical Application Control Plan to be approved by the City Biologist. The plan shall identify thresholds to determine when fertilizer, herbicide, or pesticide application is necessary, the chemical to be used, and the rate, timing, and placement of application. Pesticides or insecticides shall be used only when necessary to cure a problem and in positively identified pre-emergent situations, not as a preventive measure or as a regular, periodic application.	The City shall review and approve a chemical application control plan.	Prior to chemical application	Once	City of Goleta Public Works			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Party	Compliance Verification		
					Initial	Date	Comments
When pesticide or herbicide application is deemed necessary, use of chemical forms that are the least toxic to non-target organisms shall be employed. Only slow release organic fertilizers shall be used in the Coverage Area to minimize the potential for eutrophication in Devereux Creek. The application of fertilizers, herbicides, or pesticides shall be minimized during winter months when the greatest precipitation is likely to occur.							
Noise							
N-1 Noise Management							
Consistent with mitigation recommended in the City's Environmental Thresholds and Guidelines Manual, all noise-generating MBHMP activities, including, but not limited to, tree removal, pruning, trail maintenance, and riparian restoration, shall be limited to between 8:00 a.m. and 5:00 p.m. on weekdays. Noise-generating MBHMP activities shall not occur on weekends or State holidays. If diesel-powered construction equipment is necessary, all such equipment shall have properly maintained sound-control devices, and no equipment shall have an unmuffled exhaust system. Equipment shall not be left to idle while not in use.	The City shall comply with the requirements of this measure.	Throughout noise-generating activities	Periodic	City of Goleta Public Works			

Attachment 2

Resolution No. 19-__ entitled “A Resolution of the City Council of the City of Goleta Adopting the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan”

RESOLUTION NO. 19-__

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GOLETA, CALIFORNIA, ADOPTING THE ELLWOOD MESA/SPERLING PRESERVE OPEN SPACE MONARCH BUTTERFLY HABITAT MANAGEMENT PLAN

WHEREAS the City Council directed City staff to prepare a habitat management plan to guide management activities in the monarch butterfly aggregation areas in the City-owned Ellwood Mesa/Sperling Preserve Open Space (Ellwood Mesa Open Space) in October 19, 2010.

WHEREAS the City has prepared the Monarch Butterfly Habitat Management Plan (MBHMP), consistent with policies of the City's Open Space Element of the Goleta General Plan / Coastal Land Use Plan and Ellwood-Devereux Coast Open Space and Habitat Management Plan.

WHEREAS eucalyptus groves in Ellwood Mesa support over-wintering monarch butterfly aggregations, and monarch butterfly aggregations have historically numbered in the tens of thousands during some years, making Ellwood Mesa one of the most important sites for monarch butterflies in California; and

WHEREAS tracking butterfly numbers at Ellwood Mesa Open Space aggregation sites has been an ongoing effort that began in 1989 and has been maintained by the City since the City's incorporation in 2002. Monarch butterfly populations have declined by dramatically on Ellwood Mesa and throughout California, with the population in Ellwood Main in the 2018/2019 aggregation season declining to less than 0.5% of the population at its peak in 2011/2012; and

WHEREAS a 2017 assessment of eucalyptus tree condition at aggregation sites determined tree mortality was present throughout Ellwood Mesa as a result of five years of drought; and

WHEREAS the Planning and Environmental Review Department and the Public Works Department prepared the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan (MBHMP); and

WHEREAS the purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation; and

WHEREAS one of the most important aspects of the MBHMP is the set of management practices that would result in a sustainable eucalyptus forest that

supports aggregation sites for monarch butterflies – ensuring eucalyptus tree health and longevity is a priority.

WHEREAS the MBHMP consists of 22 programs intended to organize and integrate the many diverse aspects of habitat management into an overall plan that can be implemented in a clear and concise manner, and each program contains goals and supporting policies and actions; and

WHEREAS City staff prepared a Final Initial Study-Mitigated Negative Declaration (IS-MND) pursuant to the California Environmental Quality Act (Public Resources Code §§ 21000 et seq., "CEQA") and the regulations promulgated thereunder (14 Cal. Code of Regulations §§ 15000 et seq., the "CEQA Guidelines") for the MBHMP. The adoption of the IS-MND is considered separately under Resolution 19-__; and

WHEREAS the City hosted a meeting of stakeholders on August 2, 2018; a public workshop on August 16, 2018; and a presentation before the Public Tree Advisory Commission on August 22, 2018, to present the details of the MBHMP, receive comments on the plan, and answer questions; and

WHEREAS the City updated the Draft MBHMP in response to comments from the public and City Council; and

WHEREAS the staff report concludes that the MBHMP is consistent with the Open Space-Passive Recreation (OS-PR) land use designation under the General Plan/Coastal Land Use Plan and the Recreation (REC) zoning designation under the Coastal Zoning Ordinance; and

WHEREAS the City Council considered the entire administrative record, including the staff report, the Final IS-MND, the contents of the MBHMP, and oral and written testimony from interested persons.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GOLETA, AS FOLLOWS:

SECTION 1. *Recitals*. The City Council hereby finds and determines that the foregoing recitals, which are incorporated herein by reference, are true and correct.

SECTION 2. *Findings*.

A. The City Council finds that the MBHMP, referred to as Exhibit 1 of this Resolution, is consistent with the Coastal Zoning Ordinance as analyzed in Exhibit 2 of this Resolution.

B. The City Council finds that the MBHMP, referred to as Exhibit 1 of this Resolution, is consistent with the General Plan/Coastal Land Use

Plan and Ellwood-Devereux Open Space and Habitat Management Plan as analyzed in Exhibit 3 of this Resolution.

SECTION 3. *Action*. The City Council hereby adopts the Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan.

SECTION 4. *Reliance on Record*. Each and every one of the recommendations in this Resolution is based on the competent and substantial evidence, both oral and written, contained in the entire record relating to the MBHMP. The findings and determinations constitute the independent findings and determinations of the City Council in all respects and are fully and completely supported by substantial evidence in the record as a whole.

SECTION 5. *Summaries of Information*. All summaries of information in the findings, which precede this section, are based on the substantial evidence in the record. The absence of any particular fact from any such summary is not an indication that a particular finding is not based in part on that fact

SECTION 6. This Resolution will remain effective until superseded by a subsequent resolution.

SECTION 7. *Certification.* The City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 19th day of March, 2019.

_____
PAULA PEROTTE
MAYOR

ATTEST:

_____
DEBORAH S. LOPEZ
CITY CLERK

APPROVED AS TO FORM:

_____
MICHAEL JENKINS
CITY ATTORNEY

STATE OF CALIFORNIA)
COUNTY OF SANTA BARBARA) ss.
CITY OF GOLETA)

I, DEBORAH S. LOPEZ, City Clerk of the City of Goleta, California, DO HEREBY CERTIFY that the foregoing Resolution No. 19-__ was duly adopted by the City Council of the City of Goleta at a regular meeting held on the 19th day of March, 2019, by the following vote of the Council:

AYES:

NOES:

ABSENT:

(SEAL)

_____
DEBORAH S. LOPEZ
CITY CLERK

EXHIBIT 1

Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan

The MBHMP is also available online at:

https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/monarch-butterfly-inventory-and-habitat-management-plan

Draft
Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan

January 2019

Prepared by:

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Goleta, California 93117
(805) 961-7500

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EXECUTIVE SUMMARY

This Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan (MBHMP) outlines the programmatic approach and methods for the City of Goleta (City) to manage and improve the Ellwood Mesa eucalyptus forest for the benefit of the overwintering behavior of the monarch butterfly (*Danaus plexippus*), other wildlife, and the public's use and enjoyment.

Two key local policy documents drive the protection of the monarch butterfly: the Goleta General Plan/Coastal Land Use Plan (General Plan; City of Goleta 2006) and The Ellwood-Devereux Coast Open Space and Habitat Management Plan (Open Space Plan; City of Goleta et al. 2004). The Coastal Land Use Plan is not yet certified. These policy documents provide an important context for this MBHMP.

The 22 programs detailed in this MBHMP organize and integrate the many diverse aspects of habitat management into an overall plan that can be implemented in a clear and concise manner. Each specific program identifies individual goals, policies, and actions to establish a well-organized and efficient process leading to a management strategy for the sustainability of monarch habitat at Ellwood Mesa. The programs are followed by implementation priorities, schedules, needs, and contacts for those responsible for the implementation.

The 22 programs are organized into four categories: Administrative Programs; Natural Resources Management Programs; Outreach Programs; and Monitoring, Research, and Adaptive Management Programs.

- The nine Administrative Programs are designed to assist the City with and inform the many MBHMP stakeholders of the details regarding implementation of the MBHMP.
- The seven Natural Resources Management Programs articulate the goals, policies, and actions necessary to maintain and improve the many important natural resources, including biological diversity and ecosystem functions associated with the Ellwood Mesa eucalyptus groves and the monarch butterfly aggregation sites they support.
- The three Outreach Programs are designed to provide information for visitors, educators, and students to help develop a broad appreciation for natural resources and local natural heritage, with a focus on monarch butterflies.
- The three Monitoring, Research, and Adaptive Management Programs provide a mechanism for assessing environmental conditions and conducting original studies to help understand the ecology of monarch butterflies, particularly at Ellwood Mesa. Information obtained from these programs and other sources can be used to adapt the MBHMP in response to additional information or changing conditions.

With adoption and implementation of this MBHMP, the City will fulfill a major commitment to the natural resources of Ellwood Mesa and its residents, and to all those committed to the conservation of monarch butterflies.

Funding for implementation of the MBHMP will be drawn from a variety of sources, which may include grants, donations, mitigation fees, and City funds. An implementation budget estimate is included in Appendix 1. On June 29, 2018, the California state budget for the 2018–2019 fiscal year was approved and included a provision allocating 3.9 million dollars to the City for management and restoration of the monarch butterfly habitats on Ellwood Mesa. The state funds will be maintained in an account separate from other City funds and will be used only for actions to restore, enhance, manage, and monitor butterfly habitats on Ellwood Mesa. In the near-term, this funding will be instrumental in getting the MBHMP's programs operational and in addressing some of the imminent habitat issues that presently face the grove.

INTRODUCTION

BACKGROUND

Monarch butterfly (*Danaus plexippus*) use of the eucalyptus groves on Ellwood Mesa in the City of Goleta (City), California has inspired many residents and visitors over the years to help in the preservation and conservation of this important natural phenomenon. These eucalyptus groves occur in the City-owned Ellwood Mesa/Sperling Preserve Open Space (Ellwood Mesa Open Space or Ellwood Mesa) (Figure 1).

Over-wintering monarch butterfly aggregations in Ellwood Mesa groves have numbered in the tens of thousands during some years, making Ellwood Mesa one of the most important sites for monarch butterflies in California (Pelton et al. 2016). Each fall, monarch butterflies in the western United States migrate to the coast of California from various locations throughout western North America. The butterflies arrive at Ellwood Mesa in mid-September and, as winter approaches, cluster into aggregation roosts, often called overwintering or wintering colonies. The butterflies remain until about mid-February, when they generally disperse inland.

The eucalyptus groves at Ellwood Mesa are called the Ellwood Complex. As shown on Figure 2, six monarch butterfly over-wintering sites occur in the complex: Sandpiper, Ellwood North, Ellwood West, Ellwood Main, Ellwood East, and Ocean Meadows. The Ellwood East site is on private property and not within the Ellwood Mesa Open Space and is therefore outside the scope of this Monarch Butterfly Habitat Management Plan (MBHMP); however, it is included for context. The Ellwood Main site is located along Devereux Creek and is the primary aggregation site for over-wintering butterflies in Ellwood Mesa.

Information and data regarding the condition of the butterfly population and groves—as well as trends in butterfly health, number, and behavior—were compiled over the last several years through a collaborative effort between City staff and the City's consultants—Althouse and Meade, Rincon Consultants, and Agri-Turf Supplies. Tracking butterfly numbers at Ellwood aggregation sites has been an ongoing effort that began in 1989 and has been maintained by the City since the City's incorporation in 2002. A Habitat Assessment was completed for Ellwood Mesa in 2013 to document the habitat conditions and health of the eucalyptus groves on the mesa (Althouse and Meade, Inc. 2013). In 2017, during the 5-year drought, the condition of the eucalyptus trees was assessed at the aggregation sites, and tree mortality was determined throughout Ellwood Mesa. The development of management priorities was an expanded effort between City staff, the consultant team, the City's monarch butterfly docents, and members of the public.

The monarch butterfly populations at Ellwood Mesa and in California statewide have declined at least 74% since the 1990's (Pelton et al. 2016). The monarch butterfly is listed on the California Department of Fish and Wildlife's (CDFW) Special Animals List with overwintering roosts designated as imperiled to vulnerable in the state (CDFW 2017). Currently, the species is under federal review for potential listing under the Endangered Species Act (ESA), and the U.S. Fish and Wildlife Service (USFWS) plans to make its determination of whether this species warrants ESA listing by June 30, 2019.

Figure 1. Vicinity Map

Figure 2. Monarch Butterfly Aggregation Sites

Photo 1. Monarch Butterfly (*Danaus plexippus*) Aggregation on Blue Gum (*Eucalyptus globulus*)

POLICY

Two key local policy documents drive the protection of the monarch butterfly: the Goleta General Plan/Coastal Land Use Plan (General Plan; City of Goleta 2006) and The Ellwood-Devereux Coast Open Space and Habitat Management Plan (Open Space Plan; City of Goleta et al. 2004). These policy documents provide an important context for this MBHMP. Additionally, the City's Community Wildfire Protection Plan (CWPP) was used as a key reference. The Goleta Urban Forest Management Plan (as amended and approved February 21, 2017) was also used to guide management recommendations. A summary of related policies and/or actions is provided below.

Goleta General Plan/Coastal Land Use Plan – Conservation Element

Monarch butterfly overwintering sites are considered Environmentally Sensitive Habitat Areas (ESHAs) under the Coastal Act because the occupied groves meet the definition of an ESHA in Section 30107.5 of the California Coastal Act. An ESHA is defined as follows:

> Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

As such, autumnal and overwintering sites are protected by the Coastal Act and the General Plan. Specifically, the General Plan protects monarch butterflies and associated habitat via General Plan Conservation Element Policy 4, Protection of Monarch Butterfly Habitat Areas. The objective of the policy is as follows:

> To preserve, protect, and enhance habitats for monarch butterflies in Goleta, including existing and historical autumnal and winter roost or aggregation sites, and promote the long-term stability of over-wintering butterfly populations.

The definition of butterfly habitat is stated in subpolicy CE 4.1, Definition of Habitat Area, as follows:

> Sites that provide the key elements essential for successful monarch butterfly aggregation areas and are locations where monarchs have been historically present shall be considered ESHAs. These elements include stands of eucalyptus or other suitable trees that offer shelter from strong winds and storms, provide a microclimate with adequate sunlight, are situated near a source of water or moisture, and that provide a source of nectar to nourish the butterflies.

Additional subpolicies pertaining to the protection of this important local resource are provided in Policy CE 4 of the General Plan Conservation Element and were used to guide the preparation of this MBHMP.

Ellwood Mesa Open Space Plan

The 230-acre Ellwood Mesa is part of a 652-acre contiguous open space along the Ellwood-Devereux Coast that is managed by the City, the County of Santa Barbara, and the University of California, Santa Barbara (UCSB). In March 2004, these three agencies released The Ellwood-Devereux Coast Open Space and Habitat Management Plan (City of Goleta et al. 2004). The sections of the plan applying to the Goleta properties (referred to as the Ellwood Mesa Open Space Plan) were adopted by the Goleta City Council on June 24, 2004.

The Ellwood Mesa Open Space Plan establishes the following goal and policies that guide the management actions related to the monarch butterfly and supporting habitat:

> **Monarch Goal 1.** Protect and maintain existing monarch butterfly populations in the Open Space Plan Area, and manage the habitats to be self-sustaining.
>
> > **Monarch Policy 1.** Manage public access to protect butterflies and their habitat, while promoting public enjoyment, education, and scientific research.
> >
> > **Monarch Policy 2.** Conduct scientifically sound studies using appropriate and cautious methods to maintain and improve habitat conditions to ensure long-term viability of the population.
> >
> > **Monarch Policy 3.** Implement phased habitat improvements using pilot programs, small-scale projects, and adaptive management.

Additional overarching management goals and policies are provided in the Ellwood Mesa Open Space Plan and were used to guide the preparation of this MBHMP.

Community Wildfire Protection Plan

The City's CWPP was adopted by the City Council on March 20, 2012. The purpose of the CWPP is to enhance community wildfire protection by identifying fire hazard treatments that are in balance with sustainable ecological management and fiscal resources. The CWPP presents design standard recommendations for fuel treatments specific to areas near butterfly aggregation sites that are intended to minimize adverse effects on adjacent habitat while reducing hazardous fuels. Key recommendations focus on the coordination between butterfly and wildland fire experts during planning and implementation of fuel treatment strategy prescriptions. The CWPP was used during the preparation of this MBHMP, and this MBHMP is intended to support implementation of the CWPP, which is further discussed in detail in Program 4 (City of Goleta 2012).

Goleta Urban Forest Management Plan

The Goleta Urban Forest Management Plan (GUFMP) (as amended and approved February 21, 2017) was also used to guide management recommendations. The GUFMP provides a guide for the long-term preservation and enhancement of the urban forest within the City's jurisdiction. The urban forest is defined as all public and private trees including the street tree system, trees in parks and other public lands, and trees on private properties throughout the City. The vision statement of the GUFMP is:

> Goleta's urban forest is a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all of its citizens as an essential environmental, economic and community benefit.

The GUFMP Section 4.7 Very Mature Tree Care calls to establish a regular maintenance program for trees located in parks, open spaces, and median islands to ensure very mature tree health. Mulching, fertilization, and pruning are three major practices used to tend to mature trees. The MBHMP fulfills this section for a tree maintenance program for Ellwood Mesa eucalyptus groves.

PURPOSE

The purpose of the MBHMP is to provide a programmatic approach to management of the habitats that support the monarch butterfly seasonal aggregation areas at the Ellwood Mesa Open Space, as well as a variety of other plant and animal species and coastal access and recreation. The intent of the management approach is to maintain and improve habitat conditions to ensure long-term viability of the monarch butterfly population, while allowing for coastal access, education and compatible recreational opportunities. The 22 programs detailed in this MBHMP organize and integrate the many diverse aspects of habitat management into an overall plan that can be implemented in a clear and concise manner.

METHODS

This MBHMP is the result of careful consideration of existing information, site surveys, inventory, and assessment of tree health within the groves, consultation with a broad array of professionals and interested public, and discussions with City staff. The City collaborated with Althouse and Meade, Inc. and Rincon Consultants, Inc. in the preparation of this MBHMP. This MBHMP is composed of 22 programs, each of which contains a goal, one or more policies, and one or more actions associated with each policy. Information on program status, needs, and contacts are also included, as well as general priority and schedule information and an annual cost estimate (Appendix 1). A main focus of each program is to establish an implementation structure with targets and actions to achieve present and future goals. . The scope of this MBHMP includes monarch butterfly habitat in the City's Ellwood Mesa Open Space, including aggregation sites, forest areas, and nectaring locations (refer to Figure 1 for a vicinity map and Figure 2 for a map of the butterfly aggregation sites and Habitat Management Area).

For the purposes of this MBHMP, the following definitions apply:

Program: a planned series of activities.

Goal: a broad statement of program intentions.

Policy: a set of plans or actions agreed upon by the interested parties.

Action: the process of doing something to achieve a goal.

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THE HABITAT MANAGEMENT PLAN

This MBHMP for the Ellwood Mesa Open Space is organized into four categories: Administrative Programs; Natural Resource Management Programs; Outreach Programs; and Monitoring, Research, and Adaptive Management Programs. These programs—including their goals, policies, actions, implementation priorities, and schedules—are described in the sections that follow.

A. ADMINISTRATIVE PROGRAMS

Administrative programs are designed to assist the City and inform the many MBHMP stakeholders of the details regarding implementation of the MBHMP. Identifying specific programs and their goals, policies, and actions enables a well-organized and efficient process to be established that leads to a management strategy for the sustainability of monarch habitat at Ellwood Mesa.

It is the City's intent that the goals and policies of this MBHMP should be considered and incorporated into future land use planning and policy documents, such as General Plan amendments and a Local Coastal Program, as appropriate, as these documents are developed.

1. Municipal Management Program

Overview: This program focuses on the role of the City as manager of the Ellwood Mesa Open Space and, in particular, the role of the City in the implementation of this MBHMP. Habitats included in this MBHMP include primarily the eucalyptus groves and windrows used by monarch butterflies for winter aggregations at Ellwood Mesa, covering approximately 230 acres from Hollister Avenue south to the ocean bluffs and from UCSB west to the Sandpiper Golf Course. The eucalyptus groves and windrows occur in the context of coastal mesa grasslands, coastal scrub, riparian habitats, and residential development. Therefore, they are part of a larger coastal ecosystem and neighborhood, with management priorities for which the MBHMP is designed to be compatible.

Goal 1. To implement the MBHMP, with the City providing the administrative structure to oversee the programs and scheduling, and to interface with the community at large.

Policy 1-1. The City shall review, and revise as necessary, the MBHMP to reflect current data, butterfly conservation science, and management techniques that apply to the local monarch population.

Action 1-1.1. Conduct a public workshop to inform the community regarding the content and implementation of this MBHMP.

Action 1-1.2. Conduct environmental review of this MBHMP, including a public hearing.

Action 1-1.3. Prepare any necessary revisions to this MBHMP to resolve any issues identified during public review.

Action 1-1.4. Submit this MBHMP to the Goleta City Council for review and discussion, followed by adoption and implementation.

Policy 1-2. During implementation of the programs, goals, policies, and actions described in this MBHMP, and during the planning and implementation of other projects that may affect monarch butterfly habitat within the Ellwood Mesa Open Space, protection of the environment and specifically of monarch butterfly habitat shall be given the utmost consideration.

Action 1-2.1. Whenever vegetation removal, ground disturbance, construction, or other activities with the potential to significantly disrupt habitat values are proposed within the MBHMP coverage area by the City or any other agency or utility, environmental protection measures shall be implemented. These measures shall be determined in coordination with a qualified biologist, and should normally include pre-activity surveys for nesting birds or other wildlife, pre-activity surveys for monarch butterfly aggregations, presence of an environmental monitor during construction, and other protections, as deemed appropriate.

Policy 1-3. Because many of the MBHMP actions are related to trail improvements, tree work, and related project implementation monitoring and reporting, the City's Public Works Department shall oversee the implementation of this MBHMP. Public Works personnel overseeing implementation will have specific knowledge and experience to properly follow directives of this MBHMP.

Action 1-3.1. The City's Public Works Department, Neighborhood Services Department, and Planning and Environmental Review Department will coordinate regularly regarding MBHMP implementation.

Policy 1-4. The MBHMP is an overarching, long-term conservation strategy, setting forth the broad objectives, desired outcomes, and management policies for the Ellwood Mesa monarch butterfly habitat. Periodic Implementation Plans shall identify and describe short-term actions needed to further the goals and objectives of the MBHMP, taking into consideration current conditions and funding levels at the time each Implementation Plan is prepared.

Action 1-4.1. On an annual basis, or as warranted based on habitat conditions, prepare an Implementation Plan identifying the actions planned to implement the MBHMP's programs, goals, policies, and actions during the coming year.

Action 1-4.2. City staff shall present each annual Implementation Plan at a public hearing for stakeholder input and City Council approval.

Program Status: This MBHMP has been completed and is in the process of undergoing environmental review.

Program Needs: A public workshop, MBHMP review and revision as needed, and a public hearing—followed by adoption by City Council—are to be achieved.

Program Contact: Public Works Department

2. Fiscal Program

Overview: Successful implementation of this MBHMP and related conservation of the Ellwood Mesa Open Space depend in part on the ability to provide funding for the various programs contained in this MBHMP. Funding will come from a variety of sources as identified herein.

Goal 2. To provide short-term (annual), long-term (endowment), and special project (grant) funding for the implementation of this MBHMP.

Policy 2-1. The City shall consider providing annual funding to support MBHMP implementation.

Action 2-1.1. Consider appropriating General Fund, Special Revenue Fund, or Grant Fund monies, as available, during the bi-annual and mid-cycle budget processes.

Action 2-1.2. Consider including the MBHMP as a project sheet in the Capital Improvement Program annual budget.

Action 2-1.3. Develop an annual needs list from which the annual operating budget can be determined. This list should be included in the annual Implementation Plan (see Policy 1-3).

Policy 2-2. The City shall manage and use the City's Ellwood Mesa Butterfly Fund (Butterfly Fund) (226-5-9800-706) to pay for the implementation of the MBHMP and special projects consistent with the requirements of the fund. The Butterfly Fund shall be supplemented by grant funds and compensatory mitigation fees, as available.

Action 2-2.1. Manage the Butterfly Fund such that the fund may serve as an implementation funding source. Continue to identify grant funds to supplement the Butterfly Fund. Accept donations specific to the Butterfly Fund.

Action 2-2.2. Allow payments of compensatory mitigation fees into the Butterfly Fund, as deemed appropriate during CEQA analysis for projects with limited impacts on monarch butterfly habitat.

Program Status: The City provides annual funds in support of planning initiatives and general management needs at the Ellwood Mesa Open Space. With adoption of this MBHMP, funds can be earmarked annually for implementation of programs and specific actions within this MBHMP. Furthermore, grants and other fundraising opportunities will exist for which City funds can be used

as a local match to new funds raised from external sources. In the near term, the $3.9 million allocated in the State Budget will provide a vital funding source.

Program Needs: Adoption of this MBHMP so the Fiscal Program can be implemented.

Program Contact: Public Works Department

3. Interagency Cooperative Program

Overview: In today's complex regulatory environment, important sites for natural resource conservation can be subject to conflicting regulatory goals at the federal, state, county, and municipal levels. Management of threatened or endangered species that may occur in the future—and rare species and sensitive habitats at Ellwood Mesa—require careful coordination among regulatory partners so that conflicts are minimized.

Goal 3. To develop cooperative relationships with federal, state, county, and municipal agencies toward the implementation of integrated management practices favorable to the conservation of the monarch butterfly habitats at Ellwood Mesa Open Space.

Policy 3-1. The City shall pursue cooperative relationships with other agencies regarding regulatory goals and policies that the partners have in common concerning the Ellwood Mesa Open Space, in particular, goals and policies that have an impact on the management of the monarch butterfly aggregation sites.

Action 3-1.1. As appropriate and productive, pursue cooperative relationships with federal agencies such as the USFWS and the U.S. Army Corps of Engineers to obtain potential permits, identify funding opportunities, and identify/pursue other potentially shared interests regarding the natural resources at Ellwood Mesa, with a focus on sustaining monarch butterfly aggregation sites.

Action 3-1.2. As appropriate and productive, pursue cooperative relationships with state entities such as the CDFW, Regional Water Quality Control Board (RWQCB), UCSB, and California Coastal Commission (CCC) to obtain potential permits, identify funding opportunities, and identify/pursue other potentially shared interests regarding the natural resources at Ellwood Mesa, with a focus on sustaining monarch butterfly aggregation sites.

Action 3-1.3. As appropriate and productive, pursue cooperative relationships with Santa Barbara County departments (such as Agricultural Commissioner, Fire, Parks, Planning and Development, Flood Control, and Public Works) to obtain potential permits, identify funding opportunities, solve problems, and identify/pursue other potentially shared interests regarding the natural resources at Ellwood Mesa and adjacent properties, with a focus on sustaining monarch butterfly aggregation sites.

Program Status: City staff regularly coordinates with the County of Santa Barbara and UCSB. Additionally, City staff has formed a functioning interdepartmental working relationship among the

Public Works Department, Neighborhood Services Department, and Planning and Environmental Review Department regarding the management of Ellwood Mesa. Many additional productive relationships can be pursued related to the conservation of monarch and other butterflies.

Program Needs: Adoption of this MBHMP and implementation of its programs.

Program Contacts: Public Works Department, Neighborhood Services Department, and Planning and Environmental Review Department

4. Community Wildfire Protection Program

Overview: One of the most important efforts regarding coordination of potentially competing management goals is the identification and resolution of conflicts between the actions to protect the adjacent communities from the threat of wildfires while also providing protection of the habitats for seasonal aggregation of monarch butterflies at the Ellwood Mesa Open Space. The groves and windrows, composed primarily of blue gum eucalyptus (*Eucalyptus globulus*), are fire-prone and can present a threat to residential communities adjacent to the butterfly habitats. The CWPP was produced in coordination with this MBHMP to provide management practices compatible with monarch butterfly aggregation site protection. The City's adopted CWPP provides important context for the management of these resources.

Ellwood North, Main, and West sites are the aggregation locations within the groves on Ellwood Mesa that are directly adjacent to residences along eucalyptus grove boundaries (Figure 2). The Sandpiper site is not directly adjacent to structures, but it is adjacent to the Sandpiper Golf Course (Figure 2). In habitat areas that are not adjacent to structures, fuel treatments consist of mowing along the outside edge of the grove.

The Monarch Butterfly Aggregation Area Treatment Strategy section of the CWPP states that fuel treatments in areas near human developments are critical measures in the wildfire protection strategy for both residences and butterfly aggregations and habitat. Trees along grove edges provide wind and weather protection for aggregation sites. Therefore, it is important to maintain adequate tree density inside these edges (The Xerces Society 2017). Larger trees are not the primary fuel of concern in the spread of wildfire; rather, the greater hazard and threat are understory vegetation, dead/downed trees, and fuels that could create fire ladders. The CWPP describes the prescription guidance for butterfly aggregation areas adjacent to structures and outlines approved actions to be taken within 100 ft. of structures to reduce the ignitability of those structures. Figure 3 shows the CWPP fuel reduction zones within the MBHMP area.

In butterfly aggregation areas within 100 ft. of homes, the fuel treatment strategy prescribed by the CWPP includes removal of understory, ladder fuel, and dead/downed fuel. Careful thinning of smaller or unhealthy trees within 30 feet of the grove edge is recommended while considering the wind buffering needs of the aggregation site. Fuel reduction implementation and subsequent monitoring should involve input by City-approved monarch butterfly and wildfire professionals.

Goal 4. To provide management practices within the eucalyptus groves and windrows that support healthy monarch butterfly habitat and are compatible with the City's CWPP.

Policy 4-1. The goals, policies, and actions of this MBHMP shall be consistent with the intent of the CWPP to reduce the ignitability of homes and structures.

Figure 3. CWPP-related fuel reduction zones within the MBHMP area

Action 4-1.1. Support implementation of Goleta's CWPP in the 100-ft. buffer from homes and structures as the 100 ft. extends into the Ellwood Mesa eucalyptus groves with actions outlined in below in Table 1 (as seen in Table 14 of the CWPP).

Table 1. CWPP Prescription Guidance for Butterfly Aggregation Areas Adjacent to Structures

Location	Primary Defense Zone (A)*** (0 – 30')	Fuel Reduction Zone (B*** (30' – 100')
Fuel Type	Based on Defensible Space PRC – 4291 and Firefighter Safety	
Grass/ Forbs	Reduce fuel depth to 4 inches; methods include mowing, masticating, weed-whacking, biological browsing	Same treatment as (A); longer grass in isolated open areas is acceptable.
Surface dead/ down material	Clear dead/down flammable materials; methods include raking, hand-piling/ removal, masticating chipping/ dispersal on site	Reduce dead/down flammable material to < 3" depth; methods same as (A).
Brush/ Shrub fuel	Remove to a spacing (between edges of brush) generally 2x brush height on <20% slopes; methods include masticating or hand-cutting, biological browsing	Same Treatment as (A); a pocket or clump of brush can be treated as one large shrub in more open site conditions.
Trees Overstory without brush understory	Trim or thin only trees that do not provide protection to monarch butterfly aggregation sites* Thin smaller or unhealthy trees at 10 – 20 ft crown spacing (as determined by slope, tree size and type);Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches 6-15 ft up, or lower 1/3 of tree height on trees smaller than 18 ft..	Trim or thin only trees that do not provide protection to monarch butterfly aggregation sites* Thin smaller or unhealthy trees at approximately 10 ft crown spacing (as determined by slope, tree size and type);. Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches approximately 6 ft up, or lower 1/3 of tree height on trees smaller than 18 ft..

Location	Primary Defense Zone (A)*** (0 – 30')	Fuel Reduction Zone (B*** (30' – 100')
Fuel Type	Based on Defensible Space PRC – 4291 and Firefighter Safety	
Trees Overstory with brush understory	Trim or thin only vegetation that does not provide protection to monarch butterfly aggregation sites* Thin small or unhealthy trees at 10-20 ft crown spacing (based on slope, tree size and type). Leave larger trees at 10 ft. crown spacing unless toppling hazard.**(Reduce ladder fuels by pruning lower branches 6-15 ft up, or lower 1/3 of tree height on smaller trees In understory: remove brush ladder fuel. Methods include masticating or hand-cutting.	Trim or thin only vegetation that does not provide protection to monarch butterfly aggregation sites* Thin small or unhealthy trees to approximately 10 ft. crown spacing. Leave larger trees unless toppling hazard.** Reduce ladder fuels by pruning lower branches approximately 6 ft up, or lower 1/3 of tree height on smaller trees. In understory remove brush ladder fuel. In non-canopied areas, non-continuous patches of shrubs or small trees in openings is acceptable.. Methods include masticating or hand-cutting.

*As determined by the Goleta City Project Manager overseeing mitigation work in consultation with a City-approved monarch butterfly specialist and a City-approved wildland fire specialist.
**As determined by the Goleta City Project Manager and Goleta City arborist.
***For further information specific to homeowner/structure mitigation measures see CWPP Section 6.2.1.

Action 4-1.2. Support implementation of Goleta's CWPP, specifically in regard to guidelines that are not in potential conflict with the management of the groves that support monarch butterfly aggregation sites, as noted below.

Action 4-1.3. Maintain and revegetate moderate cover of understory in and around aggregation sites with fire-resistant, native plant species (The Xerces Society 2017) (Appendix 3).

Action 4-1.4. Conduct all wildfire protection work within 300 feet of butterfly aggregations areas between April 1 and September 15, outside of monarch butterfly overwintering season.

Action 4-1.5. Coordinate with City-approved butterfly and wildland fire experts during planning and implementation of any fuel treatments since conditions within groves can change and aggregation locations may shift.

Action 4-1.6. Install a large, bilingual "NO PARKING-FIRE LANE" sign at Santa Barbara Shores access gate.

Policy 4-2. Trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to ensure their health and longevity in the context of a high fire hazard environment.

Action 4-2.1. Implement Program 12, Tree Management Program, to reduce fire hazard, improve public safety, and eliminate trees that are threatening the sustainability of the aggregation sites, including dead, diseased, and dying trees.

Photo 2. Evidence of Wildfire (Charred Trunks) at Main Grove – East, Ellwood Mesa Open Space

Program Status: The CWPP was adopted with the passage of Resolution No. 12-21 by the Goleta City Council on March 20, 2012. The Ellwood Mesa Implementation Plan is in environmental review.

Program Needs: Adoption and implementation of CWPP and the MBHMP will result in a reduction of wildfire hazards associated with eucalyptus groves.

Program Contact: Public Works Department

5. Trail Management Program

Overview: Public access trails are located through or adjacent to most of the monarch butterfly aggregation sites on Ellwood Mesa. These localized trails link together a series of regional trails, adjacent residential neighborhoods, and other preserves, such as the Coronado Butterfly Preserve managed by the Santa Barbara Land Trust and open space lands managed by the University of California system. Public access, including organized field trips to see the seasonal aggregations of monarch butterflies, is an important part of the Ellwood Mesa experience. However, repeated and increasing access along the semi-formal trails can result in negative impacts on the habitats and overall site aesthetics. Additionally, the trees constituting the butterfly habitat do occasionally die, fall, and shed limbs, creating hazardous conditions for recreationalists at certain locations.

Goal 5. To develop and maintain public access trails that provide a safe and meaningful experience for visitors while also limiting impacts on habitats and wildlife, in particular, monarch butterflies and their seasonal aggregation sites.

Policy 5-1. The City shall maintain existing public access trails that provide a safe experience for visitors to the eucalyptus groves supporting seasonal monarch butterfly aggregation sites.

Action 5-1.1. Maintain existing public access trails through the eucalyptus groves supporting monarch butterfly aggregation sites by reducing threats of trips, slips, and falls. May use Trails Council and CCC to help with maintenance.

Action 5-1.2. Implement Program 12, Tree Management Program, to reduce the threats from falling tree limbs and trunks.

Action 5-1.3. Repair damage to trial boundary ropes and posts, as needed.

Action 5-1.4. Prevent damage to seasonal monarch habitat by installing additional trail boundary posts, ropes, and signs, as necessary, consistent with those at the Ellwood Main monarch aggregation area.

Action 5-1.5. Use wood chips on trails to reduce soil compaction and decrease erosion during wet months.

Action 5-1.6. Retain and maintain Ellwood Main visitor viewing area boundary signs and rails.

Action 5-1.7. Review locations of trail and viewing area delineations and adjust if needed to protect trees or butterflies, annually.

Action 5-1.8. Review trail conditions on an annual basis and provide recommendations on improvements and modifications regarding human safety, trail maintenance, and ecosystem health, including conservation of monarch butterfly habitat in relationship to location,

condition, use of trails, and number of visitors. Include recommendations for any tree trimming, removal recommendations, or other tree safety issues in the annual Implementation Plan.

Action 5-1.9. Long-term closure of official trails is undesirable and should not be used as a management approach. It is preferable to remedy trail hazards promptly, or to allow trails to remain open with appropriate signage alerting users to the risks present.

Policy 5-2. Maintain and improve existing links between trails associated with eucalyptus groves that support monarch butterfly aggregation sites at Ellwood Mesa with the adjacent Coronado Butterfly Preserve.

Action 5-2.1. Coordinate trail improvement activities with the Santa Barbara Land Trust and UCSB staff to ensure that improvements are compatible.

Action 5-2.2. Coordinate trail improvements with proposals for the Coastal and Juan Bautista De Anza trails that traverse Ellwood Mesa, which also link to trails within the eucalyptus groves that support monarch butterfly aggregation sites, to ensure protection measures are addressed for the aggregation sites.

Program Status: Public access trails already exist within the majority of the aggregation sites, but human safety issues exist because of the poor condition of many eucalyptus trees along the trails and eroded trail conditions. Impacts on eucalyptus groves supporting monarch butterfly aggregation sites also exist as a result of public access.

Program Needs: Dead and dying trees along trails and viewing areas present a public safety risk and risk to habitat stability. The Implementation Plan should detail work to be accomplished on an annual basis to maintain access and protect the public and sensitive habitat. Eroded trail conditions and overhanging trees can be public safety issues as well as tree health issues, necessitating trail improvements.

Program Contact: Public Works Department

6. Waste Management Program

Overview: Although the City's Public Works Department staff conducts inspections and removes easily visible waste and trash, unauthorized off-trail use, homeless encampments, and related trash dumping periodically occur in the Ellwood Mesa's eucalyptus groves. The City's butterfly docents also remove trash and alert the Public Works Department staff when there are new accumulations of trash and/or other debris that are too large or abundant for hand removal.

Goal 6. To maintain a waste-, trash-, and debris-free butterfly habitat management area.

Policy 6-1. The City shall collect, remove, and appropriately dispose of all waste, trash, and debris that accumulate in habitat on Ellwood Mesa.

Action 6-1.1. Continue to remove existing accumulations of waste, trash, and debris from monarch butterfly habitat and dispose of them in an appropriate manner. Coordinate with Sheriff's Office for removal of homeless encampments, if necessary.

Policy 6-2. The City shall inform visitors of the monarch butterfly habitat of rules relating to trash and debris policies associated with monarch butterfly habitat.

Action 6-2.1. Post signs at appropriate locations stating open space user rules; for example, "Please take out your trash" and, "Day Use Only – Camping Prohibited."

Action 6-2.2. Educate the public through seasonal, on-site presence by the City's butterfly docents about the importance of maintaining the groves free of trash.

Action 6-2.3. Place trash cans in the parking lot. Inspect annually and replace as needed.

Program Status: Despite trash removal attempts by Public Works Department staff and the City's butterfly docents, various sites throughout the monarch butterfly habitat at Ellwood Mesa accumulate trash and other debris from human activity.

Program Needs: Trash and debris should be removed, where feasible, from the Ellwood Mesa habitat that support monarch butterfly aggregation sites.

Program Contact: Public Works Department, Neighborhood Services Department

7. Aesthetic Resources Management Program

Overview: Portions of Ellwood Mesa eucalyptus groves suffer from grove senescence, drought, pests, disease, or lack of formal management efforts that maintain consistent aesthetic values. Fencing and signs are irregularly installed and inconsistently maintained. They also lack a consistent theme. This MBHMP would provide a consistent management structure.

Goal 7. To integrate this MBHMP's programs into an effort to improve the quality of aesthetic resources of the Ellwood Mesa, in particular, the eucalyptus groves and windrows supporting monarch butterfly aggregation sites.

Policy 7.1. The City shall provide stewardship and management oversight of the eucalyptus groves, in particular, those areas supporting monarch butterfly aggregation sites.

Action 7-1.1. Adopt and implement this MBHMP, including its 22 management programs.

Action 7-1.2. Provide integration of program goals, policies, and actions to improve the overall aesthetics of the various groves, including installation of a consistently designed

interpretive program and strategically placed fencing, as more specifically outlined in Program 18, Interpretive Program.

Policy 7.2. Signs, fencing, and restoration efforts associated with monarch butterfly habitat on Ellwood Mesa shall be aesthetically compatible with natural conditions.

Action 7-2.1. Review signage and fencing design for compatibility with the Ellwood Mesa natural areas.

Action 7-2.2. Review restoration plantings and activities for appropriate aesthetic compatibility.

Program Status: Adoption and implementation of this MBHMP will result in a more sustainable and visually pleasant user experience because of the improved aesthetic value of the Ellwood Mesa eucalyptus groves and monarch butterfly aggregation sites.

Program Needs: Adopt and implement this MBHMP.

Program Contact: Public Works Department

8. MBHMP Review, Update, and Amendment Program

Overview: Reviewing and updating key planning documents would ensure that the management goals and actions are working as intended. Updating and amending programs, when needed, would ensure that the planning document is responsive to the changing needs of the community and the resource.

Goal 8. To maintain the relevance of this MBHMP with periodic reviews, updates, and amendments.

Policy 8-1. The City shall review this MBHMP as the need for updates and amendments arises (e.g., changes in physical conditions, regulations, or expansion of habitat management knowledge or strategies) or at least every 5 years.

Action 8-1.1. Conduct internal and public review of this MBHMP, as conditions warrant.

Action 8-1.2. Update information in this MBHMP, as conditions warrant.

Action 8-1.3. Amend programs, goals, polices, and actions in this MBHMP to reflect the results of the review and update process.

Action 8-1.4. Seek public input on amendments to programs, goals, polices, and actions in this MBHMP.

Action 8-1.5. Conduct environmental review, if necessary (new or modified policies and actions pose new impacts).

Action 8-1.6. Obtain approval by the Goleta City Council and adopt amended MBHMP.

Program Status: Adoption of this MBHMP by the City will provide the mechanism for review, update, and amendment.

Program Needs: Commitment to update this MBHMP to ensure that it is meeting the demands of the existing conditions.

Program Contacts: Planning and Environmental Review Department and Public Works Department

9. Catastrophic Event Response Program

Overview: The eucalyptus groves at Ellwood Mesa are at risk of catastrophic environmental events. For example, trees falling during powerful storms could cause collapse of additional trees, excessive fuel loads can spread wildfires, and infestations of insect pests can weaken or kill trees. Because such potential catastrophic events are likely to occur within the monarch butterfly aggregation sites, Program 9, Catastrophic Event Response Program, would put in place a preliminary plan of action to address the consequences of loss of trees or entire groves containing monarch butterfly aggregation sites.

For the purpose of this MBHMP, a catastrophic environmental event is defined as an event causing great ecological distress and damage, either sudden or gradual, across a significant portion of the monarch butterfly habitat within the Ellwood Mesa plan area. This is distinct from an emergency, which may involve emergency responders such as the fire department and would involve immediate actions under their direction to protect life and property. A qualifying catastrophic event could negatively affect a large portion of the eucalyptus groves within the Ellwood Mesa, or could cause substantial damage to single monarch butterfly overwintering site.

The response actions for catastrophic events would primarily involve restoration activities, would not necessarily be funded in the annual budget for this MBHMP and would likely require supplemental funding with approval from the City Council. Funding approved by the City Council should include a finding that the condition is a qualifying catastrophic event. If such a finding is made, funding received through the State Budget or other sources may be also used to address catastrophic events.

As of this writing, the 5-year drought in Goleta from 2012 to 2016 has created dire conditions for the eucalyptus trees at Ellwood Mesa (County of Santa Barbara 2018). Arborists estimate that over 1,200 trees are dead or dying due to drought, drought stress, and infestation by pests across the Ellwood Mesa. The monarch overwintering sites are suffering from the die-back of trees with the loss of canopy and wind protection and loss of roosting branches. The last similar 5-year drought on record for the Goleta area was in 1947–1951 and was not as severe, with 58.05 consecutive rainfall inches, compared with 50.83 inches during the 2012–2016 drought years (County of Santa Barbara

2018). Timing of rainfall since 2012 has also been more concentrated than in prior years, with the annual rainfall occurring in a small number of intense storm events rather than a larger number of small or gentle events. This concentration has come with an increased rainfall intensity, which leads to increased runoff, excess erosion and sediment transport, and decreased groundwater recharge. The ultimate result has been less available water for uptake by trees.

The 5-year drought and the death of over 1,200 trees may qualify as a catastrophic event, if so determined by the City Council.

Goal 9. To prepare for possible catastrophic environmental events within the monarch butterfly aggregation sites by adopting a set of actions that potentially minimize the impacts and plan for a response should such events affect the groves in which aggregation sites are located.

Policy 9-1. The City shall adopt a set of protocols that could minimize the impacts from potential catastrophic environmental events.

Action 9-1.1. Implement Program 12, Tree Management Program, to reduce potential impacts on eucalyptus groves that support monarch butterfly aggregation sites.

Action 9-1.2. Implement Program 4, Community Wildfire Protection Program, to reduce potential impacts on monarch butterfly aggregation sites from wildfire.

Action 9-1.3. Implement Program 13, Integrated Pest Management Program, to reduce the potential impacts from pest infestations.

Policy 9-2. The City shall assess the damage of catastrophic events as they occur and respond with corrective action to restore damaged monarch butterfly habitat.

Action 9-2.1. Measure the extent and assess the magnitude of the damage to the monarch butterfly overwintering habitat.

Action 9-2.2. Design and implement a response strategy with actions to correct and restore the habitat after the catastrophic event and include them in the annual Implementation Plan (Policy 1-3), if practical. When feasible, employ phased approaches with consistent monitoring to evaluate success or need for changes in strategy or actions. Assign priorities, including sources of materials, constraints, and methods for debris management.

Steps for Response Strategy:

1. Define the extent of the damage to the monarch butterfly habitat within the plan area.
2. Divide affected area into sections for a phased approach, based on level of damage and importance of overwintering site compared to other areas.
3. Assign priorities to the divided sections of the damaged area.

4. Implement guidance from Programs 4, 12, and 13 for specifics in those areas.

Example Response Strategy for a catastrophic event that causes the die-back of 25% of the trees in the MBHMP area. The catastrophic event for this example could be fire, drought, pest, disease, wind storm, etc.

1. Consider whether the catastrophic event presents an imminent danger to the public, and install warning signage and/or closures as appropriate.
2. Assess and analyze the extent of the dead/dying trees in the forest at Ellwood Mesa in relation to the monarch butterfly aggregation areas.
3. Establish a phased approach for restoration activities, starting with the most affected areas. Tag and map the trees that are dead, dying, diseased, burnt, hazardous, or otherwise affected by the catastrophic event. Confer with arborists, biologists, and/or other relevant specialist to select trees for removal to benefit the forest on a whole and facilitate restoration. Remove selected trees in the first phase area. The removed trees may be disposed of off=site or chipped for use on site as ground cover. Install new trees and native understory species with irrigation.
4. Monitor the success of the plantings and irrigation over a set time (e.g., 1–2 years). Replace plantings, as needed.
5. Adjust restoration methods if necessary and implement phased approach at the next priority phase area for restoration.
6. Repeat steps 2 through 5 until every area has been attended to and restored.
7. Continue to monitor for the presence of monarch butterflies during the aggregation season and other wildlife.

Action 9-2.3. Request City Council approval for supplemental funding, with a finding that the condition is a catastrophic event. Use funding received from the State Budget, apply for grants, and/or accept private donations for the dedicated mission of monarch butterfly overwintering habitat restoration.

Program Status: Tree condition surveys that have been completed for Ellwood Mesa eucalyptus trees have identified the number of dead trees. Cause of tree mortality has been identified as drought and pest infestations. Ellwood Main and Ellwood North monarch butterfly aggregation sites contain many dead trees. In-depth planning for management and recovery of a living eucalyptus forest will be detailed in an annual Implementation Plan. Similar events have occurred in the past and are likely to be part of the future.

Program Needs: Development of an Implementation Plan addressing the significant die-off of eucalyptus trees on Ellwood Mesa is underway. The City should have an ongoing response program in place so that careful and measured decisions following a catastrophic event can be implemented.

Program Contact: Public Works Department

B. NATURAL RESOURCES MANAGEMENT PROGRAMS

Seven natural resources management programs are provided that articulate the goals, policies, and actions necessary to maintain and improve the many important natural resources, including biological diversity and ecosystem functions, associated with the Ellwood Mesa eucalyptus groves and the monarch butterfly aggregation sites they support.

10. Monarch Butterfly Management Program

Overview: The City's General Plan includes a policy specific to the protection of monarch butterfly habitat areas, including the habitat on Ellwood Mesa. The City's Ellwood Mesa Open Space Plan further specifies the need to protect and maintain the eucalyptus habitat to be self-sustaining and identifies the need for managed public access, scientifically sound existing conditions studies, phased habitat improvements, and adaptive management. The primary focus of the Habitat Management Plan described below is to implement the directives of the General Plan and Ellwood Mesa Open Space Plan.

Goal 10. To ensure the ongoing use of Ellwood Mesa by the monarch butterfly.

Policy 10-1. The City shall implement management strategies that facilitate the use of Ellwood Mesa by monarch butterflies.

Action 10-1.1. Implement Program 12, Tree Management Program, to help facilitate the conservation of the monarch butterfly aggregation sites.

Action 10-1.2. Implement Program 20, Biological Monitoring Program, and Program 21, Monarch Research Program, to expand the body of knowledge and further the understanding of the monarch butterflies' use of the resources at Ellwood Mesa.

Policy 10-2. Preservation of aggregation sites on Ellwood Mesa shall be the focus of management activities, as feasible, and in coordination with Program 9, Catastrophic Event Response Program.

Action 10-2.1. Should one or more catastrophic events result in impacts on the sustainability of monarch butterfly aggregation sites, consider alternative management and recovery strategies that incorporate goals for sustaining aggregation sites at Ellwood Mesa.

Policy 10-3. Ecosystem functions proposed for habitat restoration projects at Ellwood Mesa shall consider inclusion of native plant species.

Action 10-3.1. Implement Program 14, Habitat Enhancement and Restoration Program, as feasible, to improve conditions for native plants and animals and the ecosystem functions

they provide in and adjacent to the eucalyptus groves containing monarch butterfly aggregation sites.

Policy 10-4. To avoid impacts on monarch butterflies while they are present at the Ellwood aggregation sites, no maintenance or restoration work shall be conducted in the aggregation sites from October 1 through March 31 of each year, unless authorized by a qualified biologist.

Action 10-4.1. Unless authorized by a qualified biologist, conduct all site maintenance, tree trimming and removal, habitat restoration, exotic plant removal, and other potentially invasive activities between April 1 and September 30 of each year, when there would not likely be direct impacts on monarch butterflies.

Program Status: Monarch butterflies are important to the ecosystem of Ellwood Mesa and to the City's sense of community. Development and implementation of this MBHMP is an important step in the active conservation of the monarch butterflies and their habitat at Ellwood Mesa.

Program Needs: New information about monarch butterflies regularly emerges from the scientific community, and the Ellwood Main site is an important site for the sustainability of monarchs. The more monarch butterfly biology is understood, the better Ellwood Mesa can be managed.

Program Contact: Public Works Department

11. Wildlife Habitat Management Program

Overview: Eucalyptus groves supporting seasonal aggregation sites for monarch butterflies also provide habitat for other wildlife species. Examples include or have included perches for red-shouldered hawks, roosting sites for turkey vultures, and nesting sites for white-tailed kites, Cooper's hawks, great horned owls, and acorn woodpeckers. This MBHMP identifies management strategies for conserving habitat for monarch butterflies that are intended to be consistent, where feasible, with management of habitat for other wildlife species.

Goal 11. Manage eucalyptus groves at Ellwood Mesa for monarch butterflies in a manner consistent with ecosystem functions for other wildlife species that use the groves as habitat.

Policy 11-1. The eucalyptus groves at Ellwood Mesa that support monarch butterfly aggregation sites shall be managed in a manner consistent with ecosystem functions supporting other wildlife species, where feasible.

Action 11-1.1. All personnel associated with the implementation of this MBHMP will receive educational information regarding the presence of monarch butterfly and other native wildlife species and the need to protect all native wildlife species.

Action 11-1.2. Preserve some trees with cavities to provide opportunities for cavity-nesting birds, such as acorn woodpeckers.

Action 11-1.3. Avoid removal of or disturbance to trees or other woody vegetation during nesting bird season (March 15 to August 15), when feasible. If not feasible, a biological monitor will survey for nesting birds in the area of proposed vegetation removal and ensure no active nests are present prior to removal or disturbance.

Action 11-1.4. Limit vegetation removal and ground disturbance activities to the dry season. Avoid areas with open water in Devereux Creek and tributaries.

Policy 11-2. Program 14, Habitat Enhancement and Restoration Program, shall complement the Wildlife Habitat Management Program.

Action 11-2.1. Include native plant species that are important for wildlife habitat and food in enhancement and restoration projects (Appendix 3).

Action 11-2.2. Require a Planting Plan for any proposed enhancement plantings near the groves containing aggregation sites.

Action 11-2.3. Consider increasing mid-canopy and low-stature or groundcover native plant species to enhance wildlife habitat complexity and increase potential use of eucalyptus groves by a variety of wildlife species.

Action 11-2.4. Implement restoration for the Devereux Creek riparian corridor to improve functions for wildlife, consistent with the goals of this MBHMP for monarch butterflies.

Program Status: A variety of management actions have occurred in the Ellwood Mesa eucalyptus groves, including monitoring the butterfly populations, evaluating the health of the eucalyptus grove and individual trees, and educating the public regarding the sensitivity of the aggregation sites. However, a comprehensive approach to managing and educating the public as to the importance of all native wildlife species that inhabit the Ellwood Mesa eucalyptus groves will benefit both the visitors and the natural resources of the open space area.

Program Needs: Adoption and implementation of this MBHMP will include programs to improve the health of the habitats and their ecosystem functions for wildlife species in general, and monarch butterflies in particular.

Program Contact: Public Works Department

12. Tree Management Program

Overview: One of the most important aspects of this MBHMP is the set of management practices that would result in a sustainable eucalyptus forest that supports aggregation sites for monarch butterflies. Health of the individual eucalyptus trees, structure of the aggregation sites, and long-term sustainability of the groves supporting the sites are of primary importance. In response to these management needs, as well as concern for public safety within the groves and concern for wildfire

hazards, City staff continues to work with professional biologists and arborists to develop protocols for managing the eucalyptus groves supporting monarch butterfly aggregation sites. The information obtained during inventories and assessments, and coordination with the development of the CWPP, resulted in the management recommendations as presented in this MBHMP.

Goal 12. To manage the eucalyptus groves within monarch butterfly aggregation sites at Ellwood Mesa in a manner that provides for (1) healthy trees, (2) suitable aggregation site structure, (3) sustainable butterfly aggregation sites, (4) public safety while visitors are on trails within the groves, and (5) sensitivity to wildfire hazards.

Policy 12-1. Eucalyptus trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to ensure tree health and longevity.

Action 12-1.1. Include guidance for necessary tree work in the annual Implementation Plan (Action 1-4.1). Tree work will take place in the month of September each year. The Implementation Plan should specify responsible parties, work locations, individual trees addressed, work to be accomplished, restoration measures, and methods and procedures for managing tree health. An annual plan is recommended but may be prepared on an as-needed basis based on conditions and progress of the previous Implementation Plan.

Action 12-1.2. Preliminarily identify potential threats to aggregation sites that may occur over time and develop a framework for mitigating the threats and maintaining/recovering suitable overwintering habitat. Threats may include, but are not limited to, the following:

- Drought
- Pests
- Disease
- Fire
- Flood/erosion
- Vandalism
- Invasion by non-native plants (not including eucalyptus)

These threats, as well as others, may arise and impair the function of Ellwood Mesa as habitat for overwintering monarch butterflies. When threats are encountered, a specific plan of action should be undertaken to address the needs of the situation. However, for planning purposes, the City should be prepared to undertake the response measures outlined in Table 2 below. Although not exhaustive, these measures represent a prudent suite of response tools to address future conditions. Measures listed below may prevent or rectify impacts from multiple types of threats, as the intent of the measures is to restore and encourage healthy habitat.

Table 2. Identified Threats and Potential Response Actions

Potential Actions/Tools for Management	Purpose/Goal/Target	Threat/Cause
Selective removal of standing dead trees	To protect the living trees from being taken out if a dead tree falls, and to provide space for growth of young trees.	Drought, disease, pests, fire
Selective removal of downed trees/debris	To open up space in the grove for younger trees to grow and replace dead trees. To reduce fuel load.	Drought, disease, pests, fire
Watering/irrigation	To prevent trees (established and newly planted) from declining in health because of insufficient water, or attempt to recover drought-stressed trees. Provide water to establish replacement trees. Use of reclaimed water should be explored.	Drought
Planting trees	To correct habitat deficiencies such as: ▪ The overstory has become too sparse. ▪ Wind speeds in the grove are too strong. ▪ A tree died, fell over, or was removed.	Death of one or more trees, insufficient canopy, or aggregation site protection.
Planting understory species	To add or create a diverse understory. To add nectar sources. To create variable edge barrier.	Non-native plants, poor/homogeneous understory
Planting nectar sources within and near groves	To make nectar sources for adult monarchs available near the overwintering sites.	Non-native plants, understory lacking nectar species
Selective pruning	To prune or remove understory plants when they reduce monarch butterfly flight space or aggregation areas. To protect/maintain the open interior of the grove.	Understory becomes too dense
Re-contouring/grading	In the case of a flood, to correct erosion and reshape the drainage channel to protect trees.	Flood/erosion
Installation of erosion control best management practices (BMPs)	To prevent future erosion and direct flows away from erosion-sensitive areas (exposed roots, etc.).	Flood/erosion

Action 12-1.3. Thresholds should be established to direct professional review and potential action to address conditions in the groves. Ultimately, it is envisioned that quantitative thresholds will be established based on the results of monitoring and scientific study within the groves (Programs 20, 21, and 22). However, until adequate reference data are available, action thresholds will be determined qualitatively by the City in consultation with a qualified monarch butterfly biologist.

Factors for Consideration:

- Did a major tree fall down in or adjacent to a known overwintering site?
- Is a butterfly expert recommending that action be taken?
- Has the butterfly overwintering population at a specific site decreased dramatically in a way that does not follow the populations at other sites in the vicinity?
- Is there erosion or threat of exposed roots of trees in or adjacent to a known overwintering site?
- Has the tree canopy decreased noticeably and dramatically?
- Has a certified arborist identified a high-risk tree that could degrade the aggregation site?

Steps for Taking Action:

1. Identify the threat (persistent or temporary, site-specific or large-scale).
2. Consult with a qualified monarch butterfly biologist, guided by the goals for a sustainable overwintering habitat.
3. Develop a plan of action.
    - If the problem is large-scale, a prescribed action may be taken in phases and the effect will be evaluated to assess success before any large-scale implementation of the action.
    - Manipulative experiments may occur in coordination with adaptive management, such as pilot studies, to inform decisions.
4. Obtain approvals. Depending on the plan of action, authorization from the City Council, CCC, and/or resource agencies may be needed. Environmental review may also be required, depending on the scope.
5. Implement the plan of action.
6. Monitor and document results.
    - Areas affected by response actions, especially major ones, should be included in the monitoring program conducted under Program 20, Biological Monitoring Program.

Action 12-1.4. Implement Program 13, Integrated Pest Management Program, to help maintain tree health and control infestation in the eucalyptus groves supporting monarch butterfly aggregation sites.

Action 12-1.5. Cut down or prune trees identified as a threat to butterfly aggregation sites because they may fall and cause injury or collapse on other trees important to sustaining aggregation sites.

Action 12-1.6. Maintain a living forest within the outline of pre-drought forest extent as determined with historic aerial photographs. Restore sections of the forest where dead zones occur due to multiple tree die-offs.

Action 12-1.7. Implement Program 14, Invasive Plant Management Program, particularly regarding non-native vines that could affect the quality of monarch butterfly habitat, following recommendations for eradication consistent with the California Invasive Plant Council (Cal-IPC) and conservation priorities of monarch butterflies and their habitat.

Action 12-1.8. Implement Program 20, Biological Monitoring Program, to provide information regarding management of eucalyptus groves to ensure their health and longevity.

Action 12-1.9. Annually, identify conditions that threaten trees at aggregation sites and include recommended actions in the Implementation Plan to reduce perceived threats.

Action 12-1.10. Plant trees as needed to maintain grove density and improve monarch butterfly habitat. Plant in locations that improve aggregation site conditions as per the best available scientific analysis, and replant areas within historic eucalyptus grove extent where gaps have occurred from drought die-back.

Action 12-1.11 Following evaluation of compatibility with existing habitat and functionality with respect to butterfly habitat, conduct a pilot planting for any eucalyptus species considered for tree restoration that is not present in the MBHMP area as of 2018.

Policy 12-2. Eucalyptus trees in the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to provide sustainable habitat for butterfly aggregation sites.

Action 12-2.1. When considering eucalyptus or other tree replacement actions, consider tree configurations that retain open areas for monarch butterfly patrolling and monarch overwintering preferences.

Action 12-2.2. Investigate potential enhancement to monarch butterfly patrolling habitat by reducing tree tangles and fallen debris.

Action 12-2.3. Remove hazard trees as necessary to protect monarch butterfly cluster locations, as consistent with goals for public safety.

Action 12-2.4. Implement, as feasible, Program 10, Monarch Butterfly Management Program, to facilitate improvements in eucalyptus groves that help sustain aggregation sites.

Action 12-2.5. Protect blue gum saplings as necessary to encourage natural recruitment of trees in the eucalyptus forest.

Policy 12-3. Eucalyptus trees within the groves containing monarch butterfly aggregation sites shall be managed, as feasible and consistent with conservation of monarch habitat, to provide safe conditions for the visiting public.

Action 12-3.1. Prune and remove dead, dying, or particularly vulnerable tree trunks and branches that overhang trails and seating areas, or lay across trails, inside and near monarch butterfly aggregation sites to reduce the threat of injury from falling trunks and branches, debris on trails (trip hazards), or low-hanging material across trails that visitors could bump heads on.

Action 12-3.2. As recommended by the City arborist and detailed in the annual Implementation Plan, conduct work designed to protect and improve the structure of aggregation sites.

Action 12-3.3. As recommended by the City arborist and detailed in the annual Implementation Plan, remove or prune dead standing, dead suspended, dead on the ground, or thick understory trees both to improve grove tree health and monarch butterfly habitat and to correct hazard conditions for human safety along trails and at observation sites.

Action 12-3.4. Consider using downed, dead trees for seating along trails, or to add to slope stability or help control erosion, for preservation rather than removal, as feasible, considering human safety or wildfire threat.

Action 12-3.5. Remove ground debris, such as accumulations of branches and leaves, at trailheads in particular to reduce threat from wildfires, to reduce threat to human safety from obscured views, and to increase aesthetic appeal.

Action 12-3.6. In consultation with the City arborist, conduct an annual review of tree health in April and May at aggregation sites. Develop and implement an annual Implementation Plan to address issues identified during the review, including potential need for tree removal or pruning, treatment of diseases or pests, and other potential recommendations.

Policy 12-4. Eucalyptus trees within the groves containing monarch butterfly aggregation sites shall be managed, as feasible, to provide for low wildfire hazards.

Action 12-4.1. Implement Program 4, Community Wildfire Protection Plan, to provide wildfire protection consistent with the City's adopted CWPP.

Action 12-4.2. Reduce accumulations of dead, dry, and loose organic and other flammable material within eucalyptus groves to decrease potential for ground-level fires becoming canopy fires as a result of ladder effect of fire hazard materials. Sufficient downed wood, debris, and ground cover will be left in place to provide substrate and shelter for monarchs dislodged from clusters.

Action 12-4.3. Remove accumulations of dead plant material along southern grassland margins of eucalyptus groves and at southern trailheads to reduce threat of grassland fires becoming eucalyptus grove fires as a result of fire hazards at the boundary between grasslands and groves via mowing or selective weed-whacking. Herbicides shall not be used.

Action 12-4.4. Replace removed understory plants as recommended by the City monarch butterfly biologist with fire-resistant native shrubs to restore and improve habitat structure for monarch butterflies (Appendix 3).

Action 12-4.5. Coordinate (1) butterfly habitat management, (2) public access and safety needs, (3) fire management requirements, and (4) wildlife habitat restoration proposals to ensure management priorities and implementation of procedures that provide the most compatible result for the conservation of monarch butterflies, while also respecting the goals of the other MBHMP programs, as feasible.

Program Status: Although eucalyptus trees in some groves with monarch butterfly aggregation sites are in good health (e.g., Sandpiper and Ocean Meadows, both of which are more windrow-like than grove-like), others are of average health (Ellwood West), and some are rated poor (Ellwood East, Ellwood North, and the important Ellwood Main). As of July 2017, a significant die-off of trees occurred from drought and pest infestation, resulting in over 1,200 dead trees on Ellwood Mesa.

Program Needs: Quantitative habitat condition standards based on best available science that establishes thresholds for action. With adoption of this MBHMP and implementation of the 22 programs—in particular, Program 12, Tree Management Program—the health of the eucalyptus groves supporting monarch butterfly aggregation sites is anticipated to improve and become a more sustainable resource.

Program Contact: Public Works Department

13. Integrated Pest Management Program

Overview: Eucalyptus trees are subject to a variety of pests and diseases that can injure or kill trees. When trees occur in groves, the spread of pests and disease is facilitated by proximity to infected trees, resulting in the potential of widespread loses. Current and past infestations at Ellwood Mesa of blue gum and river red gum (*Eucalyptus camaldulensis*) include lerp psyllids on leaves, tortoise beetles, longhorned borer beetles, and orange sulfur fungus. Insect pests are often present in equilibrium with their predators and do not need further control. However, new threats to trees on Ellwood Mesa may occur that require pest control measures. Invasive non-native species such as English ivy and cape ivy also can be problematic, smothering entire trees and changing or destroying wildlife habitat (Refer to Program 15, Invasive Plant Management Program). Various approaches to pest management will be necessary to try experimentally to determine which approach works best for each pest without affecting native plant and animal species, including birds, and monarch butterflies and their seasonal aggregation sites.

Goal 13. Control or eradicate, as feasible, plant, animal, fungal, and other pests that would result in detectable impacts on monarch butterflies or degrade monarch butterfly habitat.

Policy 13-1. To maintain current knowledge of pests and diseases, the City shall conduct an annual inventory of organisms negatively affecting trees in the groves at Ellwood Mesa.

Action 13-1.1. Conduct an inventory of pests and diseases throughout the groves and windrows at Ellwood Mesa.

Action 13-1.2. Conduct an inventory of pests and diseases within the monarch butterfly aggregation sites in the Ellwood North, Ellwood West, Ellwood Main, Ellwood East, Sandpiper, and Ocean Meadows groves.

Policy 13-2. The City shall consider using a variety of approaches to pest management to prevent pests and diseases from affecting eucalyptus groves, particularly those supporting seasonal aggregation sites for monarch butterflies.

Action 13-2.1. As feasible, experiment with different integrated pest management (IPM) approaches for different pests and diseases to determine which approach best suits the conditions in eucalyptus groves at Ellwood Mesa.

Action 13-2.2. Implement wise management practices in the eucalyptus groves at Ellwood Mesa that do not facilitate the spread of pests and diseases in groves.

Action 13-2.3. Identify current problems that require immediate treatment and implement appropriate treatment protocols.

Action 13-2.4. Implement a pest and disease monitoring program, as feasible, to determine success of treatments and any new infestations requiring treatment.

Program Status: Currently, no IPM approaches are implemented for eucalyptus trees at Ellwood Mesa. A tree inventory was conducted in 2017 that found over 1,200 dead eucalyptus trees on Ellwood Mesa City property. An Implementation Plan is in preparation to address tree health issues.

Program Needs: Adopt the MBHMP and implement the 22 MBHMP programs—including Program 13, Integrated Pest Management Program—to reduce the threat of impacts on tree health and sustainability and the potential for degradation of habitat supporting monarch butterfly aggregation sites.

Program Contact: Public Works Department

14. Habitat Enhancement and Restoration Program

Overview: This program focuses on the enhancement of the eucalyptus groves from a native plant and wildlife habitat perspective and on the restoration of the Devereux Creek corridor along the

northern margin of Ellwood West, Ellwood Main, and Ellwood East groves. The mid-canopy vegetation and understory of the eucalyptus groves is generally lacking or in some situations is composed of non-native invasive plant species. Enhancement of groves with native plant species would benefit native wildlife. Various native plants are present but scattered within the groves. Most of these plant species have fleshy fruits and are bird-dispersed. Restoration of portions of Devereux Creek associated with eucalyptus groves, as feasible, is consistent with the goal to restore Devereux Creek. This restoration would provide important habitat for native plant and animal species and would potentially improve water quality flowing downstream to Devereux Slough and the Pacific Ocean.

Goal 14. To provide for the enhancement of native plant and animal habitats in the context of preserving the monarch butterfly habitat associated with established eucalyptus groves.

Policy 14-1. Establishment of appropriate native plants—in particular, ground cover, shrub, and mid-canopy species—shall be encouraged in the eucalyptus groves and along the Devereux Creek corridor outside of the eucalyptus groves.

Action 14-1.1. Plant experimental plots of native ground cover species to determine which species may result in sustainable populations.

Action 14-1.2. Focus enhancement efforts on native plants existing in the eucalyptus groves, such as toyon (*Heteromeles arbutifolia*), and native plants with nectar sources for monarchs (Appendix 3).

Action 14-1.3. Coordinate with Program 13, Integrated Pest Management Program, and Program 15, Invasive Exotic Plant Management Program.

Policy 14-2. Areas between eucalyptus groves shall be considered for habitat enhancement and restoration alternatives.

Action 14.2.1. Implement priority native plant restoration activities along Devereux Creek in areas outside of eucalyptus groves.

Action 14-2.2. Eradicate non-native herbaceous cover, seedlings, and saplings (not including eucalyptus saplings) in areas between eucalyptus groves to encourage or actively plant local natives.

Policy 14.3. Restoration of Devereux Creek shall include appropriate actions to improve the habitat structure, ecological functions and processes, and native biodiversity of the existing native riparian areas.

Action 14-3.1. Restoration activities include establishment of a riparian area along the banks of Devereux Creek composed of native riparian tree species.

Action 14-3.2. Ensure that no restoration activities along Devereux Creek shall result in increased flooding.

Action 14-3.3. Coordinate to align efforts with other restoration projects under separate permits or mitigation plans for Devereux Creek.

Policy 14-4. Native plant species are considered to be local genotypes of plants occurring naturally within the Ellwood Mesa/Devereux Creek Ecosystem.

Action 14-4.1. Collect all plant materials for use in restoration projects from existing native plant populations in the Ellwood Mesa/Devereux Creek Ecosystem, where feasible.

Action 14-4.2. Collect plant material from the nearest existing populations for re-introduction of extirpated species.

Action 14-4.3. Obtain native plants for use in restoration from local nurseries or growers within the Santa Barbara area, emphasizing contract-grown material of local genotypes.

Policy 14-5. No enhancement or restoration actions shall result in negative impacts on the quality of the eucalyptus groves that provide monarch butterfly habitat.

Action 14-5.1. Coordinate with Program 10, Monarch Butterfly Management Program; Program 11, Wildlife Habitat Management Program; and Program 12, Tree Management Program.

Policy 14-6. No enhancement or restoration actions shall conflict with the goals and policies of the CWPP.

Action 14-6.1. Coordinate all enhancement and restoration activities with the guidelines and recommendations of the CWPP.

Program Status: An Implementation Plan that describes work activities to occur each year will accompany this MBHMP.

Program Needs: Adoption of this MBHMP and implementation of Program 14, Habitat Enhancement and Restoration Program, and fund-raising necessary to design, permit, implement, and maintain the projects.

Program Contacts: Public Works Department and Planning and Environmental Review Department

Photo 3. Toyon (*Heteromeles arbutifolia*), a Native Shrub or Small Tree in the Ellwood Main Grove

15. Invasive Plant Management Program

Overview: Cal-IPC has established a list of invasive, non-native plant species of concern regarding conservation of California natural heritage (www.cal-ipc.org/ip/inventory/index.php). Invasive non-native plants are defined by Cal-IPC (2006) as "plants that 1) are not native to, yet can spread into, wildland ecosystems, and that also 2) displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes." Non-native invasive plants have been given High, Moderate, or Limited ratings by Cal-IPC, depending on the severity of their potential for resulting in impacts on wildland ecosystems.

The monarch butterfly aggregation sites at Ellwood Mesa are themselves characterized and dominated by non-native and potentially invasive plants species—most importantly blue gum, given a "Moderate" rating, and to a lesser degree river red gum, given a "Limited" rating. However, these stands of introduced trees are designated as an ESHA in the General Plan because of their importance to monarch butterflies as fall and winter aggregation sites. Several other aggressively invasive non-native plant species have prominent visual and habitat impacts within the monarch aggregation sites at Ellwood Mesa. These are mostly vines that climb butterfly habitat trees, and herbaceous ground cover, which potentially endanger the character and sustainability of the

aggregation sites. Examples of these deleterious invasive species at Ellwood Mesa and their ratings are listed below:

- "High" rating:
  - Canary Islands ivy (*Hedera canariensis*)
  - English ivy (*Hedera helix*)
  - Cape ivy (*Delairea odorata*)
  - Victorian box or mock orange (*Pittosporum undulatum*)
- "Moderate" rating:
  - Panic veltgrass (*Ehrharta erecta*)
  - Myoporum (*Myoporum laetum*)
- "Limited" rating:
  - Kikuyu grass (*Pennisetum clandestinum*)
  - New Zealand spinach (*Tetragonia tetragonioides*)

Photo 4. Canary Islands Ivy (*Hedera canariensis*) along Trail and Growing up Trees at Ellwood Main

Goal 15. To eradicate existing stands of invasive non-native species and prevent or control new occurrences of invasive non-native plant species within the monarch butterfly habitat at Ellwood Mesa.

Policy 15-1. The City shall undertake an inventory and generalized mapping program to identify, locate, and prioritize for eradication or control all invasive non-native plant species within the butterfly habitat at Ellwood Mesa.

Action 15-1.1. Identify and map all invasive non-native species identified by Cal-IPC as "High" priority species.

Action 15-1.2. Identify and map all invasive non-native species identified by Cal-IPC as "Moderate" priority species.

Action 15-1.3. Identify all invasive non-native species identified by Cal-IPC as "Limited" or unrated priority species and map any medium to large populations.

Policy 15-2. The City shall control all "High," "Moderate," and "Limited" priority invasive plant species within the monarch butterfly habitat, except those species for which monarch butterflies are dependent, as feasible.

Action 15-2.1. Control all "High" priority invasive non-native invasive plant species.

Action 15-2.2. Control all "Moderate" priority, non-native invasive plant species.

Action 15-2.3. Eradicate or control all medium or large stands of "Limited" or unrated priority non-native invasive plant species.

Policy 15-3. The City shall undertake annual monitoring as feasible to identify and eradicate or control new occurrences of "High" or "Moderate" priority invasive non-native plant species.

Action 15-3.1. Implement monitoring of eradication efforts and potential new occurrences as part of Program 20, Biological Monitoring Program.

Action 15-3.2. Coordinate with other programs in this MBHMP, including Program 14, Habitat Enhancement and Restoration Program.

Program Status: Currently, no non-native invasive plants species control or detection program is in place for the eucalyptus groves at Ellwood Mesa.

Program Needs: Adoption of this MBHMP and implementation of the MBHMP programs, including Program 15, Invasive Plant Management Program.

Program Contacts: Public Works Department and Planning and Environmental Review Department

16. Ecosystem-wide Management Coordination Program

Overview: The eucalyptus groves, including those areas where seasonal monarch butterfly aggregation sites occur, do not exist as island ecosystems but in fact are part of a broader ecosystem of the Ellwood Mesa and Devereux Creek Watershed, including UCSB's North Campus Open Space (Upper Devereux Slough) and Coal Oil Point Reserve. This MBHMP primarily addresses monarch butterfly eucalyptus tree habitat in the Ellwood Mesa Open Space.

Goal 16. To manage the eucalyptus trees supporting seasonal monarch butterfly aggregation sites by coordinating among the 22 programs directed toward the management of monarch butterfly habitat and to consider management of eucalyptus groves in the context of managing the entire Ellwood Mesa Open Space.

Policy 16-1. The City shall manage eucalyptus trees in the context of all eucalyptus habitat supporting monarch butterfly aggregation sites at Ellwood Mesa.

Action 16-1.1. When considering implementation of actions for each program, consider their relationships to other actions in the same program.

Action 16-1.2. When considering implementation of actions for each program, consider their relationships to actions in related programs.

Policy 16-2. The City shall manage eucalyptus trees supporting monarch butterfly aggregation sites in the context of all eucalyptus habitat at Ellwood Mesa.

Action 16-2.1. Through results of Program 20, Biological Monitoring Program, consider potential changes in monarch butterfly use of other aggregation locations at Ellwood Mesa, impacts of pests and diseases throughout the eucalyptus groves, or other relevant factors that can potentially affect monarch butterflies and their habitats at Ellwood Mesa.

Policy 16-3. The City shall manage eucalyptus trees supporting monarch butterfly aggregation sites in the context of all habitats at Ellwood Mesa.

Action 16-3.1. When considering implementation of management actions for eucalyptus trees, consider their relationships to management actions for other habitats and programs for all of Ellwood Mesa.

Program Status: The City regularly coordinates the management of Ellwood Mesa with adjoining public agency land managers, including UCSB and Santa Barbara County. The focus of these management meetings is to ensure that trails are connected, grant applications are coordinated, and general issues such as illegal encampments and police enforcement are discussed and collectively addressed.

Program Needs: Adopt this MBHMP and implement its 22 programs considering the potential interaction of the program actions and results. Examples include eradication of exotic plant species

(Program 15, Invasive Plant Management Program) and removal of trash and debris (Program 6, Waste Management Program), followed by habitat enhancement efforts (Program 14, Habitat Enhancement and Restoration Program) within the affected sites in eucalyptus groves, in particular along affected trails (Program 5, Trail Management Program) with potential for additional erosion.

Program Contacts: Public Works Department and Planning and Environmental Review Department

C. OUTREACH PROGRAMS

Outreach programs are designed to provide information to visitors, educators, and students to help develop a broad appreciation for natural resources and local natural heritage, with a focus on monarch butterflies.

17. Community Advisory and Docent Program

Overview: The residents of Goleta have been actively involved in the protection and acquisition of Ellwood Mesa over many decades, with a focus on the conservation of the monarch butterfly aggregation sites. The long-term sustainability of the eucalyptus groves and the aggregation sites they support will depend in part on the continuing public involvement in the process.

Goal 17. To provide a formal vehicle to involve public participation, the City shall engage with the City's butterfly docents to provide recommendations to the Public Works Department.

Policy 17-1. The City shall engage with the City's butterfly docents to review MBHMP implementation work plans and make recommendations to the Public Works Department.

Action 17-1.1. Identify a point of contact with the City's butterfly docents, referred to the as the Butterfly Docent Coordinator, who will coordinate with and speak on behalf of the docents with the Public Works Department, Planning and Environmental Review Department, and Neighborhood Services Department.

Action 17-1.2. Set up regular meetings between the Butterfly Docent Coordinator and City staff.

Policy 17-2. As needed, the City shall continue to support the City's Butterfly Docent Program, the Butterfly Docent Coordinator, and ongoing training for the docents to ensure that educational opportunities for the public are maintained and to demonstrate the City's stewardship of the eucalyptus groves.

Action 17-2.1. Continue to support the Butterfly Docent Program and the Butterfly Docent Coordinator.

Action 17-2.2. Continue to support and update the City of Goleta's monarch butterfly website at www.goletabutterflygrove.com.

Action 17-2.3. Continue to support development of educational materials to be used by docents during scheduled public tours of the monarch butterfly aggregation sites.

Action 17-2.4. Train docents in the details of this MBHMP.

Action 17-2.5. Expand the pool of trained docents and encourage docent assistance with the implementation of this MBHMP.

Program Status: An active Butterfly Docent Program, including a Butterfly Docent Coordinator, has been in operation since 2007.

Program Needs: With adoption and implementation of this MBHMP, the existing docent program becomes part of the structure of this MBHMP. No formal volunteer program exists to assist in the implementation of this MBHMP.

Program Contacts: Neighborhood Services Department, Public Works Department, and Planning and Environmental Review Department.

18. Interpretive Program

Overview: Although there are a few signs identifying the Ellwood Main grove and several behavioral signs regarding trails, there are no interpretive signs that provide information regarding the biology of monarch butterflies, general aspects of Ellwood Mesa, and the importance of the aggregation sites. There is an interpretive sign program at the nearby Coronado Butterfly Preserve. City butterfly docents at Ellwood Mesa provide an important role, and the City's monarch website has important information and links to the National Geographic monarch web information. However, for the casual visitor without web access and without the presence of a docent, there is no interpretive information to assist in understanding this significant biological phenomenon.

Goal 18. To establish a useful and informative interpretive signage program at Ellwood Mesa monarch butterfly aggregation sites that is environmentally sensitive and creates a minimum of intrusion into the habitats.

Policy 18-1. The City shall design and install an interpretive signage program that provides important information on the biology of monarch butterflies, the significance of the aggregation sites, and general information on Ellwood Mesa and the eucalyptus groves, when feasible.

Action 18-1.1. Apply for grant funding to design, construct, and install the interpretive signage program.

Action 18-1.2. Design, construct, and install an interpretive signage program that is sensitive to the environment.

Action 18-1.3. Locate the interpretive signage program in key locations minimally intrusive to the sensitive habitats of Ellwood Mesa.

Policy 18-2. The Butterfly Docent Coordinator shall provide input during design, review the draft interpretive program, and make recommendations to the City.

Action 18-2.1. Involve the butterfly docents in all phases of the interpretive signage program.

Photo 5. Ellwood Main Grove Entrance Sign at Trailhead along Devereux Creek

Program Status: No on-site interpretive program currently exists for the eucalyptus groves supporting monarch butterfly aggregation sites.

Program Needs: Adopt this MBHMP—including Program 18, Interpretive Program—and include links to the city's existing website and docent program.

Program Contact: Neighborhood Services Department and the Public Works Department.

19. Education Program

Overview: Education has always been an important part of the Ellwood Mesa monarch butterfly enthusiasm expressed by the residents of the area. Local and regional schools participate on a regular basis, especially when monarch butterflies are using the seasonal aggregation sites. Also, the

National Geographic educational information is available through the City's website: www.goletabutterflygrove.com. Therefore, it is important that education is a part of this MBHMP.

Goal 19. To provide educational experiences and information for K–12 students.

Policy 19-1. The City shall continue to work with K–12 students and their schools to explore educational experiences regarding Ellwood Mesa and the eucalyptus groves supporting monarch butterfly aggregation sites.

Action 19-1.1. Continue to support the educational opportunities provided by the Ellwood Mesa eucalyptus groves and their monarch butterfly aggregation sites.

Action 19-1.2. Create educational materials regarding biology of monarch butterflies and their habitats.

Action 19-1.3. Continue to support the position of Butterfly Docent Coordinator.

Policy 19-2. The City shall continue to support its website containing educational materials regarding monarch butterflies.

Action 19-2.1. Support, expand, and revise as necessary the City's website www.goletabutterflygrove.com.

Program Status: The City has active participation in K–12 education programs, including scheduled docent-led tours of the aggregation sites when monarchs are present and presentations at local area schools during science fairs. The City's website also includes a link to the Monarch Teachers' Network.

Program Needs: Adoption of this MBHMP—including Program 19, Education Program—will formalize the city's contributions to K–12 students as part of this MBHMP for Ellwood Mesa.

Program Contact: Neighborhood Services Department

D. MONITORING, RESEARCH, AND ADAPTIVE MANAGEMENT PROGRAMS

Monitoring and research programs provide the mechanism for assessing environmental conditions and conducting original studies to help understand the ecology of monarch butterflies, particularly at Ellwood Mesa. Information obtained from these programs and other sources can be used to adapt the MBHMP to improved or additional information or changing conditions.

20. Biological Monitoring Program

Overview: Background studies of monarch butterfly number, aggregation locations, environmental conditions, tree health, wildlife, botanical resources, and climate have been conducted at Ellwood Mesa over many years. However, more detailed studies are warranted regarding tree health and failure risk, aggregation site canopy cover and light intensity, wind patterns, microclimate, soil moisture and water demand, viable forest density, pest control, wildlife species, invasive non-native plants, eucalyptus tree health (including pest and diseases), enhancement and restoration projects within the groves, impacts from access trails, and other important aspects of the biological and physical resources related to monarch butterfly aggregation sites.

Goal 20: To develop and implement a monitoring program integrating various components of the biological resources and impacts related to the eucalyptus groves that support seasonal monarch butterfly aggregation sites.

Policy 20-1. The City shall maintain annual counts of the butterfly population at the various aggregation sites on Ellwood Mesa.

Action 20-1.1. Count and document monarch butterfly population number and cluster locations within the six Ellwood Mesa aggregation sites every year. The counts shall be conducted every 2 weeks through the overwintering season (October 1 through March 15) using the counting protocol established by Xerces Society, as funding allows. Where possible, record the tree tag numbers of trees with clustering monarchs to establish habitat use patterns (Althouse and Meade 2018).

Policy 20-2. The City shall conduct an annual assessment of ecosystem-wide tree and vegetation health on Ellwood Mesa, as funding allows.

Action 20-2.1. Track ecosystem-wide tree and vegetation health on Ellwood Mesa using high resolution multispectral and hyperspectral imaging and analysis, or similar appropriate means (Appendix 2).

Action 20-2.2. Coordinate results of the ecosystem-wide tree health assessment with Program 12, Tree Management Program, as feasible, to determine necessary and applicable management actions.

Policy 20-3. Create a Monitoring Report, updated annually, resulting from the information obtained during the implementation of the various policies and actions called for in this MBHMP.

Action 20-3.1. Track the implementation of this MBHMP in the form of a Monitoring Report.

Action 20-3.2. Conduct a Visitor Impact Assessment as part of the monitoring program to determine use patterns and potential impacts on trails, changes in erosion of trails, and potential impacts on aggregation sites through which trails are located.

Action 20-3.3. Coordinate results of the monitoring reports with Program 22, Adaptive Management Program, as feasible, to determine if changes in management actions are necessary.

Program Status: Various studies and butterfly counts have been gathered on a somewhat irregular basis. The City recently conducted a Tree Inventory and Health Analysis. However, no formal regular monitoring program has been developed or implemented at eucalyptus groves, in particular those areas that support monarch butterfly aggregation sites.

Program Needs: Adopt and implement this MBHMP, including Program 20, Biological Monitoring Program.

Program Contact: Public Works Department

21. Monarch Research Program

Overview: Although the City has conducted field studies as part of the preparation of this MBHMP, the City has not actively encouraged scientific studies using appropriate and cautious methods to maintain and improve habitat of the Ellwood Mesa habitats.

Goal 21. Encourage research projects and identify funding for research associated with monarch butterflies and their habitats at Ellwood Mesa.

Policy 21-1. The City shall allow for certain research projects that investigate the biology of monarch butterflies and their habitats at Ellwood Mesa and that provide information helpful to this MBHMP management programs.

Action 21-1.1. Evaluate requests for research and, where approved, issue Scientific Research Permits to regulate the research efforts.

Action 21-1.2. Ensure that scientists use non-invasive research projects at Ellwood Mesa, in particular those that focus on monarch butterflies and their habitats, and require that the

results of the research are provided to the City and posted on the City's website at www.goletabutterflygrove.com.

Action 21-1.3. Encourage research of the plants native to Santa Barbara County with regard to their ability to provide suitable monarch butterfly overwintering habitat and their applications for the restoration of the Ellwood Mesa.

Program Status: No formal, ongoing research projects are conducted at the Ellwood Mesa eucalyptus groves that support monarch butterfly aggregation sites.

Program Needs: Adopt and implement this MBHMP, including Program 21, Monarch Research Program.

Program Contact: Public Works Department

22. Adaptive Management Program

Overview: Management plans with ongoing maintenance, restoration, monitoring, and research programs generally develop an information base that helps provide insight into those portions of the implemented management plan that are performing well and those that could be performing better or differently with changing situations. In addition to the update and amendment process provided in Program 8, MBHMP Review, Update, and Amendment Program, the Adaptive Management Program provides a vehicle for the management authority to make adjustments in management approaches on an as-needed basis, especially as new information provides new opportunities for improved management practices and resource stewardship.

Goal 22. To establish an adaptive management approach to resource management at the eucalyptus groves that supports monarch butterfly aggregation sites and their surrounding environment at Ellwood Mesa.

Policy 22-1. The City shall use an adaptive management approach to resource management at the eucalyptus groves that supports monarch butterfly aggregation sites and their surrounding environment at Ellwood Mesa.

Action 22-1.1. Implement adaptive management procedures associated with all relevant programs of this MBHMP for Ellwood Mesa.

Action 22-1.2. Include a description of adaptive management actions in the Monitoring Report (Action 20.3-1).

Action 22-1.3. Conduct a review of management policies and actions every fifth year, as feasible, to determine possible patterns in change regarding monarch butterfly use of the aggregation sites and overall ecosystem health of the monarch butterfly habitat at Ellwood Mesa.

Program Status: Currently, there are no adaptive management procedures associated with the management of the eucalyptus groves at Ellwood Mesa.

Program Needs: Adopt and implement this MBHMP, including Program 22, Adaptive Management Program.

Program Contact: Public Works Department

E. CONCLUSION

This MBHMP for the Ellwood Mesa/Sperling Preserve Open Space provides a fully functional programmatic plan for the management of natural resources, focusing on habitat that supports the phenomenal occurrence of seasonal aggregations of thousands of monarch butterflies at six aggregation sites at Ellwood Mesa. With adoption and implementation of this MBHMP, the City of Goleta will fulfill a major commitment to the natural resources of Ellwood Mesa and its residents, and all those committed to the conservation of monarch butterflies.

F. REFERENCES

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G. LIST OF PREPARERS

This MBHMP was collaborative effort. Consultants and City staff involved in the preparation of this plan are listed below.

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APPENDIX A. IMPLEMENTATION PRIORITIES, SCHEDULE, AND ESTIMATED COSTS

For the purposes of this MBHMP, implementation priorities, scheduling, and cost estimates are provided on a general programmatic basis. Programs are ranked as **Urgent**, **High**, and **Moderate** priority. They also are given an **Ongoing** and **Long-term** (+/- 5-year) scheduling estimate. Cost estimates are on an annual basis, with staff time listed as such and some first-year estimates in brackets.

Table A1. Implementation Priorities and Cost Estimates

	Cost ($)		City Labor Cost (hours)				Department
Program	**Annual**	**One-Time**	**Annual**	**One-Time**	**Priority**	**Schedule**	**Responsible**
A. Administrative Programs							
1. Municipal Management Program	$16,000	$13,000	$26,000 (260)	$9,600 (96)	High	ASAP	PW
2. Fiscal Program	$1,000	—	$19,600 (196)	—	High	ASAP	PW
3. Interagency Cooperative Program	$3,000	—	$9,600 (96)	—	High	ASAP	PW, NS, PER
4. Community Wildfire Protection Program	$8,000	—	$7,800 (78)	—	Moderate	Annually	PW
5. Trail Management Program	$10,000	$10,000	$45,600 (456)	$24,000 (240)	Moderate	Annually	PW
6. Waste Management Program	$1,500	—	$10,400 (104)	$1,600 (16)	Moderate	Annually	PW/NS
7. Aesthetic Resources Management Program	—	—	$7,000 (70)	—	Low	Annually	PW
8. MBHMP Review, Update, and Amendment Program	$10,000	—	$12,400 (124)	—	Moderate	Annually	PW, PER
9. Catastrophic Event Response Program	$75,000	—	$20,400 (204)	—	Moderate	Annually	PW
B Natural Resources Management Programs							
10. Monarch Butterfly Management Program	$2,000	—	$6,000 (60)	—	High	Annually	PW
11. Wildlife Habitat Management Program	$2,750	—	$5,600 (56)	—	Moderate	Annually	PW

Program	Cost ($) Annual	Cost ($) One-Time	City Labor Cost (hours) Annual	City Labor Cost (hours) One-Time	Priority	Schedule	Department Responsible
12. Tree Management Program	$49,600	—	$99,200 (992)	—	High	ASAP	PW
13. Integrated Pest Management Program	$11,500	$5,000	$11,600 (116)	—	Moderate	As funding is available	PW
14. Habitat Enhancement and Restoration Program	$30,000	$40,000	$29,600 (296)	$16,000 (160)	High	ASAP	PW, PER
15. Invasive Plant Management Program	$5,500	$27,500	$14,800 (148)	—	Moderate	As funding is available	PW, PER
16. Ecosystem-wide Management Coordination Program	—	—	$5,000 (50)	—	Low	Annually	PW, PER
C. Outreach Programs							
17. Community Advisory and Docent Program	$5,000	—	$77,200 (772)	—	High	Annually	PW, NS, PER
18. Interpretive Program	$500	$3,000	$8,800 (88)	$6,000 (60)	Moderate	As needed	PW, NS
19. Education Program	—	—	$12,400 (124)	$2,000 (20)	Moderate	Annually	NS
D. Monitoring, Research, and Adaptive Management Programs							
20. Biological Monitoring Program	$20,000	—	$8,000 (80)	—	High	Annually	PW
21. Monarch Research Program	$34,000	$40,000	$4,000 (40)	$4,000 (40)	Low	As needed	PW
22. Adaptive Management Program	$5,000	—	$8,000 (80)	—	Low	Every 5 years	PW
Totals	$290,350	$138,500	$449,000 (4,490)	$63,200 (632)			
Grand Total Over 5 Years	**$1,590,250**		**$2,308,200 (23,082)**		***TOTAL: $3,898,450***		

PW = Public Works Department
NS = Neighborhood Services Department
PER = Planning and Environmental Review Department

Table A2. Cost Estimates by Action

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
A. ADMINISTRATIVE PROGRAMS					
1. Municipal Management Program					
Action 1-1.1	$4,000	—	—	24	Prepare and conduct public workshop, 40 consultant hours
Action 1-1.2	—	$8,000	—	—	IS/MND
Action 1-1.3	—	$5,000	—	40	Depends on quantity and scope of revisions
Action 1-1.4	—	—	—	32	4 hours for the review by 8 people
Action 1-2.1	—	—	200	—	City coordination
Action 1-3.1	$10,000	—	40	—	Prepare annual Implementation Plan
Action 1-3.2	$2,000	—	20	—	Prepare and conduct City Council presentation, 20 consultant hours
2. Fiscal Program					
Action 2-1.1	—	—	24	—	Accounting staff, 12 hours bi-annually
Action 2-1.2	—	—	8	—	Accounting staff
Action 2-1.3	$1,000	—	8	—	Annual needs list to be included into Implementation Plan, accounting staff to determine operating budget
Action 2-2.1	—	—	136	—	8 hrs/month + 40 hours grant application coordinating
Action 2-2.2	—	—	20	—	As compensatory mitigation fees are paid
3. Interagency Cooperative Program					
Action 3-1.1	$1,000	—	24	—	2 hr/month for coordination meetings/calls with City staff and consultants
Action 3-1.2	$1,000	—	48	—	2 hr/month for coordination meetings/calls with City staff and consultants
Action 3-1.3	$1,000	—	24	—	2 hr/month for coordination meetings/calls with City staff and consultants

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
4. Community Wildfire Protection Program (CWPP)					
Action 4-1.1	—	—	12	—	CWPP
Action 4-1.2	$2,000	—	40	—	PW's site maintenance. the majority of this cost is included in Program 14
Action 4-1.3	—	—	—	—	Restrictions on timing of work
Action 4-1.4	$6,000	—	24	—	Coordination with butterfly and fire experts 2hr/mo prior to work activates. Expert time for consultation/surveys/ inspections monthly as necessary
Action 4-2.1	—	—	2	—	Cost incorporated into Program 12
5. Trail Management Program					
Action 5-1.1	—	—	192	—	2 days/month for trail maintenance
Action 5-1.2	—	—	—	—	Cost incorporated into Program 12
Action 5-1.3	$1,000	—	—	—	Staff time in Action 5-1.1
Action 5-1.4	$5,000	$10,000	96	240	Installation cost & 2 wks x 3 staff; maintenance 1 day/mo
Action 5-1.5	—	—	64	—	2 day effort x 2 staff x twice during wet season
Action 5-1.6	—	—	16	—	2 day effort once annually
Action 5-1.7	—	—	8	—	Annual review of trails boundaries
Action 5-1.8	$4,000	—	40	—	5 days x 1 staff and risk assessor, trails, arborist, butterfly biologist
Action 5-2.1	—	—	20	—	Staff coordination time and meetings
Action 5-2.2	—	—	20	—	Staff coordination time and meetings
6. Waste Management Program					
Action 6-1.1	—	—	96	—	1 day/mo
Action 6-2.1	$1,500	—	—	16	2 days staff time and signs
Action 6-2.2	—	—	4	—	Cost incorporated into Program 17

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 6-2.3	—	—	4	—	Inspection of trash cans annually
7. Aesthetic Resources Management Program					
Action 7-1.1	—	—	10	—	Read and adopt all programs
Action 7-1.2	—	—	20	—	Program 18
Action 7-2.1	—	—	20	—	Review signage and fencing. Cost included in Program 5
Action 7-2.2	—	—	20	—	Staff time to review restoration plans
8. MBHMP Review, Update and Amendment Program					
Action 8-1.1	$1,000	—	32	—	Staff and consultant time for review
Action 8-1.2	$2,000	—	24	—	City staff and consultant's' time for updates
Action 8-1.3	$2,000	—	24	—	City staff and consultants' time for updates
Action 8-1.4	$2,000	—	24	—	City staff and consultants' time for response to public comments
Action 8-1.5	$3,000	—	12	—	Update IS/MND, if necessary. Consultant time
Action 8-1.6	—	—	8	—	City Council approval/meeting
9. Catastrophic Event Response Program					
Action 9-1.1	—	—	4	—	Cost included in Program 12
Action 9-1.2	—	—	4	—	Cost included in Program 4
Action 9-1.3	—	—	4	—	Cost included in Program 13
Action 9-2.1	$25,000	—	80	—	Expert/arborist/risk/biologist consultant time, plus materials to assess
Action 9-2.2	$50,000	—	80	—	Expert/arborist/risk/biologist consultant time, plus materials to design and implement strategy
Action 9-2.3	—	—	32	—	City staff time
B. NATURAL RESOURCES MANAGEMENT PROGRAMS					
10. Monarch Butterfly Management Program					
Action 10-1.1	—	—	8	—	Program 12
Action 10-1.2	—	—	8	—	Program 20 and 21
Action 10-2.1	—	—	8	—	Program 9
Action 10-2.2	$1,000	—	20	—	Staying current with research, staff time, and consultant time to inform staff.

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 10-3.1	—	—	8	—	Program 14
Action 10-4.1	$1,000	—	8	—	Guidance to staff and education
11. Wildlife Habitat Management Program					
Action 11-1.1	$1,000	—	40	—	0.5-hr training per employee
Action 11-1.2	$750	—	8	—	Arborist/biologist as needed
Action 11-1.3	$800	—	—	—	Cost of nesting bird survey if needed, NBS biologist 1 day to confirm nests $800
Action 11-1.4	$200	—	8	—	Educate City/crew to avoid water
Action 11-2.1	—	—	—	—	Program 14
Action 11-2.2	—	—	—	—	Program 14
Action 11-2.3	—	—	—	—	Program 14
Action 11-2.4	—	—	—	—	Program 14
12. Tree Management Program					
Action 12-1.1	$4,800	—	40	—	Monarch biologist (8 hrs) and arborist (16 hrs) site visits. $2400. Implementation Plan preparation 16 hrs. $2400. = $4800. Quarterly site visits 32 hrs, IP 8 hrs
Action 12-1.2	—	—	—	—	Guidance for identifying threats
Action 12-1.3	—	—	—	—	Guidance for establishing thresholds
Action 12-1.4	—	—	—	—	Program 13
Action 12-1.5	$23,800	—	20	—	Arborist for 5 days: $4000, Butterfly biologist for 1 day to confirm tree work: $800, Wildlife biologist to monitor work for 5 days: $4000, Tree crew for 5 days: 15,000. (Total = $23,800.) City staff to check work for 5 days @4 hrs. (Total = 20 hours.)
Action 12-1.6	—	—	—	—	Would be accomplished with replanting restoration.
Action 12-1.7	—	—	—	—	Program 14
Action 12-1.8	—	—	—	—	Program 20
Action 12-1.9	$1,600	—	—	—	Biologist/arborist field visit 2 days

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 12-1.10	$5,000	—	60	—	Container trees and labor estimate, depends on # of trees planted.
Action 12-2.1	—	—	—	—	Direction for restoration design
Action 12-2.2	$800	—	32	—	Biologist 1 field day, City staff labor for 4 x 4 days
Action 12-2.3	—	—	—	—	Included in 12-1.5
Action 12-2.4	—	—	—	—	Program 10
Action 12-3.1	$8,800	—	768	—	Inspection of trails one per month (16 hr/mo=192hr/yr), maintenance crew to prune/remove hazard limbs and trucks every month for 2 days (3 crew, 2 d/mo = 576hr/yr). Est. 768 total staff time plus equipment. Arborist 5 days $4000, butterfly biologist 1 day to confirm tree work $800, wildlife biologist to monitor work 5 days $4000.
Action 12-3.2	—	—	—	—	Included in 12-1.5
Action 12-3.3	—	—	—	—	Included in 12-1.5
Action 12-3.4	—	—	—	—	Included in 12-1.5
Action 12-3.5	—	—	48	—	3 days x 2 staff
Action 12-3.6	$4,800	—	8	—	Implementation Plan. Arborist: 20 hours. Monarch biologist: 20 hours. Report prep: 8 hours. @ 100/ hr. City staff to review Implementation Plan
Action 12-4.1	—	—	0	—	Program 4
Action 12-4.2	—	—		—	Program 4
Action 12-4.3	—	—		—	Program 4
Action 12-4.4	—	—	8	—	To review programs annually
Action 12-4.5	—	—	8	—	Staff time to coordinate
13. Integrated Pest Management Program					
Action 13-1.1	—	—	—	—	Arborist pest assessment can be done during annual plan site visits, 12-3.6

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 13-1.2	—	—	—	—	Arborist pest assessment can be done during annual plan site visits, 12-3.6
Action 13-2.1	$5,000	—	40	—	Estimate for experimental techniques
Action 13-2.2	$2,000	—	20	—	Guidance
Action 13-2.3	$3,000	—	24	—	Pest inspection by specialist with recommendations; staff time to review
Action 13-2.4	$1,500	$5,000	32	—	Pest specialist to develop and maintain pest monitoring program and materials, and staff time to implement.
14. Habitat Enhancement and Restoration Program					
Action 14-1.1	$20,000	$25,000	120	80	Container plants, planting, irrigation system, water, maintenance, and monitoring; Initial experimental plots allowance. City staff maintenance: 10 hr/month.
Action 14-1.2	—	—	—	—	Guidance
Action 14-1.3	—	—	—	—	Programs 13 and 15
Action 14-2.1	$10,000	$15,000	120	80	Container plants, planting, irrigation system, water, maintenance, and monitoring; Initial experimental plots allowance. City staff maintenance: 10 hr/month.
Action 14-2.2	—	—	—	—	Program 15
Action 14-2.3	—	—	20	—	Guidance
Action 14-3.1	—	—	12	—	Coordination activities
Action 14-3.2	—	—	12	—	Coordination activities
Action 14-3.3	—	—	12	—	Coordination activities
Action 14-4.1	—	—	—	—	Direction for collection locations
Action 14-4.2	—	—	—	—	Direction for collection locations
Action 14-4.3	—	—	—	—	Direction for collection locations
Action 14-5.1	—	—	—	—	Coordinate with Program 10, 11, 12

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 14-6.1	—	—	—	—	Coordinate with Wildfire Protection Plan
15. Invasive Plant Management Program					
Action 15-1.1	$2,500	$5,000			Renew map every two years. Initial mapping for 1511.1, 1.2, and 1.3 = 40 hrs. Botanist: 10 hrs. GIS @ $100 = $5000
Action 15-1.2	—	—	—	—	Cost in 15-1.1
Action 15-1.3	—	—	—	—	Cost in 15-1.1
Action 15-2.1	$1,000	$7,500	36		Control invasive plants allowance. Hand removal, herbicide. Hand crews CCC for 5 days per year.
Action 15-2.2	$1,000	$7,500	36		Control invasive plants allowance. Hand removal, herbicide
Action 15-2.3	$1,000	$7,500	36		Control invasive plants allowance. Hand removal, herbicide
Action 15-3.1	—	—	20	—	Program 20
Action 15-3.2	—	—	20	—	Program 14
16. Ecosystem-wide Management Coordination Program					
Action 16-1.1	—	—	20	—	Guidance for staff
Action 16-1.2	—	—	10	—	Guidance for staff
Action 16-2.1	—	—	10	—	Guidance for staff
Action 16-3.1	—	—	10	—	Guidance for staff
C. OUTREACH PROGRAMS					
17. Community Advisory and Docent Program					
Action 17-1.1	—	—	4	—	Hire docent coordinator
Action 17-1.2	—	—	64	—	2 hrs/wk for 8 month (Aug–Mar)
Action 17-2.1	$5,000	—	640	—	20 hrs/wk for 8 month (Aug–mar), supplies for the program
Action 17-2.2	—	—	64	—	2 hrs/wk for 8 month (Aug–Mar)
Action 17-2.3	—	—	—	—	Incorporated in Action 17-2.1
Action 17-2.4	—	—	—	—	Incorporated in Action 17-2.1
Action 17-2.5	—	—	—	—	Incorporated in Action 17-2.1
18. Interpretive Program					
Action 18-1.1	—	—	40	40	Staff prepare grant applications
Action 18-1.2	$500	$3,000	20	20	Design and install signage

	Materials and Contractors Cost ($)		City of Goleta Staff Time (hours)		
	Annual	**One-Time**	**Annual**	**One-Time**	**Notes/Assumptions**
Action 18-1.3	—	—	20	—	Guidance for signs
Action 18-2.1	—	—	8	—	Guidance for signs
19. Education Program					
Action 19-1.1	—	—	80	—	1 hr/tour x 80 tours average, by docents
Action 19-1.2	—	—	20	20	Create education materials and keep them updated
Action 19-1.3	—	—	—	—	Incorporated in Action 17-2.1
Action 19-2.1	—	—	24	—	Monthly updates. 12 x 2 hrs. = 24 hrs
D. MONITORING, RESEARCH, AND ADAPTIVE MANAGEMENT PROGRAMS					
20. Monitoring Program					
Action 20-1.1	$4,800	—	20	—	This could be docents for 48 hours: 4 hours per survey for 12 surveys
Action 20-2.1	$4,800	—	—	—	Per year estimate. One field day with drone to cover 4 sites; camera use, analysis, and brief report
Action 20-2.2	—	—	20	—	Staff coordination
Action 20-3.1	$3,000	—	4	—	30 hrs for biologist for monitoring report, staff review
Action 20-3.2	$3,000	—	4	—	30 hrs for biologist for visitor impact assessment, staff review.
Action 20-3.3	$500	—	8	—	Coordination of programs for biologists and staff
21. Monarch Research Program					
Action 21-1.1	—	$15,000	16	40	Evaluate requests for research and issue permits as needed.
Action 21-1.2	—	—	8	—	Guidance for research permits
22. Adaptive Management Program					
Action 22-1.1	—	—	16	—	16 hours per year staff time
Action 22-1.2	—	—	8	—	8 hours per year staff time
Action 22-1.3	—	—	8	—	8 hours per year staff time
TOTALS	**$203,650**	**$63,500**	**3226**	**472**	

APPENDIX B. SPECTRAL IMAGING AND ANALYSIS FOR ASSESSING TREE HEALTH

To monitor and determine vegetation health within the aggregate sites, spectral imaging and analysis will be used. In the last few decades, high resolution multispectral and hyperspectral imaging have become more commonly used by agricultural and horticultural industries to manage soil, fertilizing, and irrigation, and to monitor the health of crops. Spectral imaging is similar to digital photography except that instead of just collecting an image of three primary colors or bands (red, green, and blue; RGB) the multispectral camera sensor (spectrometer) divides the color range into multiple discrete bands of colors (typically 5 to 15 bands for multispectral to greater than 100 for hyperspectral) across the visible and near-infrared spectrums. In addition, the image captures data about the amount of light for each band that reaches the sensor. Since most plants with chlorophyll absorb light in the red (650 to 700 nm) and blue spectrum (425 to 475 nm) and reflect green and yellow light (500 to 600 nm), changes in the ratio of light within these regions can be used to determine vegetation health over time or in comparison to known healthy vegetation. By using spectral imaging over traditional arborist techniques, small changes in vegetation health can be assessed rapidly, the data can be quantified, and management decisions can be monitored for effectiveness. In addition, very little quantifiable information about the health of vegetation and butterfly use of aggregation sites has been studied.

To monitor the health of vegetation in aggregate sites, a ground-based imaging spectrometer will be used at set locations within the study area and within known aggregates sites. The spectrometer will be placed on a tripod at a known elevation and location within a study site. A series of images (both spectral and RGB) will be taken at a predefined aspect and slope of the tree canopy and surrounding vegetation. All perennial vegetation (trees and shrubs) within each image will be identified, and a visual assessment of vegetation health will be recorded and catalogued in order to track changes over time. For at least the first 2 or 3 years of the study, images should be taken three times during the year to help determine phenotypical color differences (variation in color due to genetics) between members of the same species and to calibrate seasonal changes. Afterwards, image frequency can be reduced to twice a year (at the beginning and middle of the growing season). For each spectral image, key individuals will be identified, and multiple pixel groups will be sampled across the foliage using multispectral imaging software and statistically analyzed to determine relative chlorophyll absorbance and reflectance, to indicate vegetation health.

By comparing changes in spectral signatures of like species and individuals, and by looking for abnormal changes for all species over time, the health of vegetation can be assessed. Individual, chronic changes to perennial vegetation can help determine which individuals are stressed and have a higher potential for mortality, while overall changes to the ecosystem can indicate climate stressors (e.g., drought) or toxic conditions (e.g., pollution). Since modern cameras are small and light enough to be mounted to unmanned aerial vehicles (UAVs), this technique can be used to determine whole forest health by sampling upper canopy foliage (once yearly) along with below canopy aggregation sites. This would allow for a whole ecosystem assessment and would help determine stressed locations or individual species across the whole study area.

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APPENDIX C. NATIVE PLANTS TO BE INCLUDED IN HABITAT RESTORATION EFFORTS

The following plants are native to the Central Coast of California and are known to offer several valuable elements to enhance the quality and longevity of native coastal habitats, including: fall and winter nectar source for monarch butterflies, canopy for wind protection, food source for wildlife, drought resistance, and fire resistance. California native plants are plants that were present in California prior to the arrival of European explorers and colonists in the late 18th century. Native plant stock should be sourced from local populations.

Restoration Native Plant List	**Location**			**Purpose**					
Common Name (*Scientific Name*)	**Over-wintering Site**	**Open Area Adjacent to Overwintering Site**	**Devereux Creek**	**Understory Windbreak**	**Nectar Source**	**Wildlife Habitat and Forage**	**Fire Resistant**	**Drought Tolerant**	**Erosion Control**
Trees									
coast live oak (*Quercus agrifolia*)	X	X		X		X	X	X	
western sycamore (*Platanus racemosa*)			X			X			
toyon (*Heteromeles arbutifolia*)	X			X	X	X	X	X	X
arroyo willow (*Salix lasiolepis*)			X		X*	X			X
hollyleaf cherry (*Prunus ilicifolia*)		X			X*	X	X	X	
Shrubs									
seacliff buckwheat (*Eriogonum parvifolium* var. *parvifolium*)		X			X*	X			
California bay laurel (*Umbellularia californica*)	X			X	X*			X	
California wax myrtle (*Myrica californica*)	X			X				X	
lemonade berry (*Rhus integrifolia*)		X		X	X*	X	X	X	X
golden currant (*Ribes aureum*)		X		X	X	X	X	X	
mulefat (*Baccharis salicifolia*)			X		X*	X			
California brittlebush (*Encelia californica*)		X			X*	X		X	X
California goldenrod (*Solidago veluntina* ssp. *Californica*)		X			X*	X		X	
California goldenbush (*Ericameria ericoides*)		X			X*	X		X	
saltmarsh baccharis (*Baccharis glutinosa* [*douglasii*])			X		X	X			X
coyote bush (*Baccharis pilularis*)		X			X*	X		X	
black sage (*Salvia mellifera)*		X			X*	X		X	

Restoration Native Plant List	**Location**				**Purpose**				
Common Name (*Scientific Name*)	**Over-wintering Site**	**Open Area Adjacent to Overwintering Site**	**Devereux Creek**	**Understory Windbreak**	**Nectar Source**	**Wildlife Habitat and Forage**	**Fire Resistant**	**Drought Tolerant**	**Erosion Control**
seaside fleabane (*Erigeron glaucus*)		X			X*	X		X	
purple sage (*Salvia leucophylla)*		X			X	X		X	
blueblossom (*Ceanothus thyrsiflorus)*		X			X*	X		X	
heart-leaved Keckiella (*Keckiella cordifolia*)	X	X	X		X*	X		X	
Groundcovers									
black figwort (*Scrophularia atrata*)	X	X	X	X	X*	X		X	
purple needlegrass (*Nassella pulchra*)		X				X		X	X
blue-eyed grass (*Sisrinchium bellum*)		X			X*	X	X	X	
bluedicks (*Dichelostemma capitatum)*		X			X*	X		X	
Santa Barbara honeysuckle (*Lonicera subspicata* var. *supspicata*	X	X	X	X	X	X			
Sticky monkeyflower (*Diplacus aurantiacus*)		X	X	X	X*	X		X	

X* indicates species that bloom during the overwintering period (October – March)

Plant List References

The Theodore Payne Foundation for Wildflowers and Native Plants, Inc. Fire Resistant Native Plants with High Wildlife Value. Sun Valley, CA. Available; http://www.theodorepayne.org/plants/fire_resistant.htm.

The Xerces Society. 2017. Protecting California's Butterfly Grove: Management Guidelines for Monarch Butterfly Overwintering Habitat. 32+vi pp. Portland, OR: The Xerces Society for Invertebrate Conservation.

EXHIBIT 2

Coastal Zoning Ordinance Findings of Consistency

ZONING ORDINANCE CONSISTENCY ANALYSIS
ELLWOOD MESA MONARCH BUTTERFLY HABITAT MANAGEMENT PLAN

REC Recreation District
(GMC § 35-89)

	Required	Proposed	Consistent Y/N
Permitted Uses	1. Outdoor public and/or private recreational uses, e.g., parks, campgrounds, recreational vehicle accommodations, and riding, hiking, biking, and walking trails. 2. Golf courses. 3. Structures and facilities required to support the recreational activities, e.g., parking areas, corrals and stabling areas, water and sanitary facilities, boat launching facilities, ranger stations, and limited concession facilities. 4. Any other use which the Planning Commission determines to be similar in nature to the above uses.	The project includes management, maintenance, and habitat enhancement activities within an existing public open space, which is an allowable use within the REC Zone.	Yes
Minimum Lot Size	1 Acre	N/A (no change to parcel boundaries)	Yes
Front Yard Setback	10 feet	N/A (no structures proposed)	Yes
Side Yard Setback	10 feet	N/A (no structures proposed)	Yes
Rear Yard Setback	10 feet	N/A (no structures proposed)	Yes
Building Height	25 feet	N/A (no structures proposed)	Yes
Parking Spaces	N/A	N/A (no new parking proposed)	Yes
Landscaping/Open Space	1. Landscaping shall be installed and maintained in accordance with the approved Final Development Plan. 2. Where a lot is adjacent to a lot(s) zoned for residential use, landscaping, fences, and/or walls to screen facilities such as tennis courts, concession stands, restrooms, and other structures shall be provided.	No structures proposed that would require Development Plan approval or visual screening	Yes

EXHIBIT 3

General Plan / Coastal Land Use Plan and Elllwood-Devereux Open Space and Habitat Management Plan Findings of Consistency

GENERAL PLAN/COASTAL LAND USE PLAN AND ELLWOOD MESA MONARCH BUTTERFULY HABITAT MANAGEMENT PLAN POLICY CONSISTENCY ANALYSIS

The Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan (MBHMP) is consistent with all applicable provisions of the Goleta General Plan/Coastal Land Use Plan (GP/CLUP), as well as all applicable provisions of the Ellwood-Devereux Coast Open Space and Habitat Management Plan.

GENERAL PLAN/COASTAL LAND USE PLAN CONSISTENCY

Open Space Element

Policy OS 5: Ellwood-Devereux Open Space Area [GP/CP]
Objective: The portion of the Ellwood-Devereux Open Space Area within Goleta, which includes the City-owned Sperling Preserve and Santa Barbara Shores Park units, shall be managed to provide coastal access and passive, coastal-dependent recreational opportunities consistent with protection and enhancement of the site's environmentally sensitive habitat areas [ESHAs] and other environmental and scenic resources.

Consistent: The MBHMP does not impede or preclude coastal access and passive coastal-dependent recreational opportunities in the Ellwood-Devereux Open Space Area (Open Space Area). The MBHMP provides an overarching framework for management of the habitats that support the monarch butterfly seasonal aggregation areas at the Open Space Area, and also addresses the area's importance for coastal access and recreation. The intent of the management approach is to maintain and improve habitat conditions to ensure long-term viability of the monarch butterfly population, while allowing for coastal access, education and compatible recreational opportunities. None of the MBHMP's policies would impair or curtail public use and access within the Coverage Area. As such, the MBHMP is consistent with Policy OS 5.

OS 5.3: Public Access and Recreation. [GP/CP] *The Ellwood-Devereux Open Space Area shall be managed to maintain the site's historical public access and recreation uses while managing accessways to protect natural resources such as the monarch butterfly groves, vernal pools, native grasslands, beaches, coastal bluffs, and other environmentally sensitive habitat areas. The planned trail and beach access system is based on the locations of existing informal trails created by repeated public use, with some trail segments being closed to avoid impacts to environmentally sensitive areas, to eliminate hazardous segments, and/or to eliminate parallel redundant trail segments. Although some trail closures are proposed, the planned trail system will not reduce overall access or trail experiences in the public open space area, but will redirect users to alternate routes located in close proximity. The following standards shall apply to public access and recreation in the open space area:*

a. The Anza Trail is one of two major planned east-west trails across the Ellwood Mesa. This trail extends from the eastern boundary with UCSB to the public access parking lot at Santa Barbara Shores Park adjacent to Hollister Avenue (see related OS 4.4).

b. The California Coastal Trail segment within the Ellwood-Devereux Open Space Area, the other major east-west trail, is planned to have a bluff-top alignment (see related OS 4.3).

c. The locations of additional planned trails are also shown on Figure 3 3. Although the trail system shall be planned primarily as footpaths for pedestrians, bicyclists and/or equestrians may also be accommodated on certain trail segments as shown in Figure 3-3. At least one trail from the Hollister parking lot to the bluff-top shall be designated for exclusive use by pedestrians.

d. Except for the Anza Trail, trails shall generally be designed to utilize native soil materials with appropriate grooming and maintenance to provide for slightly crowned cross sections, defined trail edges, and proper drainage. Trail improvements shall be designed to maintain natural drainage patterns in order to avoid potential impacts to Devereux Creek and the associated eucalyptus groves that comprise the monarch butterfly aggregation sites. Trail improvements may include boardwalks and/or bridges across Devereux Creek in wet or eroded areas in the vicinity of the Ellwood Main grove.

e. Two accessways from the bluff top to Ellwood Beach (identified as accessways E and F) are planned, as shown on Figure 3-3. These beach accessways shall be planned to accommodate pedestrians only.

1) Improvements to accessway E, which is a steeply sloped former roadway with a badly eroded asphalt surface, are limited to repairs to improve the surface for the safety of users and to reduce further erosion of the bluff face and pathway.

2) Improvements to accessway F, which is a steep pathway down the face of the bluff, shall be designed to smooth the surface, improve drainage, and reduce erosion of the path and bluff face and are generally limited to minor grading and placement of landscape ties or a similar material to stabilize the pathway.

f. A public access parking lot consisting of not less than 40 parking spaces shall be provided adjacent to Hollister Avenue, as shown in Figure 3-3. The following standards shall apply to public parking serving the open space area:

1) The Hollister Avenue lot shall be paved with permeable materials to reduce stormwater runoff and prevent pollution of surface waters.

2) Landscaping of the parking lot and Hollister Avenue street frontage shall maintain a natural appearance and shall be limited to drought-tolerant species. Landscaping shall not impair views of the coastal bluff-top, ocean, and Channel Islands from Hollister Avenue.

3) Onstreet parking on streets within the Ellwood neighborhood shall be available as needed for public coastal access, subject to appropriate restrictions on the hours of availability and duration of such parking.

g. A limited amount of facilities or amenities may be provided within the open space area to better accommodate users and manage accessways to protect natural resources. These may include the following:

1) A potential public restroom facility to be located between the public parking lot and Hollister Avenue, which shall be designed to avoid impairing views of the ocean and the Channel Islands from Hollister Avenue.

2) Low-profile signs to identify permitted uses, guide pedestrians, interpret resources, and advise users on resource protection regulations.

3) Temporary or permanent barriers to establish protection for sensitive plants and animals and habitat restoration areas that are compatible with the natural appearance of the surroundings.

4) Benches at a limited number of selected scenic locations.

5) Trash receptacles, mutt-mitt dispensers, and other similar low-impact facilities.

h. A signage program shall be prepared for the open space area. The overall intent or purposes of the sign program shall be to assist and inform visitors as to open space regulations, directions, and information. Signs shall be designed and located in a manner that is protective of environmental and visual resources and may include the following:

1) A donor recognition sign.

2) Trail markers identifying names, directions, and distances.

3) Trail head signs.

4) Interpretative signs.

5) *Regulatory signs, including trail and open space rules, closures, and hazardous areas.*

6) *Habitat protection signs.*

Consistent: The City is in the process of undertaking a separate project, the Ellwood Mesa Coastal Trails and Habitat Restoration Project, to broadly address the objectives of public access and recreation on Ellwood Mesa and to implement Policy OS 5.3. The MBHMP's Trail Management Program (Program 5) is fully consistent with these efforts, and calls for maintaining and improving the existing trails network within the Coverage Area. The MBHMP does not propose changes to historical public access and recreation uses of the Open Space Area, and accessways will be managed to protect sensitive resources and improve public safety. In the event that short-term trail closures are necessary due to unsafe conditions, MBHMP Action 5-1.9 calls for these issues to be resolved as quickly as possible. Long-term closure of official trails is not proposed as a management approach under the MBHMP; rather, trails would be allowed to remain open with appropriate signage alerting users to the risks present. Appropriate signage would be posted, as discussed in Sections 5, 7, 9, and 18 of the MBHMP, and would redirect users to alternate routes in the event of short-term trail closures. As such, the MBHMP is consistent with Policy OS 5.3.

OS 5.4 Protection and Enhancement of Habitat Areas. [GP/CP] *Within its boundaries, the Ellwood-Devereux Open Space Area encompasses a diverse array of sensitive aquatic and upland habitats, as shown on Figure 3-3 [of the GP/CLUP]. These habitats include beach and shoreline areas, dunes, rocky intertidal areas, coastal bluffs, monarch butterfly aggregation sites and associated eucalyptus groves, vernal pools, riparian areas along Devereux Creek and its tributaries, coastal sage and scrub areas, native grasslands, and raptor nesting and roosting areas. All environmentally sensitive habitat areas shall be managed and protected consistent with the policies and standards described in the Conservation Element of [the GP/CLUP]. In addition, the following criteria and standards shall apply to the Ellwood-Devereux Open Space Area:*

a. *Habitat management on City owned lands shall be implemented within a broad ecosystem context in which habitat management priorities will consider the role of the targeted habitats and the interrelationships with other habitats in the open space area. In addition to protection of existing habitats, management actions may include interventions to enhance or restore degraded habitat conditions. All management activities shall use an adaptive approach that includes monitoring and adjustments to ensure that self-sustaining habitats will be created that are not reliant on long-term human intervention.*

b. *Priority habitat management activities include ensuring the long-term vitality of the eucalyptus groves and stability in the monarch butterfly population; restoration of native grasslands; enhancement of vernal pools and riparian habitats; and protection of special status species, including various raptors and the western snowy plover. Some examples of habitat management action areas are shown on Figure 3-4 [of the GP/CLUP].*

c. *Habitat management activities shall be designed to accommodate public access and use in or adjacent to habitat areas, where practicable, in a manner consistent with protection of the resource.*

d. *In all habitat enhancement or restoration projects, genetic stock for seeds and plants from the Devereux Creek watershed shall be used, unless such use has been determined to be infeasible.*

Consistent: The foremost objective of the MBHMP is to enhance the habitat value of the monarch butterfly/raptor ESHA within the Coverage Area, which has become degraded by significant dieoff of eucalyptus trees. This would be accomplished by rehabilitating habitat areas within the existing eucalyptus groves in the Coverage Area, and without the need to convert designated riparian, scrub, native grassland, or other ESHA to eucalyptus. The MBHMP considers a broad ecosystem context and provides for an Ecosystem-wide Management Coordination Program, the goal of which is to manage the eucalyptus trees supporting seasonal monarch butterfly aggregation sites by coordinating among the 22 programs directed toward the management of monarch butterfly habitat and to consider management of

eucalyptus groves in the context of managing the entire Open Space Area. The MBHMP proposes habitat management activities to help ensure the long-term vitality of the eucalyptus groves and stability in the monarch butterfly population. At the same time it accommodates public access and use in, and adjacent to, monarch ESHAs where practicable, in a manner consistent with monarch protection. MBHMP Action 14-4.1 directs that plant materials for use in restoration projects should be sourced from existing native plant populations in the Ellwood Mesa/Devereux Creek Ecosystem, where feasible. As such, the MBHMP is consistent with OS 5.4 and its specific standards.

OS 5.5: Use and Management of the Open Space Area. [GP/CP] *The following management policies shall apply to lands owned by the City within the Ellwood-Devereux Open Space area:*

a. An advisory committee may be established to provide advice and recommendations to the City regarding management of access, recreation uses, and habitat within the area. The committee may include residents of the adjacent neighborhoods as well as technical experts.

b. Permitted uses include, but are not limited to, the following compatible passive and coastal-dependent recreation activities: hiking, bicycling on designated trails, horseback riding on designated trails, bird-watching, surfing, sunbathing and beach play, surf fishing as allowed by law, swimming, scuba diving and snorkeling, kayaking, picnicking, playing of nonamplified musical instruments, kite flying, small educational tours, habitat restoration, scientific studies, and other uses as deemed appropriate by the City. Particular uses may require advance approval of a permit by the City.

c. Prohibited uses include, but are not necessarily limited to, the following: fireworks; camping; plant or wildlife collecting unless approved by the City; amplified music; radio-controlled motorized equipment such as model airplanes and cars; organized competitive sporting events such as track and field and bicycle races; large-scale special events and public gatherings; model rockets; fires of any kind, including in pits or in camp stoves; and archery, BB guns, pellet guns, paint guns, and firearms of all types.

d. All private for-profit commercial uses of the City-owned portion of the Ellwood-Devereux Open Space Area shall be prohibited, including but not limited to commercial equestrian operations.

e. Beach grooming using mechanical equipment shall be prohibited.

f. Any group activity that causes damage to vegetation or soil outside of designated trails shall be prohibited.

g. Use of herbicides, insecticides, and similar toxic substances shall not be permitted unless other nonchemical methods of pest control have been attempted or determined to be infeasible.

Consistent: The MBHMP is consistent with the allowed uses and management of the Open Space Area as outlined in Policy OS 5.5 and its specific standards. The MBHMP does not propose any prohibited uses of the Coverage Area outlined in these standards.

Conservation Element

Policy CE 2: Protection of Creeks and Riparian Areas [GP/CP]
Objective: *Enhance, maintain, and restore the biological integrity of creek courses and their associated wetlands and riparian habitats as important natural features of Goleta's landscape.*

Consistent: The MBHMP includes programs, most notably the Habitat Enhancement and Restoration Program, which would allow for the restoration of the Devereux Creek riparian ecosystem by planting native species. Eucalyptus groves that provide habitat for monarch butterflies would not be removed, despite the non-native nature of the eucalyptus trees; this is consistent with specific exemption language in CE 2.6.

CE 2.6 Restoration of Degraded Creeks. [GP/CP] *Segments of several creeks in Goleta have been covered or channelized by concrete culverts, causing degradation of the creek ecosystem. Restoration activities for improving degraded creek resources shall include the following:*

a. Channelized creek segments and culverts shall be evaluated and removed to restore natural channel bed and bank, where feasible.

b. Creek courses in public rights-of-way shall be uncovered as part of public works improvement projects.

c. Barriers that prevent migration of fish such as anadromous salmonids from reaching their critical habitat shall be removed or modified.

d. Restoration of native riparian vegetation and removal of exotic plant species shall be implemented, unless such plants provide critical habitat for monarch butterflies, raptors, or other protected animals.

e. Creek rehabilitation projects shall be designed to maintain or improve flow capacity, trap sediments and other pollutants that decrease water quality, minimize channel erosion, prevent new sources of pollutants from entering the creek, and enhance in-creek and riparian habitat.

f. The use of closed-pipe drainage systems for fish-bearing creeks shall be prohibited unless there is no feasible, less environmentally damaging alternative. When the use of culverts is necessary, the culverts shall be oversized and have gravel bottoms that maintain the channel's width and grade.

Consistent: The MBHMP includes programs, most notably the Habitat Enhancement and Restoration Program, which would allow for the restoration of the Devereux Creek riparian ecosystem by planting native species. Eucalyptus groves that provide habitat for monarch butterflies would not be removed, despite the non-native nature of the eucalyptus trees; this is consistent with specific exemption language item (d) of Policy CE 2.6. The MBHMP is consistent with Policy CE 2.6.

CE 4: Protection of Monarch Butterfly Habitat Areas [GP/CP]
Objective: To preserve, protect, and enhance habitats for monarch butterflies in Goleta, including existing and historical autumnal and winter roost or aggregation sites, and promote the long-term stability of over-wintering butterfly populations.

Consistent: The MBHMP provides recommendations for the preservation, protection, and enhancement of monarch butterfly habitat, including existing and historical autumnal and winter roost or aggregation sites, and promotes the long-term stability of over-wintering butterfly populations. As such, the MBHMP is consistent with CE 4.

CE 4.1 Definition of Habitat Area. [GP/CP] *The monarch butterfly is recognized as a California and Goleta special resource. Although the species is not threatened with extinction, it's autumnal and winter aggregation sites, or roosts, are especially vulnerable to disturbance. Sites that provide the key elements essential for successful monarch butterfly aggregation areas and are locations where monarchs have been historically present shall be considered ESHAs. These elements include stands of eucalyptus or other suitable trees that offer shelter from strong winds and storms, provide a microclimate with adequate sunlight, are situated near a source of water or moisture, and that provide a source of nectar to nourish the butterflies.*

Consistent: Monarch butterfly aggregation areas and locations where monarchs have been historically present are considered ESHAs in the GP/CLUP, and the purpose of the MBHMP is to restore and enhance these ESHAs within the Coverage Area. The MBHMP does not propose removal, expansion, or conversion of these areas to other uses. The extent of existing monarch ESHAs will remain the same, but the areas will benefit from improved management, tree care, monitoring, butterfly research, and adaptive management. As such, the MBHMP is consistent with Policy CE 4.1.

CE 4.2 Designation of Monarch Butterfly ESHAs. [GP/CP] *Existing and known historical monarch roost sites, as shown on Figure 4-1 [of the GP/CLUP], are hereby designated as ESHAs. These include*

about 20 known roosts, eight of which comprise the Ellwood Complex, a series of sites within a network consisting of eucalyptus groves and windrows interspersed by open fields and crossed by small creeks. This network includes several separate but interconnected autumnal and winter roost sites. The Ellwood Main site, the largest roost in Santa Barbara County and one of the largest in the state, occupies a site along Devereux Creek in the Sperling Preserve, a City-owned tract situated near the coastal bluffs in western Goleta.

Consistent: The MBHMP recognizes the monarch butterfly ESHAs designated in the GP/CLUP and described in Policy CE 4.2, and provides management recommendations to protect, restore, and enhance these areas. As such, the MBHMP is consistent with CE 4.2.

CE 4.3 Site-Specific Studies and Unmapped Monarch ESHAs. [GP/CP] *Any area not designated on Figure 4-1 [in the GP/CLUP] that is determined by a site-specific study to contain monarch habitats, including autumnal and winter roost sites, shall be granted the same protections as if the area was shown on the figure. Proposals for development on sites shown on this figure or where there is probable cause to believe that monarch habitats may exist shall be required to provide a site-specific study.*

Consistent: The MBHMP does not contradict these stipulations. The mapping in the GP/CLUP is fairly conservative, and indicates the entire eucalyptus grove within the Coverage Area as a monarch/raptor ESHA. Thus, there are no known monarch aggregation sites within the Coverage Area that are not currently mapped as ESHA. Goals, policies, and actions related to studies and research are presented in Section D, Monitoring, Research, and Adaptive Management Programs. As such, the MBHMP is consistent with Policy CE 4.3.

CE 4.4 Protection of Monarch Butterfly ESHAs. [GP/CP] *Monarch butterfly ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on and compatible with maintaining such resources shall be allowed within these ESHAs or their buffer areas. The following standards shall apply:*

a. No development, except as otherwise allowed by this policy, shall be allowed within monarch butterfly ESHAs or ESHA buffers.
b. Since the specific locations of aggregation sites may vary from one year to the next, the focus of protection shall be the entire grove of trees rather than individual trees that are the location of the roost.
c. Removal of vegetation within monarch ESHAs shall be prohibited, except for minor pruning of trees or removal of dead trees and debris that are a threat to public safety.
d. Public accessways are considered resource-dependent uses and may be located within a monarch ESHA or its buffer; however, such accessways shall be sited to avoid or minimize impacts to aggregation sites.
e. Interpretative signage is allowed within a monarch ESHA or its buffer, but shall be designed to be visually unobtrusive.
f. Butterfly research, including tree disturbance or other invasive methods, may be allowed subject to City approval of a permit.

Consistent: The overarching goal of the MBHMP is to provide protection for monarch butterflies and their associated ESHAs. The MBHMP does not contemplate significant development within the Coverage Area, and most activities would involve maintaining and improving minor facilities such as trails and signage. Larger developments, like temporary irrigation systems or water tanks, would be sited outside ESHA to the extent feasible. All development activities would be timed to avoid sensitive periods (avian breeding season, monarch aggregation season) where possible, and impact minimization measures would be incorporated. The standards outlined in Policy CE.4 have been incorporated into the goals, policies, and actions of the MBHMP. As such, the MBHMP is consistent with Policy CE.4 and its specific standards.

CE 4.5 Buffers Adjacent to Monarch Butterfly ESHAs. [GP/CP] *A buffer of a sufficient size to ensure the biological integrity and preservation of the monarch butterfly habitat, including aggregation sites and the surrounding grove of trees, shall be required. Buffers shall not be less than 100 feet around existing*

and historic roost sites as measured from the outer extent of the tree canopy. The buffer area shall serve as transitional habitat with native vegetation and shall provide physical barriers to human intrusion. The buffer may be reduced to 50 feet in circumstances where the trees contribute to the habitat but are not considered likely to function as an aggregation site, such as along narrow windrows. Grading and other activities that could alter the surface hydrology that sustains the groves of trees are prohibited within or adjacent to the buffer area.

Consistent: The MBHMP would restore and enhance ESHA, and does not propose any uses that are inconsistent with the ESHA designations or buffers. Restoration of areas surrounding the eucalyptus groves with native species would not be inconsistent with the requirement to maintain a buffer around monarch/raptor ESHA. The MBHMP is consistent with Policy CE 4.5.

CE 4.6 Standards Applicable to New Development Adjacent to Monarch ESHAs. [GP/CP] *The following standards shall apply to consideration of proposals for new development adjacent to monarch ESHAs or ESHA buffers:*

a. A site-specific biological study, prepared by an expert approved by the City who is qualified by virtue of education and experience in the study of monarch butterflies, shall be required to be submitted by the project proponent.
b. The study shall include preparation of a Monarch Butterfly Habitat Protection Plan, which at a minimum shall include: 1) the mapped location of the cluster of trees where monarchs are known, or have been known, to roost in both autumnal and over-wintering aggregations; 2) an estimate of the size of the population within the colony; 3) the mapped extent of the entire habitat area; and 4) the boundaries of the buffer zone around the habitat area.
c. A temporary fence shall be installed along the outer boundary of the buffer zone prior to and during any grading and construction activities on the site.
d. If an active roost or aggregation is present on the project site, any construction grading, or other development within 200 feet of the active roost, shall be prohibited between October 1 and March 1.

Consistent: The entirety of the Coverage Area is under City ownership and designated Open Space, and therefore no future development proposals are envisioned in the area. The MBHMP is consistent with Policy CE 4.6.

ELLWOOD-DEVEREUX COAST OPEN SPACE AND HABITAT MANAGEMENT PLAN CONSISTENCY

3.1.2 Environmentally Sensitive Habitat Areas [OSP] *The GCP [Goleta Community Plan], which applies to the unincorporated areas of the County, contains a list of ESHAs that occur in the Open Space Plan Area. Key policies related to ESHAs are as follows:*

GCP Policy BIO-GV-6*. Monarch butterfly roosting habitats shall be preserved and protected.*

Consistent: The overarching goal of the MBHMP is to provide protection for monarch butterflies and their associated ESHAs, including those listed in the GCP. The MBHMP provides recommendations for the preservation, protection, and enhancement of monarch butterfly habitat, including existing and historical autumnal and winter roost or aggregation sites, and promotes the long-term stability of over-wintering butterfly populations. As such, the MBHMP is consistent with GCP Policy BIO-GV-6.

3.1.6 Exotic Species Management Approach [OSP]
"Invasive exotics" are insects, plants, or wildlife species that exhibit rapid and aggressive ability to colonize suitable areas and that displace native species by competitive abilities or predatory actions. Invasive exotics can cause adverse impact to habitats through various means besides physical displacement. They can hybridize with native stock and cause undesirable traits in native plants, support other invasive species, and create new microclimates and alter physical conditions in the ecosystem.
The habitat protection and management element is designed to reduce the extent of, and if feasible, eradicate, invasive exotic species. This will be accomplished by targeted removal of invasive exotics with or without associated habitat restoration. The primary objectives of invasive exotic species management are to protect the various biological, hydrological, and geophysical functions of ESHAs in the Open Space

Plan Area, as well as to protect the genetic integrity and reproductive capability of native species populations in the Open Space Plan Area.

Control and eventual eradication of the following invasive exotic species will be an opportunity throughout the implementation of the Open Space Plan:

- *Long-horned beetle (which attack eucalyptus trees)*
- *Fennel (Foeniculum vulgare). Fennel is scattered through non-native grasslands, along the Devereux Creek drainage, and in large patches on the South Parcel Nature Park.*
- *Pampas Grass (Cortaderia selloana). Pampas grass occurs in dense patches on the South Parcel Nature Park.*
- *Harding Grass (Phalaris aquatica). Harding grass occurs in scattered locations on Ellwood Mesa, the South Parcel Nature Park, and West Campus Bluffs Nature Park.*
- *Hottentot Fig (Carpobrotus edulis). Hottentot fig (a species of iceplant) occurs in dense patches on the coastal bluffs and dunes in the Open Space Plan Area.*
- *Tamarisk (Tamarix aphylla). Tamarisk occurs in patches on the West Campus Bluffs Nature Park.*

Eucalyptus trees on the City of Goleta's Ellwood Mesa and Santa Barbara Shores and the University's large ornamental pine and cypress trees on the West Campus will not be removed as part of the habitat protection and management plan. These trees provide important monarch butterfly aggregation and roosting habitat and also serve as raptor roost and nest sites.

Areas where the vegetation and soil have been disturbed by humans or domestic animals are more susceptible to invasion of exotic species. Previous grazing activity, uncontrolled recreation uses, and other land disturbances within the Open Space Plan Area support the conditions to sustain exotic species. A more complete list of invasive exotic species occurring within the Open Space Plan Area and a description of the species' general location is provided in Appendix A.

The phrase "native species" used in this Open Space Plan refers to plants, insects, fish, and wildlife indigenous to the South Coast and/or southern California. "Non-native species" refers to species that are from areas outside of the region, state, or continent. "Naturalized species" refers to non-native species which have become common since the European settlement of California, and which now are integral elements of the coastal ecosystem. Examples of naturalized species include the annual grasses that dominate most of the grassy foothills and meadows of the South Coast (e.g., wild oats, plantain, Italian ryegrass, filaree, ripgut brome), and eucalyptus trees.

Consistent: The exotic species management approach outlined in OSP Policy 3.1.6 was considered during development of the MBHMP, and the MBHMP does not conflict with this approach. The MBHMP provides goals, policies, and actions for an Integrated Pest Control Program, Habitat Enhancement and Restoration Program, and Invasive Plant Management Program, all of which are intended to promote native species and minimize or eradicate exotic species. While other invasive exotic species may be removed in the Open Space Area, eucalyptus trees in the Open Space Area will not be removed unless they pose a risk to life or property, or require trimming or removal to minimize wildfire risk. As such, the MBHMP is consistent with OSP Policy 3.1.6.

3.1.7 General Policies for Habitat Protection and Management [OSP]

The following goal and associated policies guide the overall implementation of the Habitat Protection and Management Element of the Open Space Plan.

- *Habitat Goal 1. Protect, enhance, and, where feasible, restore ESHAs in the Open Space Plan Area.*
    - *Habitat Policy 1. Focus high priority habitat enhancement and restoration initial improvements and opportunities on invasive exotic species control in wetlands, enhancement and restoration of riparian and non-riparian wetlands, ensuring the long-term vitality of the monarch groves, and enhancement and restoration of native habitats that are under-represented in the Open Space Plan Area.*
    - *Habitat Policy 2. Enhance and restore native habitats to be self-sustaining and not reliant on long-term human management and intervention.*

- *Habitat Policy 3. Control and, where feasible, eradicate invasive exotic species within the Open Space Plan Area in a manner that protects ESHAs from adverse impacts.*

Consistent: A primary objective of the MBHMP is to help ensure the long-term viability of monarch butterfly ESHAs, and one of the most important aspects of the MBHMP is the set of management practices that would result in a sustainable eucalyptus forest that supports aggregation sites for monarch butterflies. The general policies for habitat protection and management outlined in OSP Policy 3.1.7 were considered during development of the MBHMP, and the MBHMP does not conflict with these policies. The goals, policies, and actions recommended for the Integrated Pest Control Program, Habitat Enhancement and Restoration Program, and Invasive Plant Management Program are intended to promote native species and minimize or eradicate exotic species. As such, the MBHMP is consistent with OSP Policy 3.1.7.

3.2.2 Management Issues [OSP]

The monarch butterfly groves have been subject to past and ongoing human impacts due to unmanaged access by pedestrians, bicyclists, equestrian users, and pets. Unmanaged and excessive access has compacted soils, destroyed the layer of litter (dead leaves and small twigs), and trampled vegetation. Evidence of damaging public access is very evident in the Ellwood Main site. The loss of the litter layer exposes soils to erosion. Compaction of soil can cause stress to the trees and hinders natural regeneration by seedling and saplings in the understory. In some experts' opinions, the absence of a diverse size and age structure of trees in the Ellwood Main site makes the groves vulnerable to disease.

Another major management issue is the growing number of eucalyptus pests that have arrived in California, including the long horned beetle (Phoracantha semipunctata), several species of psilid (psilids), and at least two species of weevils. The long horned beetle is probably the best known of these pests and can kill a eucalyptus tree in a matter of months. There are few tools presently available to control this pest. The best defense is healthy trees free of stress by drought, soil compaction, or overcrowding. The Ellwood Main site exhibits limited signs of beetle infestation (Meade, 1999).

Eucalyptus trees are very vulnerable to fire because of the abundance of oil within their leaves. In the long-term, fire may be beneficial to a eucalyptus grove because it regenerates old groves. However, in the Open Space Plan Area, fire is not an acceptable management tool due to obvious public safety concerns to adjacent residences.

Finally, a number of educational and scientific organizations and community groups monitor monarchs in the Ellwood Complex. Many times these efforts include tagging or handling the butterflies. The high level of interest and direct interaction with this species from school children to scientists could harm the population if not properly managed and coordinated.

Consistent: The management issues outlined in OSP Policy 3.2.2, including human impacts, eucalyptus tree population dynamics, pests, fire, and educational/scientific activities, were considered during development of the MBHMP, and appropriate recommendations consistent with this policy were incorporated therein. The MBHMP provides recommendations for implementation of several major programs, including administrative; natural resources management; outreach; and monitoring, research, and adaptive management programs, intended to address these management issues. As such, the MBHMP is consistent with OSP Policy 3.2.2.

3.2.3 Regulatory Considerations [OSP]

Monarch butterfly overwintering sites in the Open Space Plan Area are considered ESHAs because the occupied groves meet the definition of an ESHA in Section 30107.5 of the Coastal Act. As such, autumnal and overwintering sites are afforded the protection under the Coastal Act described in Section 3.1. Unoccupied eucalyptus groves within the City of Goleta in areas adjacent to the overwintering sites that contain suitable conditions to support overwintering butterflies are also considered ESHAs because they could be used at any time in the future, and because they provide additional habitat in the event that the occupied groves are damaged.

Consistent: The monarch overwintering sites in the Open Space Area are considered ESHAs and are treated as such in the MBHMP. The MBHMP takes a habitat-based approach to conserving the monarch ESHA, and the MBHMP Programs are focused on achieving healthy conditions in the groves overall and not just at specific locations. This approach was selected because conditions in the Coverage Area are changing rapidly, and areas outside the traditional aggregation sites may end up proving essential to preserving the aggregation phenomenon on Ellwood Mesa. As such, the MBHMP is consistent with OSP Policy 3.2.3.

3.2.4 Management Goals and Policies [OSP]

The following goal and policies will guide the overall implementation of the monarch butterfly Habitat Protection and Management Element of this Open Space Plan. The three sponsoring agencies will formally adopt these goals and policies into their local coastal programs. Management actions and projects by each agency associated with the implementation of the Open Space Plan within their jurisdiction must be consistent with these goals and policies.

- *Monarch Goal 1. Protect and maintain existing monarch butterfly populations in the Open Space Plan Area, and manage the habitats to be self-sustaining.*
    - *Monarch Policy 1. Manage public access to protect butterflies and their habitat, while promoting public enjoyment, education, and scientific research.*
    - *Monarch Policy 2. Conduct scientifically sound studies using appropriate and cautious methods to maintain and improve habitat conditions to ensure long-term viability of the population.*
    - *Monarch Policy 3. Implement phased habitat improvements in a manner, using pilot programs, small-scale projects, and adaptive management.*

Consistent: The management goals and policies outlined in OSP Policy 3.2.4 have been incorporated into the MBHMP. The MBHMP provides a framework for implementation of administrative; natural resources management; outreach; and monitoring, research, and adaptive management programs that will help protect, restore, and enhance existing monarch butterfly populations in the Open Space Area. These programs will drive management of the monarch ESHAs to be self-sustaining, while providing for public access and promoting public enjoyment, education, and scientific research. Scientifically sound studies have been conducted, and further studies will be conducted, to obtain information and data that can be used to help maintain and improve habitat conditions to ensure long-term viability of the population. Therefore, the MBHMP is consistent with OSP Policy 3.2.4.

3.2.5 Resource Protection and Management [OSP]

Trail and Public Access Plan in Butterfly Groves

During the peak overwintering season, especially on weekends and during holidays, a large number of people visit the Ellwood Main site which can cause adverse impacts to the habitat. To reduce the impact, access in the Ellwood Main site would be managed by closing certain duplicative trails and placing low-profile barriers such as post and cable fences or logs to direct foot traffic and discourage bicycle use in sensitive or eroded areas. The fencing and other barriers would be similar to the existing onsite barriers in the Ellwood Main site.

The trail system for the Open Space Plan Area is presented on Figure 12 (as presented in Section 4.0 of this plan). Trail closure opportunities would occur within all of the monarch butterfly overwintering sites, as summarized below:

- *Public access in the Sandpiper Aggregation would be reduced as a result of elimination of the north-south connecting trail as a result of the Comstock Homes Development. A 500-foot-long trail that connects the Comstock Homes Development site with the grove would be closed. Pedestrian access would be maintained on Trail 24, located along the perimeter of the aggregation.*
- *Within the Ellwood West site, a small trail connector, approximately 200 feet in length, would be closed. Pedestrian access would be allowed; bicyclists and equestrians would not be allowed.*
- *Approximately 400 feet of existing trail between Trails 18 and 23 would be closed in the Ellwood West site. This trail closure would include a Devereux Creek crossing.*

- *Three trail closures totaling approximately 1,050 feet are proposed within the Ellwood Main site. Trail closures include approximately 300 feet between Trails 18 and 16; approximately 350 feet between Trails 19 and 17; and 400 foot between Trails 18 and 17. Pedestrian access would be allowed. Bicyclists and equestrians would not be allowed.*
- *Two trail closures totaling 200 feet are proposed within the Ocean Meadows Roost. These small spur trails diverge off Trail 14 and connect to the golf course. Pedestrian access would be allowed; bicyclists and equestrians would not be allowed. The southern edge of this roost would be accessed via an existing improved trail (Trail 8) on University property that would connect with the unimproved trail (Trail 17) on City of Goleta property.*

Consistent: The MBHMP's Trail Management Program (Program 5) is fully consistent with the efforts of OSP Policy 3.2.5, and calls for trails to be managed and maintained in a manner that protects sensitive habitat areas. However, the MBHMP does not propose permanent changes to historical public access and recreation uses of the Open Space Area. The City is in the process of undertaking a separate project, the Ellwood Mesa Coastal Trails and Habitat Restoration Project, which will broadly address the objectives of public access and recreation on Ellwood Mesa. The MBHMP does address the need for short-term trail closures due to unsafe conditions, and MBHMP Action 5-1.9 calls for these issues to be resolved as quickly as possible. Long-term closure of official trails is not proposed as a management approach under the MBHMP; rather, trails would be allowed to remain open with appropriate signage alerting users to the risks present. Appropriate signage would be posted, as discussed in Sections 5, 7, 9, and 18 of the MBHMP, and would redirect users to alternate routes in the event of short-term trail closures. As such, the MBHMP is consistent with the "*Trail and Public Access Plan in Butterfly Groves"* portion of OSP Policy 3.2.5.

Eucalyptus Woodland Enhancement Opportunities
The following opportunities to enhance the six monarch overwintering sites in the Open Space Plan Area will be considered during the implementation of the Open Space Plan. The objective of these opportunity projects is to ensure that the eucalyptus groves that provide overwintering habitat remain viable, self-sustaining, and protected from stress factors such as disease, drought, senescence, fire, and storm damage. The sponsoring agencies recognize there is scientific debate and uncertainty about habitat enhancement approaches and methods for monarch groves. Hence, the opportunity projects would only be pursued after consultation with experts, a careful consideration of the scientific and empirical observations concerning the habitat enhancement issues, and input from the public. The following opportunity projects will not be implemented without public involvement and additional environmental review where applicable. Any eucalyptus enhancement and management actions would be implemented in a phased and incremental manner over time, as funding allows. In addition, pilot projects and field experiments would be pursued to evaluate the effectiveness of the opportunity projects.

1. *Monitor insect infestation within the monarch butterfly aggregations, overwintering sites, and roosts within the Ellwood Complex. Once infected trees are identified, they should be removed to prevent other trees from being infected. Tree removal would occur under the approval and supervision of a monarch biologist and at the appropriate time of year to avoid impacts to the butterflies.*
2. *Replace insect-infested trees with blue gum saplings within and outside the occupied areas as determined by the arborist and monarch biologist in order to prevent spread of the insect.*
3. *Plant eucalyptus trees in the understory of the occupied groves to offset the effects of trampling by visitors, under the direction of a monarch biologist.*
4. *Allow the natural build-up of leaf litter and downed-wood within the Ellwood Complex sites, per the direction of a monarch biologist. Consultation with the County Fire Department would be required.*

Consistent: One of the most important aspects of the MBHMP is the set of management practices that would result in a sustainable eucalyptus forest that supports aggregation sites for monarch butterflies. Health of the individual eucalyptus trees, structure of the aggregation sites, and long-term sustainability of the groves supporting the sites are of primary importance. In response to these management needs, as well as concern for public safety within the groves and concern for wildfire hazards, City staff continues to work with professional biologists and arborists to develop protocols for managing the eucalyptus groves

supporting monarch butterfly aggregation sites. The information obtained during inventories and assessments, and coordination with the development of the Community Wildfire Prevention Plan, resulted in management recommendations as presented in the MBHMP. As such, the MBHMP is consistent with the "*Eucalyptus Woodland Enhancement Opportunities*" portion of OSP Policy 3.2.5.

Monarch Inventory and Monitoring
A monarch inventory and monitoring program could be implemented for the Open Space Plan Area in order to evaluate the condition of the population and groves; detect trends in butterfly health, number, and behavior; and to support awareness of butterfly migration. The program will be implemented as funding allows. The program could include the following activities at the Ellwood Complex sites:

- *Existing and historic monarch overwintering sites in the Open Space Plan Area would be surveyed each year by a qualified biologist. Site surveys would occur at least three times a year, in the fall (late October), in mid-winter (December), and in late winter (late January).*
- *An annual inventory of the monarch population would be conducted. Monarch tagging would not occur as part of the population inventory.*
- *A comprehensive inventory of current monarch roosting trees would be conducted to map and characterize the occupied trees, including general information about size, density, and health.*
- *The sponsoring agencies would designate a monarch specialist who would coordinate all monarch research and inventory work in the Open Space Plan Area by educational and scientific entities. The sponsoring agencies would implement a monarch research and education permit program which would require groups or individuals interested in research or educational programs to apply for a permit. Educational programs involving contact with butterflies or off-trail activity would not be allowed unless a permit is obtained.*

Consistent: The MBHMP provides goals, policies, and actions for Biological Monitoring and Monarch Research Programs (MBHMP Programs 20 and 21). Goals of these programs include developing and implementing a monitoring program integrating various components of the biological resources and impacts related to the eucalyptus groves that support seasonal monarch butterfly aggregation sites, and encouraging research projects and identifying funding for research associated with monarch butterflies and their habitats. As such, the MBHMP is consistent with the "*Monarch Inventory and Monitoring*" portion of OSP Policy 3.2.5.

Attachment 3

Guiding Policies from the Goleta General Plan / Coastal Land Use Plan

The General Plan is available online at:
https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan

Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan: Related Policies

Policy OS 5: Ellwood-Devereux Open Space Area [GP/CP]

Objective: *The portion of the Ellwood-Devereux Open Space Area within Goleta, which includes the City-owned Sperling Preserve and Santa Barbara Shores Park units, shall be managed to provide coastal access and passive, coastal-dependent recreational opportunities consistent with protection and enhancement of the site's environmentally sensitive habitat areas and other environmental and scenic resources.*

OS 5.3 **Public Access and Recreation. [GP/CP]** The Ellwood-Devereux Open Space Area shall be managed to maintain the site's historical public access and recreation uses while managing accessways to protect natural resources such as the monarch butterfly groves, vernal pools, native grasslands, beaches, coastal bluffs, and other environmentally sensitive habitat areas. The planned trail and beach access system, shown on the map in Figure 3-3, is based on the locations of existing informal trails created by repeated public use, with some trail segments being closed to avoid impacts to environmentally sensitive areas, to eliminate hazardous segments, and/or to eliminate parallel redundant trail segments. Although some trail closures are proposed, the planned trail system will not reduce overall access or trail experiences in the public open space area, but will redirect users to alternate routes located in close proximity. The following standards shall apply to public access and recreation in the open space area:

a. The Anza Trail is one of two major planned east-west trails across the Ellwood Mesa. This trail extends from the eastern boundary with UCSB to the public access parking lot at Santa Barbara Shores Park adjacent to Hollister Avenue (see related OS 4.4).

b. The California Coastal Trail segment within the Ellwood-Devereux Open Space Area, the other major east-west trail, is planned to have a bluff-top alignment (see related OS 4.3).

c. The locations of additional planned trails are also shown on Figure 3-3. Although the trail system shall be planned primarily as footpaths for pedestrians, bicyclists and/or equestrians may also be accommodated on certain trail segments as shown in Figure 3-3. At least one trail from the Hollister parking lot to the bluff-top shall be designated for exclusive use by pedestrians.

d. Except for the Anza Trail, trails shall generally be designed to utilize native soil materials with appropriate grooming and maintenance to provide for slightly crowned cross sections, defined trail edges, and proper drainage. Trail improvements shall be designed to maintain natural drainage patterns in order to avoid potential impacts to Devereux Creek and the associated eucalyptus groves that comprise the monarch butterfly aggregation sites. Trail improvements may include boardwalks and/or bridges across Devereux Creek in wet or eroded areas in the vicinity of the Ellwood Main grove

e. Two accessways from the bluff top to Ellwood Beach (identified as accessways E and F) are planned, as shown on Figure 3-3. These beach accessways shall be planned to accommodate pedestrians only.

   1) Improvements to accessway E, which is a steeply sloped former roadway with a badly eroded asphalt surface, are limited to repairs to improve the surface for the safety of users and to reduce further erosion of the bluff face and pathway.

   2) Improvements to accessway F, which is a steep pathway down the face of the bluff, shall be designed to smooth the surface, improve drainage, and reduce erosion of the path and bluff face and are generally limited to minor grading and placement of landscape ties or a similar material to stabilize the pathway.

f. A public access parking lot consisting of not less than 40 parking spaces shall be provided adjacent to Hollister Avenue, as shown in Figure 3-3. The following standards shall apply to public parking serving the open space area:

1) The Hollister Avenue lot shall be paved with permeable materials to reduce stormwater runoff and prevent pollution of surface waters.

2) Landscaping of the parking lot and Hollister Avenue street frontage shall maintain a natural appearance and shall be limited to drought-tolerant species. Landscaping shall not impair views of the coastal bluff-top, ocean, and Channel Islands from Hollister Avenue.

3) Onstreet parking on streets within the Ellwood neighborhood shall be available as needed for public coastal access, subject to appropriate restrictions on the hours of availability and duration of such parking.

g. A limited amount of facilities or amenities may be provided within the open space area to better accommodate users and manage accessways to protect natural resources. These may include the following:

1) A potential public restroom facility to be located between the public parking lot and Hollister Avenue, which shall be designed to avoid impairing views of the ocean and the Channel Islands from Hollister Avenue.

2) Low-profile signs to identify permitted uses, guide pedestrians, interpret resources, and advise users on resource protection regulations.

3) Temporary or permanent barriers to establish protection for sensitive plants and animals and habitat restoration areas that are compatible with the natural appearance of the surroundings.

4) Benches at a limited number of selected scenic locations.

5) Trash receptacles, mutt-mitt dispensers, and other similar low-impact facilities.

h. A signage program shall be prepared for the open space area. The overall intent or purposes of the sign program shall be to assist and inform visitors as to open space regulations, directions, and information. Signs shall be designed and located in a manner that is protective of environmental and visual resources and may include the following:

1) A donor recognition sign.

2) Trail markers identifying names, directions, and distances.

3) Trail head signs.

4) Interpretative signs.

5) Regulatory signs, including trail and open space rules, closures, and hazardous areas.

6) Habitat protection signs.

OS 5.4 **Protection and Enhancement of Habitat Areas. [GP/CP]** Within its boundaries, the Ellwood-Devereux Open Space Area encompasses a diverse array of sensitive aquatic and upland habitats, as shown on Figure 3-3. These habitats include beach and shoreline areas, dunes, rocky intertidal areas, coastal bluffs, monarch butterfly aggregation sites and associated eucalyptus groves, vernal pools, riparian areas along Devereux Creek and its tributaries, coastal sage and scrub areas, native grasslands, and raptor nesting and roosting areas. All environmentally sensitive habitat areas shall be managed and protected consistent with the policies and standards described in the Conservation Element of this plan. In addition, the following criteria and standards shall apply to the Ellwood-Devereux Open Space Area:

a. Habitat management on City owned lands shall be implemented within a broad ecosystem context in which habitat management priorities will consider the role of the targeted habitats and the interrelationships with other habitats in the open space area. In addition to protection of existing habitats, management actions may include interventions to enhance or restore degraded habitat conditions. All management activities shall use an

adaptive approach that includes monitoring and adjustments to ensure that self-sustaining habitats will be created that are not reliant on long-term human intervention.

b. Priority habitat management activities include ensuring the long-term vitality of the eucalyptus groves and stability in the monarch butterfly population; restoration of native grasslands; enhancement of vernal pools and riparian habitats; and protection of special status species, including various raptors and the western snowy plover. Some examples of habitat management action areas are shown on Figure 3-4.

c. Habitat management activities shall be designed to accommodate public access and use in or adjacent to habitat areas, where practicable, in a manner consistent with protection of the resource.

d. In all habitat enhancement or restoration projects, genetic stock for seeds and plants from the Devereux Creek watershed shall be used, unless such use has been determined to be infeasible.

OS 5.5 **Use and Management of the Open Space Area. [GP/CP]** The following management policies shall apply to lands owned by the City within the Ellwood-Devereux Open Space area:

a. An advisory committee may be established to provide advice and recommendations to the City regarding management of access, recreation uses, and habitat within the area. The committee may include residents of the adjacent neighborhoods as well as technical experts.

b. Permitted uses include, but are not limited to, the following compatible passive and coastal-dependent recreation activities: hiking, bicycling on designated trails, horseback riding on designated trails, bird-watching, surfing, sunbathing and beach play, surf fishing as allowed by law, swimming, scuba diving and snorkeling, kayaking, picnicking, playing of nonamplified musical instruments, kite flying, small educational tours, habitat restoration, scientific studies, and other uses as deemed appropriate by the City. Particular uses may require advance approval of a permit by the City.

c. Prohibited uses include, but are not necessarily limited to, the following: fireworks; camping; plant or wildlife collecting unless approved by the City; amplified music; radio-controlled motorized equipment such as model airplanes and cars; organized competitive sporting events such as track and field and bicycle races; large-scale special events and public gatherings; model rockets; fires of any kind, including in pits or in camp stoves; and archery, BB guns, pellet guns, paint guns, and firearms of all types.

d. All private for-profit commercial uses of the City-owned portion of the Ellwood-Devereux Open Space Area shall be prohibited, including but not limited to commercial equestrian operations.

e. Beach grooming using mechanical equipment shall be prohibited.

f. Any group activity that causes damage to vegetation or soil outside of designated trails shall be prohibited.

g. Use of herbicides, insecticides, and similar toxic substances shall not be permitted unless other nonchemical methods of pest control have been attempted or determined to be infeasible.

Policy CE 4: Protection of Monarch Butterfly Habitat Areas [GP/CP]
Objective: *To preserve, protect, and enhance habitats for monarch butterflies in Goleta, including existing and historical autumnal and winter roost or aggregation sites, and promote the long-term stability of over-wintering butterfly populations.*

CE 4.1 **Definition of Habitat Area. [GP/CP]** The monarch butterfly is recognized as a California and Goleta special resource. Although the species is not threatened with extinction, its autumnal and winter aggregation sites, or roosts, are especially vulnerable to disturbance. Sites that provide the key elements essential for successful monarch butterfly aggregation areas and

are locations where monarchs have been historically present shall be considered ESHAs. These elements include stands of eucalyptus or other suitable trees that offer shelter from strong winds and storms, provide a microclimate with adequate sunlight, are situated near a source of water or moisture, and that provide a source of nectar to nourish the butterflies.

CE 4.2 **Designation of Monarch Butterfly ESHAs. [GP/CP]** Existing and known historical monarch roost sites, as shown on Figure 4-1, are hereby designated as ESHAs. These include about 20 known roosts, eight of which comprise the Ellwood Complex, a series of sites within a network consisting of eucalyptus groves and windrows interspersed by open fields and crossed by small creeks. This network includes several separate but interconnected autumnal and winter roost sites. The Ellwood Main site, the largest roost in Santa Barbara County and one of the largest in the state, occupies a site along Devereux Creek in the Sperling Preserve, a City-owned tract situated near the coastal bluffs in western Goleta.

CE 4.3 **Site-Specific Studies and Unmapped Monarch ESHAs. [GP/CP]** Any area not designated on Figure 4-1 that is determined by a site-specific study to contain monarch habitats, including autumnal and winter roost sites, shall be granted the same protections as if the area was shown on the figure. Proposals for development on sites shown on this figure or where there is probable cause to believe that monarch habitats may exist shall be required to provide a site-specific study.

CE 4.4 **Protection of Monarch Butterfly ESHAs. [GP/CP]** Monarch butterfly ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on and compatible with maintaining such resources shall be allowed within these ESHAs or their buffer areas. The following standards shall apply:

a. No development, except as otherwise allowed by this policy, shall be allowed within monarch butterfly ESHAs or ESHA buffers.

b. Since the specific locations of aggregation sites may vary from one year to the next, the focus of protection shall be the entire grove of trees rather than individual trees that are the location of the roost.

c. Removal of vegetation within monarch ESHAs shall be prohibited, except for minor pruning of trees or removal of dead trees and debris that are a threat to public safety.

d. Public accessways are considered resource-dependent uses and may be located within a monarch ESHA or its buffer; however, such accessways shall be sited to avoid or minimize impacts to aggregation sites.

e. Interpretative signage is allowed within a monarch ESHA or its buffer, but shall be designed to be visually unobtrusive.

f. Butterfly research, including tree disturbance or other invasive methods, may be allowed subject to City approval of a permit.

CE 4.5 **Buffers Adjacent to Monarch Butterfly ESHAs. [GP/CP]** A buffer of a sufficient size to ensure the biological integrity and preservation of the monarch butterfly habitat, including aggregation sites and the surrounding grove of trees, shall be required. Buffers shall not be less than 100 feet around existing and historic roost sites as measured from the outer extent of the tree canopy. The buffer area shall serve as transitional habitat with native vegetation and shall provide physical barriers to human intrusion. The buffer may be reduced to 50 feet in circumstances where the trees contribute to the habitat but are not considered likely to function as an aggregation site, such as along narrow windrows. Grading and other activities that could alter the surface hydrology that sustains the groves of trees are prohibited within or adjacent to the buffer area.

CE 4.6 **Standards Applicable to New Development Adjacent to Monarch ESHAs. [GP/CP]** The following standards shall apply to consideration of proposals for new development adjacent to monarch ESHAs or ESHA buffers:

a. A site-specific biological study, prepared by an expert approved by the City who is qualified by virtue of education and experience in the study of monarch butterflies, shall be required to be submitted by the project proponent.

b. The study shall include preparation of a Monarch Butterfly Habitat Protection Plan, which at a minimum shall include: 1) the mapped location of the cluster of trees where monarchs are known, or have been known, to roost in both autumnal and over-wintering aggregations; 2) an estimate of the size of the population within the colony; 3) the mapped extent of the entire habitat area; and 4) the boundaries of the buffer zone around the habitat area.

c. A temporary fence shall be installed along the outer boundary of the buffer zone prior to and during any grading and construction activities on the site.

d. If an active roost or aggregation is present on the project site, any construction grading, or other development within 200 feet of the active roost, shall be prohibited between October 1 and March 1.

Attachment 4

Guiding Policies from the Ellwood-Devereux Coast Open Space and Habitat Management Plan

This plan is also available online at:
https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/advance-planning-division/environmental-programs

Ellwood Mesa/Sperling Preserve Open Space Monarch Butterfly Habitat Management Plan: Related Open Space Plan Policies

3.1.2 Environmentally Sensitive Habitat Areas

The GCP, which applies to the unincorporated areas of the County, contains a list of ESHAs that occur in the Open Space Plan Area. Key policies related to ESHAs are as follows:

> **GCP Policy BIO-GV-6.** Monarch butterfly roosting habitats shall be preserved and protected.

3.1.6 Exotic Species Management Approach

"Invasive exotics" are insects, plants, or wildlife species that exhibit rapid and aggressive ability to colonize suitable areas and that displace native species by competitive abilities or predatory actions. Invasive exotics can cause adverse impact to habitats through various means besides physical displacement. They can hybridize with native stock and cause undesirable traits in native plants, support other invasive species, and create new microclimates and alter physical conditions in the ecosystem.

The habitat protection and management element is designed to reduce the extent of, and if feasible, eradicate, invasive exotic species. This will be accomplished by targeted removal of invasive exotics with or without associated habitat restoration. The primary objectives of invasive exotic species management are to protect the various biological, hydrological, and geophysical functions of ESHAs in the Open Space Plan Area, as well as to protect the genetic integrity and reproductive capability of native species populations in the Open Space Plan Area.

Control and eventual eradication of the following invasive exotic species will be an opportunity throughout the implementation of the Open Space Plan:

- Long-horned beetle (which attack eucalyptus trees)
- Fennel (*Foeniculum vulgare*). Fennel is scattered through non-native grasslands, along the Devereux Creek drainage, and in large patches on the South Parcel Nature Park.
- Pampas Grass (*Cortaderia selloana*). Pampas grass occurs in dense patches on the South Parcel Nature Park.
- Harding Grass (*Phalaris aquatica*). Harding grass occurs in scattered locations on Ellwood Mesa, the South Parcel Nature Park, and West Campus Bluffs Nature Park.
- Hottentot Fig (*Carpobrotus edulis*). Hottentot fig (a species of iceplant) occurs in dense patches on the coastal bluffs and dunes in the Open Space Plan Area.
- Tamarisk (*Tamarix aphylla*). Tamarisk occurs in patches on the West Campus Bluffs Nature Park.

Eucalyptus trees on the City of Goleta's Ellwood Mesa and Santa Barbara Shores and the University's large ornamental pine and cypress trees on the West Campus will not be removed as part of the habitat protection and management plan. These trees provide important monarch butterfly aggregation and roosting habitat and also serve as raptor roost and nest sites.

Areas where the vegetation and soil have been disturbed by humans or domestic animals are more susceptible to invasion of exotic species. Previous grazing activity, uncontrolled recreation uses, and other land disturbances within the Open Space Plan Area support the conditions to sustain exotic species. A more complete list of invasive exotic species occurring within the Open Space Plan Area and a description of the species' general location is provided in Appendix A.

The phrase "native species" used in this Open Space Plan refers to plants, insects, fish, and wildlife indigenous to the South Coast and/or southern California. "Non-native species" refers to species that are from areas outside of the region, state, or continent. "Naturalized species" refers to non-native species

which have become common since the European settlement of California, and which now are integral elements of the coastal ecosystem. Examples of naturalized species include the annual grasses that dominate most of the grassy foothills and meadows of the South Coast (e.g., wild oats, plantain, Italian ryegrass, filaree, ripgut brome), and eucalyptus trees.

3.1.7 General Policies for Habitat Protection and Management

The following goal and associated policies guide the overall implementation of the Habitat Protection and Management Element of the Open Space Plan.

Habitat Goal 1. Protect, enhance, and, where feasible, restore ESHAs in the Open Space Plan Area.

> **Habitat Policy 1.** Focus high priority habitat enhancement and restoration initial improvements and opportunities on invasive exotic species control in wetlands, enhancement and restoration of riparian and non-riparian wetlands, ensuring the long-term vitality of the monarch groves, and enhancement and restoration of native habitats that are under-represented in the Open Space Plan Area.
>
> **Habitat Policy 2.** Enhance and restore native habitats to be self-sustaining and not reliant on long-term human management and intervention.
>
> **Habitat Policy 3.** Control and, where feasible, eradicate invasive exotic species within the Open Space Plan Area in a manner that protects ESHAs from adverse impacts.

3.2.2 Management Issues

The monarch butterfly groves have been subject to past and ongoing human impacts due to unmanaged access by pedestrians, bicyclists, equestrian users, and pets. Unmanaged and excessive access has compacted soils, destroyed the layer of litter (dead leaves and small twigs), and trampled vegetation. Evidence of damaging public access is very evident in the Ellwood Main site. The loss of the litter layer exposes soils to erosion. Compaction of soil can cause stress to the trees and hinders natural regeneration by seedling and saplings in the understory. In some experts' opinions, the absence of a diverse size and age structure of trees in the Ellwood Main site makes the groves vulnerable to disease.

Another major management issue is the growing number of eucalyptus pests that have arrived in California, including the long horned beetle (*Phoracantha semipunctata*), several species of psilid (*psilids*), and at least two species of weevils. The long horned beetle is probably the best known of these pests and can kill a eucalyptus tree in a matter of months. There are few tools presently available to control this pest. The best defense is healthy trees free of stress by drought, soil compaction, or overcrowding. The Ellwood Main site exhibits limited signs of beetle infestation (Meade, 1999).

Eucalyptus trees are very vulnerable to fire because of the abundance of oil within their leaves. In the long-term, fire may be beneficial to a eucalyptus grove because it regenerates old groves. However, in the Open Space Plan Area, fire is not an acceptable management tool due to obvious public safety concerns to adjacent residences.

Finally, a number of educational and scientific organizations and community groups monitor monarchs in the Ellwood Complex. Many times these efforts include tagging or handling the butterflies. The high level of interest and direct interaction with this species from school children to scientists could harm the population if not properly managed and coordinated.

3.2.3 Regulatory Considerations

Monarch butterfly overwintering sites in the Open Space Plan Area are considered ESHAs because the occupied groves meet the definition of an ESHA in Section 30107.5 of the Coastal Act. As such, autumnal and overwintering sites are afforded the protection under the Coastal Act described in Section 3.1. Unoccupied eucalyptus groves within the City of Goleta in areas adjacent to the overwintering sites that

contain suitable conditions to support overwintering butterflies are also considered ESHAs because they could be used at any time in the future, and because they provide additional habitat in the event that the occupied groves are damaged.

3.2.4 Management Goals and Policies

The following goal and policies will guide the overall implementation of the monarch butterfly Habitat Protection and Management Element of this Open Space Plan. The three sponsoring agencies will formally adopt these goals and policies into their local coastal programs. Management actions and projects by each agency associated with the implementation of the Open Space Plan within their jurisdiction must be consistent with these goals and policies.

Monarch Goal 1. Protect and maintain existing monarch butterfly populations in the Open Space Plan Area, and manage the habitats to be self-sustaining.

> **Monarch Policy 1.** Manage public access to protect butterflies and their habitat, while promoting public enjoyment, education, and scientific research.
>
> **Monarch Policy 2.** Conduct scientifically sound studies using appropriate and cautious methods to maintain and improve habitat conditions to ensure long-term viability of the population.
>
> **Monarch Policy 3.** Implement phased habitat improvements in a manner, using pilot programs, small-scale projects, and adaptive management.

3.2.5 Resource Protection and Management

Trail and Public Access Plan in Butterfly Groves

During the peak overwintering season, especially on weekends and during holidays, a large number of people visit the Ellwood Main site which can cause adverse impacts to the habitat. To reduce the impact, access in the Ellwood Main site would be managed by closing certain duplicative trails and placing low-profile barriers such as post and cable fences or logs to direct foot traffic and discourage bicycle use in sensitive or eroded areas. The fencing and other barriers would be similar to the existing onsite barriers in the Ellwood Main site.

The trail system for the Open Space Plan Area is presented on Figure 12 (as presented in Section 4.0 of this plan). Trail closure opportunities would occur within all of the monarch butterfly overwintering sites, as summarized below:

- Public access in the Sandpiper Aggregation would be reduced as a result of elimination of the north-south connecting trail as a result of the Comstock Homes Development. A 500-foot-long trail that connects the Comstock Homes Development site with the grove would be closed. Pedestrian access would be maintained on Trail 24, located along the perimeter of the aggregation.
- Within the Ellwood West site, a small trail connector, approximately 200 feet in length, would be closed. Pedestrian access would be allowed; bicyclists and equestrians would not be allowed.
- Approximately 400 feet of existing trail between Trails 18 and 23 would be closed in the Ellwood West site. This trail closure would include a Devereux Creek crossing.
- Three trail closures totaling approximately 1,050 feet are proposed within the Ellwood Main site. Trail closures include approximately 300 feet between Trails 18 and 16; approximately 350 feet between Trails 19 and 17; and 400 foot between Trails 18 and 17. Pedestrian access would be allowed. Bicyclists and equestrians would not be allowed.
- Two trail closures totaling 200 feet are proposed within the Ocean Meadows Roost. These small spur trails diverge off Trail 14 and connect to the golf course. Pedestrian access would be

allowed; bicyclists and equestrians would not be allowed. The southern edge of this roost would be accessed via an existing improved trail (Trail 8) on University property that would connect with the unimproved trail (Trail 17) on City of Goleta property.

Eucalyptus Woodland Enhancement Opportunities

The following opportunities to enhance the six monarch overwintering sites in the Open Space Plan Area will be considered during the implementation of the Open Space Plan. The objective of these opportunity projects is to ensure that the eucalyptus groves that provide overwintering habitat remain viable, self-sustaining, and protected from stress factors such as disease, drought, senescence, fire, and storm damage. The sponsoring agencies recognize there is scientific debate and uncertainty about habitat enhancement approaches and methods for monarch groves. Hence, the opportunity projects would only be pursued after consultation with experts, a careful consideration of the scientific and empirical observations concerning the habitat enhancement issues, and input from the public. The following opportunity projects will not be implemented without public involvement and additional environmental review where applicable. Any eucalyptus enhancement and management actions would be implemented in a phased and incremental manner over time, as funding allows. In addition, pilot projects and field experiments would be pursued to evaluate the effectiveness of the opportunity projects.

1. Monitor insect infestation within the monarch butterfly aggregations, overwintering sites, and roosts within the Ellwood Complex. Once infected trees are identified, they should be removed to prevent other trees from being infected. Tree removal would occur under the approval and supervision of a monarch biologist and at the appropriate time of year to avoid impacts to the butterflies.
2. Replace insect-infested trees with blue gum saplings within and outside the occupied areas as determined by the arborist and monarch biologist in order to prevent spread of the insect.
3. Plant eucalyptus trees in the understory of the occupied groves to offset the effects of trampling by visitors, under the direction of a monarch biologist.
4. Allow the natural build-up of leaf litter and downed-wood within the Ellwood Complex sites, per the direction of a monarch biologist. Consultation with the County Fire Department would be required.

Monarch Inventory and Monitoring

A monarch inventory and monitoring program could be implemented for the Open Space Plan Area in order to evaluate the condition of the population and groves; detect trends in butterfly health, number, and behavior; and to support awareness of butterfly migration. The program will be implemented as funding allows. The program could include the following activities at the Ellwood Complex sites:

- Existing and historic monarch overwintering sites in the Open Space Plan Area would be surveyed each year by a qualified biologist. Site surveys would occur at least three times a year, in the fall (late October), in mid-winter (December), and in late winter (late January).
- An annual inventory of the monarch population would be conducted. Monarch tagging would not occur as part of the population inventory.
- A comprehensive inventory of current monarch roosting trees would be conducted to map and characterize the occupied trees, including general information about size, density, and health.
- The sponsoring agencies would designate a monarch specialist who would coordinate all monarch research and inventory work in the Open Space Plan Area by educational and scientific entities. The sponsoring agencies would implement a monarch research and education permit program which would require groups or individuals interested in research or educational programs to apply for a permit. Educational programs involving contact with butterflies or off-trail activity would not be allowed unless a permit is obtained.