



Agenda Item C.1
DISCUSSION/ACTION ITEM
Meeting Date: December 18, 2018

TO: Mayor and Councilmembers

FROM: Charles W. Ebeling, Public Works Director

CONTACT: Everett King, Environmental Services Coordinator

SUBJECT: Compliance with the State Water Resources Control Board's Trash Provision

RECOMMENDATIONS:

- A. Receive a presentation on compliance with the State's Trash Provision and;
- B. Direct Public Works staff to submit a final Track 2 Implementation Plan to the Central Coast Regional Water Quality Control Board, incorporating any revisions to the draft plan based on Council's direction.

BACKGROUND:

On April 7, 2015, the State Water Board adopted the statewide Trash Amendment (Amendment) to address the pervasive impacts of trash on the beneficial uses of the state's surface waters. The Amendment establishes a statewide water quality objective for trash and prohibition of trash discharge to surface waters of the state. While trash originating from other sources, such as direct dumping and wind dispersion, are not directly addressed through the Amendment, the trash control programs implemented by municipalities will result in a significant reduction of trash discharged to waters of the United States. The Amendment became effective on December 2, 2015.

On June 1, 2017, the State Water Board issued a California Water Code Section 13383 Order for all Traditional Small (Phase II) Municipal Separate Storm Sewer Systems (Permittees), including the City of Goleta (City). The Order required two actions:

1. By September 1, 2017, submit a letter to the State Water Board identifying the selected compliance option (Track 1 or Track 2) and a preliminary jurisdictional map; and
2. By December 1, 2018, submit an updated jurisdictional map (Track 1 and Track 2) and an implementation plan, if applicable (Track 2 only).

The Amendment requires municipalities with regulatory authority over priority land uses (PLUs) to comply with the prohibition of trash discharge. PLUs include industrial, commercial, high-density residential, and transit facilities, including individual bus stops.

Track 1 requires the Permittee to install, operate and maintain full capture systems (FCS) for all storm drains that capture runoff from the PLUs in their jurisdictions, using Water Board approved FCS that are demonstrated to capture all non-organic debris greater in size than five millimeters. Compliance is achieved by certifying that FCS have been installed. Permittees then must regularly inspect and maintain those FCS going forward.

Track 2 requires the Permittee to install, operate, and maintain any combination of FCS, multi-benefit projects, other treatment controls, and/or institutional controls within its jurisdiction. Permittees shall demonstrate that such combination achieves full capture system equivalency (FCSE). Permittees may determine which controls to implement to achieve compliance with the FCSE. The State Water Board expects that permittees will elect to install FCS within their PLUs where such installation is not cost-prohibitive. The Water Board also expects Permittees to make regular progress towards full compliance, demonstrating reasonable annual efforts (approximately 10% annually) under either Track.

In selecting a compliance path, Public Works staff considered the constraints, opportunities, and available resources for both Tracks, to determine which was the most feasible. Track 1 was determined to be problematic in recognition that some of the City's storm drain system (MS4) may not readily accommodate retrofitting with FCSs, the potential costs of implementing Track 1, and concerns that installation of FCS could adversely impact areas of the City that are currently subject to flooding in major rain events. Track 2 provides some flexibility in meeting the requirements of the Amendment, where retrofitting the MS4 that drains PLUs was deemed infeasible, or prohibitively expensive. Track 2 also requires a significant effort to assess and quantify the trash loading rates generated within the City's PLUs as a necessary preliminary step to developing an implementation plan, as well as annual monitoring and reporting to demonstrate that the alternative approaches are achieving FCSE in reducing baseline trash loads. Track 2 Implementation Plans are subject to the review and approval of the Regional Water Board's Executive Officer.

On August 15, 2017, the City Council selected Track 2, and directed staff to conduct the necessary assessment and analysis work to develop an Implementation Plan. Then on October 29, 2017, the City submitted to the Water Board a Storm Drain map identifying the PLUs and locations of the City's storm drain drop inlets and outfalls, and a letter indicating the City's selected compliance option to the Regional Water Board.

DISCUSSION:

Track 2 requires installation, operation, and maintenance of any combination of full trash capture systems, multi-benefit projects, alternative treatment controls, and/or institutional controls. Alternative treatment controls can include manual litter abatement, enhanced street sweeping, public education and outreach (local campaigns & programs, social

media, etc.), on-land and creek cleanups, and product bans (plastic bags, Styrofoam, etc.). It is important to note that the Water Board expects Track 2 Permittees to retrofit their MS4s to the degree feasible.

On Land Visual Trash Assessments

In developing an alternative compliance approach the level of trash present within the target PLUs had to be surveyed and quantified, utilizing a Water Board approved methodology. In March 2018, Public Works staff attended a two-day training sponsored by the California Stormwater Quality Associations (CASQA) and presented by EOA Inc. on how to conduct On-land Visual Trash Assessments (OVTAs) that can be used to quantify base-line trash loading within the PLUs. The training provided protocols for street & sidewalk surveys, and area based surveys, how to accurately and consistently assess the amount of trash observed during assessment surveys, and to quantify trash loading.

The OVTA methodology requires two separate rounds of assessment surveys within the PLUs. Survey segments are assigned one of four levels of trash loading: A - not littered; B – slightly littered; C – littered, and; D – very littered. The level of trash assessed within any particular segment is then assigned to the adjacent parcels. Where a parcel is bounded by two survey segments with differing trash levels, the higher level is assigned to the parcel. Similarly, the more conservative parcel assessment between the two rounds of assessment surveys must be assigned to that parcel in the base-line condition map. For example, a parcel assessed as level B during the first round of OVTA surveys, but determined to be level C following the second round of surveys, must be assessed at level C.

Base-line Conditions

The OVTA assessments generated a final Parcel Baseline Condition Map, which is attached, and an estimated annual baseline trash load, presented in the following table.

	Number of Parcels	Number of Catch Basins	Average Trash Generation Rate	Acres	Estimated Annual Baseline Trash Load (Acres X Rate)
Low (A)	252	90	N/A	643.538227	N/A
Moderate (B)	350	69	7.5	291.485867	2186.144
High (C)	150	18	30	106.783197	3203.49592
Very High (D)	0	0	100	0	0
	752	177		1041.80729	5389.63992

Areas that are assessed at level A, are considered to be the equivalent of full trash capture, and additional measures are not required to be implemented in those areas.

Draft Implementation Plan

Public Works staff has drafted the attached Implementation Plan, which demonstrates how the City can achieve full trash capture equivalent within the specified compliance period.

The attached Draft Plan briefly describes the City's location, demographics, and the City's MS4, followed by a description of the OVTA methodology and results. Baseline trash loading and baseline management measures are discussed, followed by a description of the various means the City can employ in order to achieve Full Trash Capture Equivalent.

There are three primary means of removing litter within the PLUs; retrofitting the MS4 with full capture systems, manual litter abatement, and effective street-sweeping operations.

Full Capture Systems

As a result of the OVTA surveys, roughly half of the City's PLUs and the catch basins that drain those areas were assessed at Level A, or full trash capture equivalent, and no additional measures are required in those areas. This has reduced the number of catch basins that may need to be retrofitted significantly.

There are approximately 177 catch basins within the PLUs. Of those, approximately 90 are within areas assessed at Level A. This leaves 87 catch basins draining areas assessed at Levels B & C. Staff is proposing to retrofit most of those with low flow devices, such as connector pipe screens that can be installed within individual catch basins. Where there are areas or individual catch basins that cannot be retrofitted, the installation of medium flow full trash capture devices at outfalls that drain those areas may be feasible.

Final determination of which portions of the MS4 can be retrofitted with FCS will require additional planning, engineering and design work. Where retrofitting the MS4 is not feasible, the Plan proposes implementing a variety of measures designed to address those areas assessed at levels B and C.

Manual Litter Abatement

Manual litter abatement efforts in those areas of the City with the highest trash levels are relatively inexpensive and easy to implement, and would have an immediate impact on reducing trash loading. Manual Litter abatement could remove litter from areas that street sweeping equipment cannot reach, such as parkways, sidewalks, and the area immediately beyond the sidewalk. They would also have the added benefit of demonstrating to residents and the local business community that the City is taking tangible steps towards reducing the amount of litter in the right-of-way, to the benefit of the community.

The cost of a litter abatement crew would depend upon the extent and timing of their deployment. Manual litter abatement could serve as an interim measure to reduce trash loading until more permanent measures can be implemented. Retrofitting portions of the MS4 that drain PLUs assessed at level B or higher would eliminate the subsequent need for alternative measures in those areas.

Parking Restrictions for Enhanced Street Sweeping Operations

In many areas of the City, particularly residential neighborhoods, street sweeping equipment cannot currently reach the curb much of the time due to parked vehicles, preventing the removal of debris and litter accumulated in the gutter. Imposing parking restrictions for street sweeping operations would be an effective way of reducing the amount of litter on the City's streets. Parking restrictions could be phased in over time, starting in those areas identified as having heavier trash loads, and expanding to cover additional areas as deemed necessary.

The potential implementation of parking restrictions will require additional analysis to determine details such as their extent and frequency, how to phase them in over time, how current street sweeping operations may need to be modified, designing, procuring and installing signage, how they may impact the City's parking enforcement program, and coordination with trash collection schedules.

Parking restrictions for effective street sweeping operations would require the installation of signage. While temporary parking restrictions can be posted in limited applications, permanent parking restrictions would likely require permanent signage. The cost of purchasing and installing signage would depend on the minimum distance between signs, and the number of affected curb-miles.

There are a variety of secondary measures that can contribute to a reduction in litter generation, but will not remove litter from the right of way. These include:

- Public Education and Outreach
- Source Controls
- Partnerships with Other Agencies
- Enhanced Community Cleanup Programs
- Institutional Controls

The City's stormwater management program includes many of these measures and it would be relatively easy to adjust their messaging and scope to focus on litter reduction.

Estimated Costs and Potential Funding Sources

The Trash Provision is an unfunded mandate from the State. The specific cost of compliance will depend upon the types and number of FCS that are installed, their maintenance costs, and the costs of any alternative approaches such as manual litter abatement efforts or parking restrictions for street sweeping operations.

Compliance with the Trash Provision will be funded by the Solid Waste and Environmental Program Fees collected the City's franchise solid waste service provider. In addition, the franchise agreement requires the contractor to provide up to \$25,000 annually for solid waste and recycling educational and outreach efforts. CalRecycle City/County Payment program grants (approximately \$8,000/yr.) can be applied to the purchase of FTC devices (installation & maintenance costs may not qualify), as well as to the cost of litter abatement activities.

A Storm Drain Development Impact Fee (DIF) that will be proposed for adoption by Council soon can also raise revenues that can be applied to meeting the Trash Amendment and making necessary upgrades or expansion of capacity of the storm drain system.

FISCAL IMPACTS:

There are no anticipated fiscal impacts to the current FY 2018/19 budget. The future costs of compliance with the Trash Amendment will be spread over an approximately 10-year period between 2020 and 2030. The costs associated with planning, design and implementation of programs and projects to comply with the Trash Amendment during FYs 2019/20 and 2020/21 will be included in the next two-year budget proposal.

ALTERNATIVES:

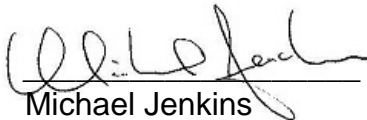
There are no alternatives to complying with the State's Trash Provision. The State Water Board has provided two tracks to meeting compliance, and Permittees are required to submit a compliance plan demonstrating how the mandate will be met under either track. Permittees are permitted to switch tracks, as necessary, subsequent to the submission of their compliance plans. Failure to comply would be a violation of the City's MS4 Permit, and would likely result in fines and penalties from the State Water Board.

Reviewed By:



Carmen Nichols
Deputy City Manager

Legal Review By:



Michael Jenkins
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Approved By:



Michelle Greene
City Manager

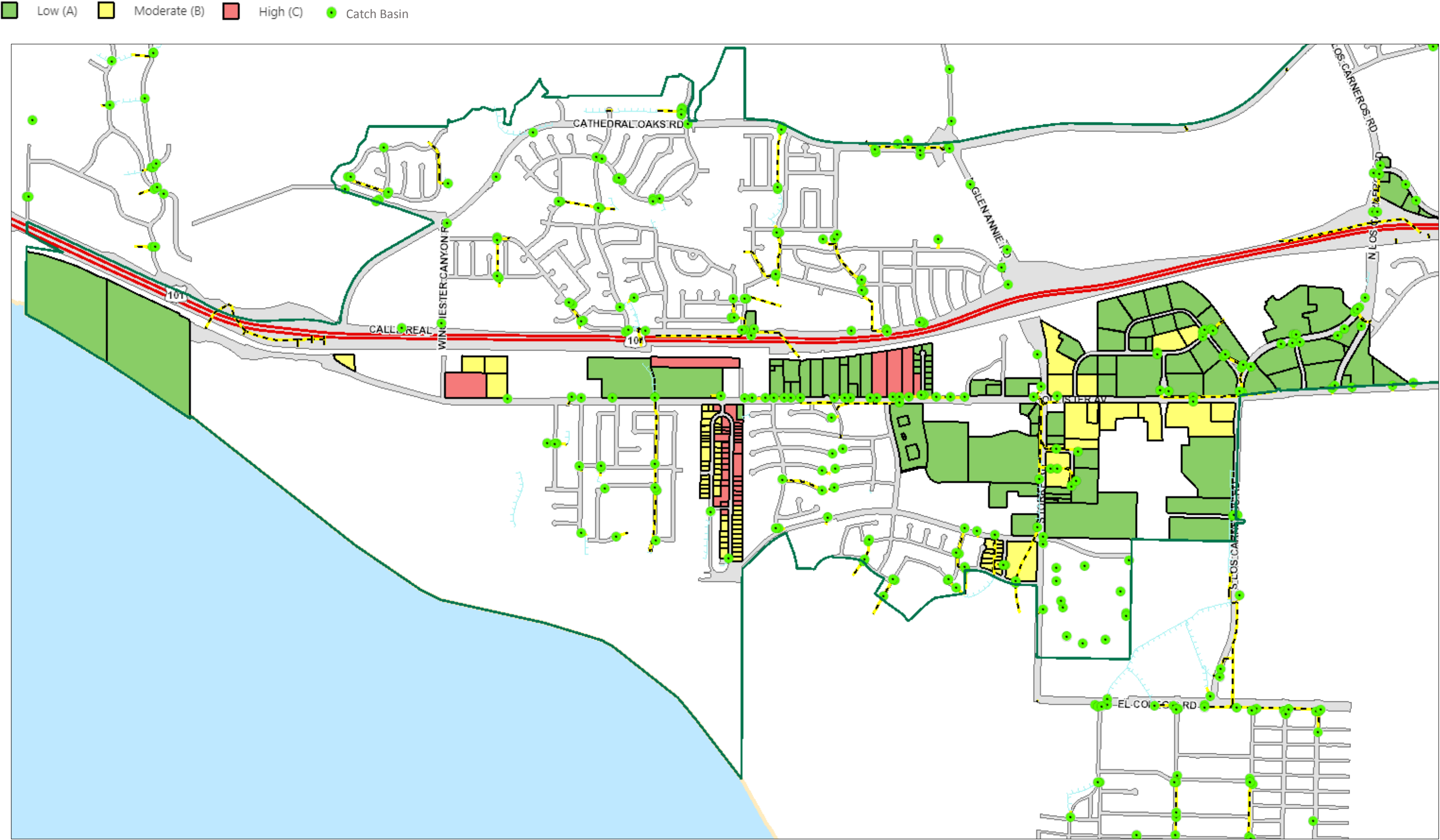
ATTACHMENTS:

1. Baseline Condition Map
2. City of Goleta Track 2 Implementation Plan to Meet the State Water Board's Trash Provision

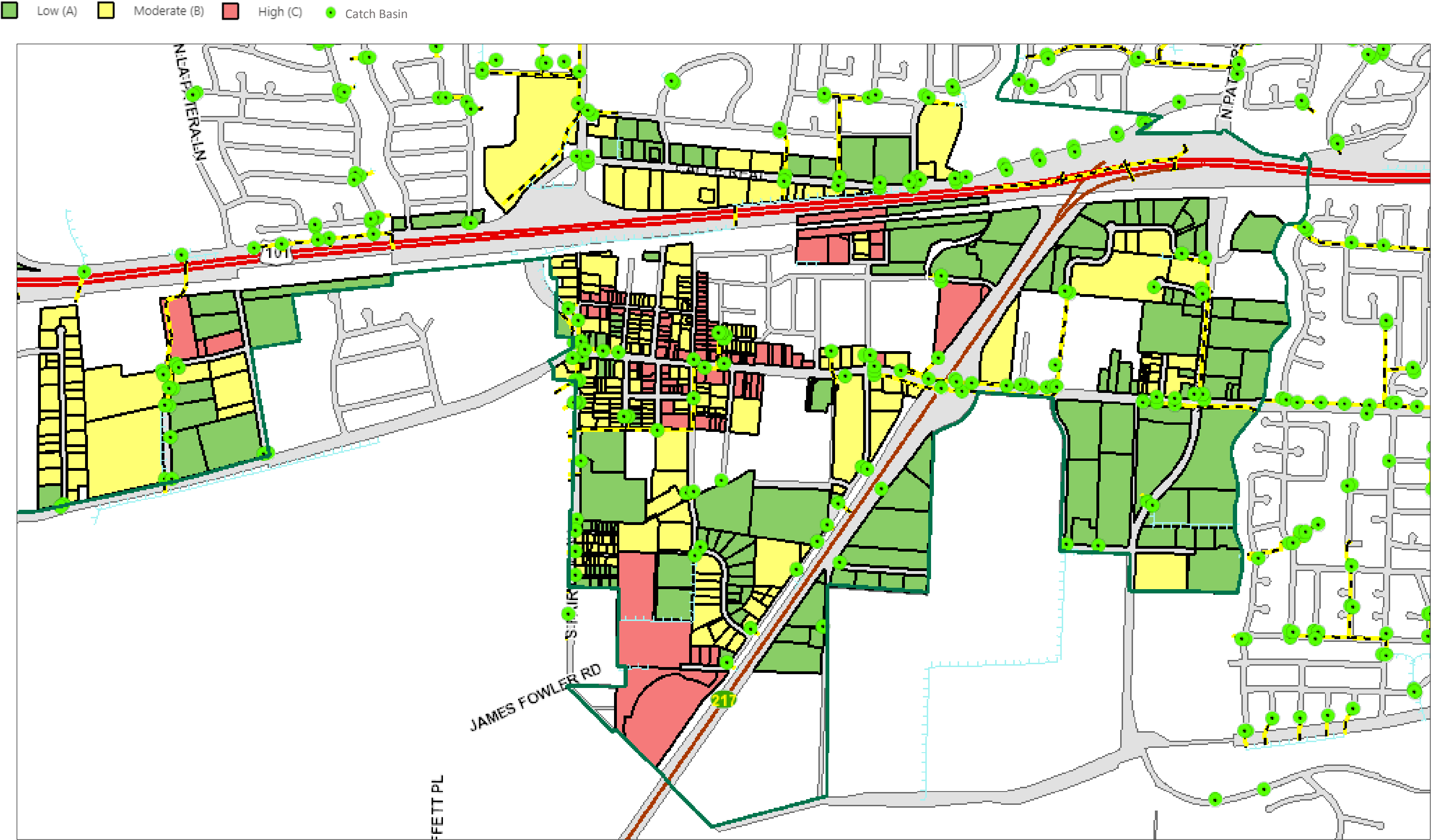
ATTACHMENT 1

City of Goleta Trash Amendment Baseline Condition Parcel Maps

City of Goleta Trash Amendment Baseline Condition Parcel Map, Western half of the City



City of Goleta Trash Amendment Baseline Condition Parcel Map, Eastern half of the City



ATTACHMENT 2

City of Goleta Track 2 Implementation Plan to Meet the State Water Board's
Trash Amendment

**TRACK 2 IMPLEMENTATION PLAN TO MEET THE STATE
WATER BOARD'S TRASH PROVISION**



Prepared by City of Goleta Public Works Department

DECEMBER 18, 2018

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Attachment 1: City of Goleta Public Works Department Organization Chart

Attachment 2: List of public refuse receptacles serviced by MarBorg

Attachment 3: Base-line condition parcel map

Attachment 4: Potential Regional Full Capture Systems: Outfall Devices

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Attachment 6: Jurisdictional Maps and Identification of Potential FCS

Attachment 7: Implementation Schedule

Attachment 8: Full Capture System Field Verification and Site Evaluation Form

Attachment 9: City of Goleta Annual Report of Full Capture System Installation

Attachment 10: Implementation Plan Change Log

INTRODUCTION

Purpose and Scope

This Implementation Plan is submitted to the Central Coast Regional Water Quality Control Board (Regional Board) in response to the State Water Resources Control Board's (Water Board) Trash Amendment.

On April 7, 2015, the State Water Board adopted the Proposed Final Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the Proposed Final Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan). The goal of the Statewide Trash Amendments is to address the impacts of trash to the surface waters of California through the establishment of a statewide narrative water quality objective and implementation requirements to control trash, including a prohibition against the discharge of trash. Trash reduction in the storm drain systems will result in trash reductions in the receiving waters to which these systems drain. While trash originating from other sources, such as direct dumping and wind dispersion, are not directly addressed through the Statewide Trash Amendments, the trash control programs implemented by municipalities will result in a significant reduction of trash discharged to waters of the United States.

The Statewide Trash Amendments became effective on December 2, 2015.

On June 1, 2017, the State Water Board issued a California Water Code Section 13383 Order for all Traditional Small (Phase II) Municipal Separate Storm Sewer Systems (Permittees), including the City of Goleta (City). The Order required two actions:

1. By September 1, 2017, submit a letter to the State Water Board identifying the selected compliance option (Track 1 or Track 2) and a preliminary jurisdictional map; and
2. By December 1, 2018, submit an updated jurisdictional map (Track 1 and Track 2) and an implementation plan, if applicable (Track 2 only).

The Statewide Trash Amendments require Permittees with regulatory authority over Priority Land Uses (PLUs) to comply with the prohibition of trash discharge through one of two Tracks. PLUs are described later in this report.

Track 1 requires the Permittee to install, operate and maintain Full Capture Systems (FCS) for all storm drains that capture runoff from the PLUs in their jurisdictions. The Water Board has published a list of approved FCS that are demonstrated to capture all non-organic debris >5 mm (to capture cigarette butts). Compliance is achieved by certifying that FCS have been installed. Permittees then must regularly inspect and maintain those FCS going forward.

Track 2 requires the Permittee to Install, operate, and maintain any combination of FCS, multi-benefit projects, other treatment controls, and/or institutional controls within its

jurisdiction. The Permittee shall demonstrate that such combination achieves full capture system equivalency (FCSE). The Permittee may determine which controls to implement to achieve compliance with the FCSE. The State Water Board expects that the Permittee will elect to install FCS within their PLUs where such installation is not cost-prohibitive.

The Water Board also expects Permittees to make regular progress towards full compliance, demonstrating reasonable annual efforts (approximately 10% annually) under either Track.

Compliance Approach

In selecting a compliance path, City staff considered the constraints, opportunities, and available resources for both tracks, to determine which Track was the most feasible. Track 1 was determined to be problematic in recognition that some of the City's storm drain system may not readily accommodate retrofitting with FCSs, the potential costs of implementing Track 1, and concerns that installation of FCS could adversely impact areas of the City that are currently subject to flooding in major rain events.

On August 15, 2017, the City Council selected Track 2, and directed staff to conduct the necessary assessment and analysis work to develop an Implementation Plan. Then on August 29, 2017, The City submitted to the Water Board a Trash Amendment Option Selection letter, and preliminary jurisdictional map that identifies the City's Priority Land Use areas and the corresponding storm drain network.

Location

Community Description

Incorporated in 2002, the City of Goleta has a population of around 30,944 (2015 estimate) and is located on the south coast of Santa Barbara County approximately 90 miles north of Los Angeles, California. The City encompasses approximately 8 square miles and is situated on an alluvial plain at the base of the Santa Ynez Mountains. The climate can be described as semi-arid Mediterranean. Annual rainfall rates average approximately 18 inches per year.

- The Population is 48.2% White, 38.6% Hispanic, and 8.73% Asian. (DATAUSA)
The Median age is 37.3 years. (DATAUSA)
- Median household income is \$81,398 (DATAUSA), and the poverty rate is 8.43% (DATAUSA)
- The most common industries include Educational Services; Healthcare & Social Assistance; Retail Trade; Professional, Scientific and Tech Services; and Manufacturing. (DATAUSA)

- The unemployment rate as of January 2018 was 3.9%, below the Santa Barbara County (4.9%), State (4.3%) and National (4.1%) averages. (DATAUSA)

Administering Organization

Roles and Responsibilities

The Public Works Department is primarily responsible for managing the City's MS4, and implementing the City's Municipal Permit requirements. The Environmental Services Coordinator, under the direction of the Public Works Director, oversees the City's Storm Water Control Plan/Guidance Document (SWMP), and coordinates with other divisions within Public Works on the implementation of various elements of the SWMP. A Departmental organizational chart is provided as Attachment 1.

The Engineering Division assists with land development review, conditioning projects to meet construction site and post-construction stormwater management requirements, reviewing and approving required drainage studies and Storm Water Control Plans, and conducting plan check.

The Capital Improvement Division manages design, environmental review and construction of approved Capital Improvement Projects. CIP and municipal construction projects are subject to construction site erosion and sediment control requirements, and those that meet the post-construction stormwater management thresholds, are conditioned accordingly.

The Operations Division conducts inspection, general maintenance and repair to the City's MS4 and manages the City's street sweeping contract.

General Discussion of Program Management

The City's stormwater program is funded through a Solid Waste and Environmental Program Fee that is assessed on the adjusted gross monthly revenue collected by the City's exclusive Franchise solid waste service provider, from residential and commercial subscribers. The City also applies for and receives the annual City/County Payment Program grant, which may also be applied to trash control and litter abatement projects. The program does not currently receive general fund revenues.

The development of a Storm Sewer Master Plan has been included in the City's approved list of Capital Improvement Projects. The Plan will improve the accuracy of the City's storm drain atlas, identify elements of the system in need of repair or improvement, including potential retrofitting of catch basins to comply with the Amendment, identify potential regional, multi-benefit projects for stormwater infiltration, and develop operational and maintenance procedures and schedules.

Funding and Operational Opportunities and Constraints

The City proposes to fund its compliance efforts through a combination of revenues generated from a solid waste and environmental program fee that is assessed on all residential and commercial trash customers, and the CalRecycle City/County Payment Program.

The City is a cooperating partner in the Santa Barbara County Storm Water Resource Plan (SWRP), which identifies potential dry well and retention projects on City owned-property that are eligible for future matching-grant funding under Prop. 1.

CIP projects that involve adding to, modifying or improving the City's storm drain system within the PLUs may be eligible for State and federal grants.

The City is also considering imposing a Development Impact Fee (DIF) for stormwater management on new private land development projects.

Description of the City's Storm Drain System

The City's storm drain system consists of curb and gutter, catch basins with curb inlets, surface and subsurface conveyances, and outfalls to a number of creeks that flow through the City. There are currently no detention basins within the public right-of-way or on City property. Some areas of the City currently lack sidewalk, curb and gutter. The City has several sidewalk infill projects within its Capital Improvement Program, and those areas currently lacking sidewalk, curb and gutter are anticipated to be addressed over the next few years.

The City has developed a GIS based storm drain/sub-drainage atlas that maps and characterizes the storm drain system, and sub-drainages within the City's permit boundaries. There are 407 identified catch basins with the public right-of-way. Of these, approximately 181 are within the PLUs; 98 industrial, 71 commercial, and 12 High-density Residential. In addition, there are an unknown number of catch basins or drop inlets located within private residential and commercial developments, CalTrans ROW, and a small number of roads that are not within the City's network of maintained roadways that either connect to the City's storm drain system or discharge directly to receiving waters. These are the responsibility of the private land owners.

There are approximately 112 identified outfalls to receiving waters within the City's Permit boundary, most of which are associated with the City's maintained storm drain system.

The City's Storm Drain/Sub-drainage Atlas represents the most complete and accurate characterization of the City's storm drain system that is currently available. However, it is a work in progress, and there are portions of the system that remain unmapped. For example, there are "free-floating" catch basins as well as outfalls, with no mapped surface or sub-surface conveyances connecting to them.

There are also elements of the system that will prove infeasible to retrofit with approved FCSs, consisting of a concrete or asphalt shoot that conveys stormwater to a pipe or ditch that then discharges to a receiving water or vegetated area.

The City will also develop a Storm Drain Master Plan that will focus on mapping missing elements of the storm drain system, identifies opportunities for improvements to the system, and potential multi-benefit projects for more effective stormwater management. The Master Plan will integrate with this Alternative Compliance Plan.

PRIORITY LAND USE PLANNING

The State's defined PLUs are described in Table 1.

Table 1. Statewide Trash Amendments Priority Land Use Definitions

Priority Land Use	Definition
High Density Residential	At least 10 developed dwelling units/acre.
Industrial	Primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
Commercial	Primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.).
Mixed Urban	High-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
Public Transportation	Facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

The City of Goleta's existing land uses are defined in the City's General Plan, and generalized land uses by area is shown in Table 2.

Table 2: Land Use by Area

Land Use Type	% Total	Acres
Residential	33%	1,675
Commercial/Industrial	23%	1,167
Open Space	22%	1,117
Agricultural	9%	457
Public-Quasi Public	13%	660
	100%	5,075

Approximately one third of the City comprises residential development, 23% comprises commercial/industrial land uses and another 22% comprises open space. The remaining 22% comprises agricultural (9%) and public (13%) uses. There are approximately 125 Metropolitan Transit District (MTD) bus stops within the City. There are no public transfer stations or transit terminals within the City. Santa Barbara Airbus, a private transit service that provides transport to Los Angeles International Airport is located within the City's Industrial PLU.

The City's PLUs and Transit stops are shown in Figure 1.

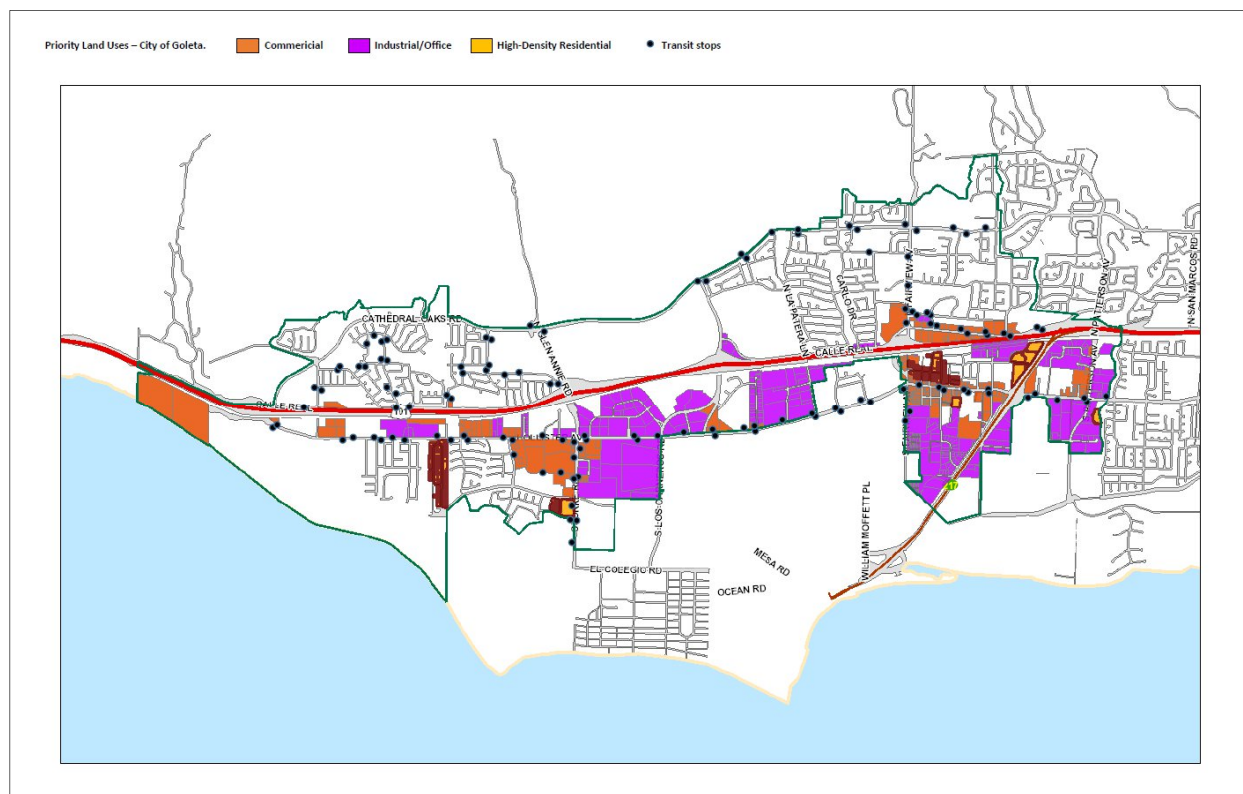


Figure 1: City of Goleta PLUs and Transit Stops

Description of trash sources in Priority Land Uses

Identifying Trash Sources/Pathways

Much of the trash observed within the PLUs is assumed to have been generated on adjacent parcels, particularly in the vicinity of convenience stores, gas stations with mini-marts, or fast food establishments within commercial PLU areas. Some of it may generated by motorists, either thrown from moving cars, or deposited at the curb when parked, or wind-blown from outside the PLU or City. Cigarette butts may be generated anywhere by smokers who don't have ready access to an appropriate receptacle for disposal.

Festivals or special events that regularly occur in the City, include the Goleta Lemon Festival, Fiesta Ranchera, Dam Dinner, Disk Golf Tournament, Christmas Parade and 4th of July celebration. Some of these occur on City streets or City owned property, where others are hosted on private property. The City also periodically hosts events such as bicycle or foot races that either pass through the City, or take place entirely within the City limits. Movie shoots are another occasionally occurring event that can take place on City streets.

The City caters to tourists, who are attracted by the areas scenic beauty, historic features, and UCSB. In particular, there is an annual influx of out-of-town visitors who arrive for UCSB graduation ceremonies in May or June. There are also some “party events” (“Deltopia”, Halloween) that take place in near-by Isla Vista, and trash generated at these events may find its way into some areas of the City.

Homeless encampments and the trash they generate are an on-going challenge for the City and the surrounding jurisdictions (County and City of Santa Barbara), and are a major source of trash within City creeks, and open space. Homeless encampments are not always located within riparian corridors and are sometimes identified on undeveloped private lots.

Open commercial trash bins can attract birds, particularly seagulls scavenging for food, and this can result in litter on the ground in the immediate vicinity of the targeted bins. This most often occurs in older commercial developments that lack enclosure roof structures.

MTD bus stops located in commercial and industrial zones, particularly adjacent to food service businesses and convenience stores can also be a source of litter.

The City also has an on-going problem with illegally abandoned items, typically large bulky items such as furniture, bicycles, mattresses, televisions and other appliances, which are not likely to enter the storm drain system. The areas where this consistently occurs are mostly within the identified PLUs. Occasionally hazardous materials such as containers of used motor oil are abandoned in the public right-of-way. Rarely, if ever, has there been cases of putrescible household garbage being dumped in the public right-of-way or on city owned property.

PLU Management Limitations

There are a number of private residential developments serviced by private roads that are outside the City’s maintained road network. The operation and maintenance of internal drainage systems are the responsibility of HOAs or property owners. Similarly, internal drainage systems serving commercial developments with large parking lots are the responsibility of the property owner.

These private systems either tie into the City’s storm drain system, or bypass it to discharge directly to receiving waters.

State Roads and Highways

State roads and highways, and railroad corridors can be a source of litter. The City is bisected, along its east-west axis, by US 101. In addition, SR 117 splits from the US 101 near the City's eastern boundary, and cuts south-west through the City on its way to the University of California at Santa Barbara (UCSB), located outside the City limits. These right-of-ways are the responsibility of CalTrans, and are outside the City's jurisdiction.

Similarly, the Union Pacific Rail Road runs through the City, east-west, immediately south of and parallel to US 101.

Trash generated within the CalTrans and/or UPRR rights-of-way may be transported to within the City limits by wind or water. Homeless encampments located within these ROWs can also be a concentrated source of litter and debris.

Outlets to Ocean/Waterways/Private Property

There are several large commercial properties within the PLUs that drain directly to adjacent receiving waters, by passing the City's storm drain system. As privately owned and operated drainage systems, the City lacks the ability to retrofit those drainage facilities.

The issuance of future LUPs, or Building Permits for any of those properties, or upgrades to their parking lots that trigger the Central Coast Post Construction Stormwater Management Regulations, may provide opportunities for the City to bring them into conformance with the Amendment, and require full trash capture.

Jurisdictional Limitations

The City of Goleta is bounded on the east, north and west by the unincorporated area of Santa Barbara County, and on the south by the County, City of Santa Barbara (Santa Barbara Municipal Airport) and the University of California at Santa Barbara (UCSB).

The western portion of Old Town (bounded by Fairview Avenue to the West, the UPRR and U.S. 101 to the north, SR 217 to the east and Carson Street to the South) is drained via a series of catch basins that discharge via two outfalls on San Pedro Creek, immediately to the west of S. Fairview Avenue. These outfalls, however, are located within the City of Santa Barbara's Airport property. One option for complying with the Amendment is the installation of medium flow devices at the end of two drainage lines serving Old Town, and the fact that these lines outfall in the Airport's property may complicate that possibility.

Hollister Avenue from Fairview Avenue west to Los Carneros Road, is also under the jurisdiction of the City of Santa Barbara, the City limit running along the back of sidewalk on Hollister Avenue's north side. All the catch basins located on this segment of Hollister Avenue, all of which receive drainage from within the City limits, are not owned, operated

or maintained by the City of Goleta. The Santa Barbara Airport is subject to both the City's Municipal Permit, as well as the General Industrial Permit. The City of Santa Barbara has selected Track 1, and as an industrial and commercial property, the Airport property, including those catch basins along this segment of Hollister Avenue.

Public Works staff has contacted the City of Santa Barbara's Creeks Division, which manages the City's Municipal Permit, as well as Airport Authority operations staff to discuss these issues and how the Cities might collaborate in these areas to meet the Trash Provision.

BASELINE TRASH GENERATION LEVELS

Assessment Methodology

The City utilized the On-land Visual Trash Assessment (OVTA) methodology developed by EOA Inc. Public Works staff attended a two-day training workshop on using the OVTA method presented by EOA staff and sponsored by CASQA, in March 2018. Staff from the County of Santa Barbara, UCSB, and the Cities of Santa Barbara, Carpinteria, Solvang and Buellton also received OVTA training. This proved useful as staff from neighboring jurisdictions were able to assist one another with conducting OVTA surveys, and in addressing challenges that arose during the assessment process.

The training provided approved methodologies for conducting OVTAs and how to accurately and consistently assess the amount of trash observed during the survey work. Three survey protocols were provided; Protocol A involves walking along the curb and assessing the presence of trash present from the road's mid-line to a few feet beyond the edge of the sidewalk. Protocol C is used to assess large impervious areas, such as parking lots, that have internal drainage systems and do not discharge directly to the roadway. Protocol B, Driving Survey, used where there is a lack of sidewalk and safety considerations make Protocol A infeasible, was not utilized. More information about the OVTA process and protocols may be found at http://eoainc.com/ovta_fc/.

The OVTA method requires conducting two separate rounds of assessments. Ideally one round of assessments conducted in the dry season and one round during the rainy season. Due to when the OVTA training was made available, staff was unable to conduct assessments within the 2017/18 rain year. Similarly, the December 1, 2018, deadline for submittal of the City's Alternative Compliance Plan did not allow a round of assessments to be conducted during the 2018/19 rain year.

Leaf litter and other organic materials are not counted as trash. Large abandoned items such as mattresses, furniture, or appliances may be noted, but are not counted since they are unlikely to enter the storm drain system. Trash observed within a few feet of the sidewalk that is trapped in vegetation or high grass, or otherwise not likely to be mobilized, is not counted in the assessment. For each of these protocols, the survey segment is assigned one of four levels of trash as shown in Table 3.

Table 3. Definitions of trash levels defined by the On-land Visual Trash Assessment protocol

Trash Level	Definition
<p>A Not Littered</p>	<ul style="list-style-type: none"> • Effectively no trash is observed in the assessment area. • There may be some trash in the area, but it is not obvious at first glance. • One individual could easily clean up all the trash observed while walking at normal pace. • No additional trash reduction measures are needed in the assessment area.
<p>B Slightly Littered</p>	<ul style="list-style-type: none"> • Predominantly free of trash, except for a few littered areas. • Some trash is noticeable at first glance. • The trash observed could be collected by one or two individuals, but would require walking at a slower than normal pace. • Additional trash reduction measures are needed in the assessment area.
<p>C Littered</p>	<ul style="list-style-type: none"> • Predominantly littered, except for a few clean areas. • Trash is widely/evenly distributed and/or small accumulations are noticeable on the streets and sidewalks. • It would take multiple people to remove all trash from the area, frequently requiring individuals to stop walking to remove the trash. • Roughly 4 times as much trash as a "B" level.
<p>D Very Littered</p>	<ul style="list-style-type: none"> • Trash is continuously seen throughout the assessment area and there is a strong impression of lack of concern for litter. • Large piles of trash may be observed. • It would take a large number of people during an organized effort to remove all trash from the area, consistently requiring individuals to stop to remove the trash. • Roughly 3 times as much trash as a "C" level.

Conditions were documented throughout the assessment process to document conditions within the surveyed reaches. Catch basins within assessed reaches were also briefly inspected to determine the presence of any significant accumulation of litter. High concentrations of litter and debris, as well as potential sources of litter, such as refuse bins placed close to the sidewalk, bus stops, or convenience stores were also noted.

The OVTA methodology requires a team of two trained persons to conduct the surveys, in order to cross-calibrate the assessment results. Surveys need to be conducted after the mid-point between street sweeping, ideally as close before the next scheduled sweeping as possible in order to capture the worst-case condition. Surveys must also be conducted no less than 48-hours following a significant rain event, which could wash trash into the storm drain system.

The assumption is that trash observed within the survey segments using Protocol A, is likely generated by the adjacent land parcel. The level of trash assessed within any particular segment, is then assigned to the adjacent parcels. Where a parcel is bounded by two survey segments with differing trash levels, the higher level is assigned to the parcel. For example, a parcel bound by one street that is assessed at level A, and another street assessed at level B, the Parcel is assessed as level B.

Similarly, the more conservative parcel assessment between the two rounds of OVTA surveys must be assigned to that parcel in the base-line condition map. For example, a parcel assessed as level B during the first round of OVTA surveys, but determined to be level C following the second round of surveys, must be assessed at level C.

MTD bus stops located outside the PLUs were assessed separately, using a modified area assessment that looked at the immediate area surrounding the stop, from mid-line of the street, to 3 feet from the edge of the sidewalk, and approximately 10 feet on either side of the stop. Pictures were taken and the trash level assigned. A separate assessment of the number of cigarette butts present was also made, using a low, medium and high designation.

Timing, Duration, Frequency of Baseline Assessments

Following the OVTA training, staff began mapping out the approach to conducting the assessments, and trained an intern on the OVTA protocols A and C, which were used during the assessment surveys. The first round of OVTA surveys began in May 2018 and completed in early August. Surveys were scheduled after the mid-point of the street sweeping schedule, and as close to the day of sweeping as staff availability would allow.

The second round of assessments began in September and was completed in October.

The results of the first and second round of curb assessments for a portion of Old Town are shown in Figures 2 and 3. Those two assessments were then transferred to the adjacent parcels, as is shown in Figure 4. Figures 5 and 6 show the baseline condition for the entire City.



Figure 2: Characterization of assessment reaches following the first round of assessments

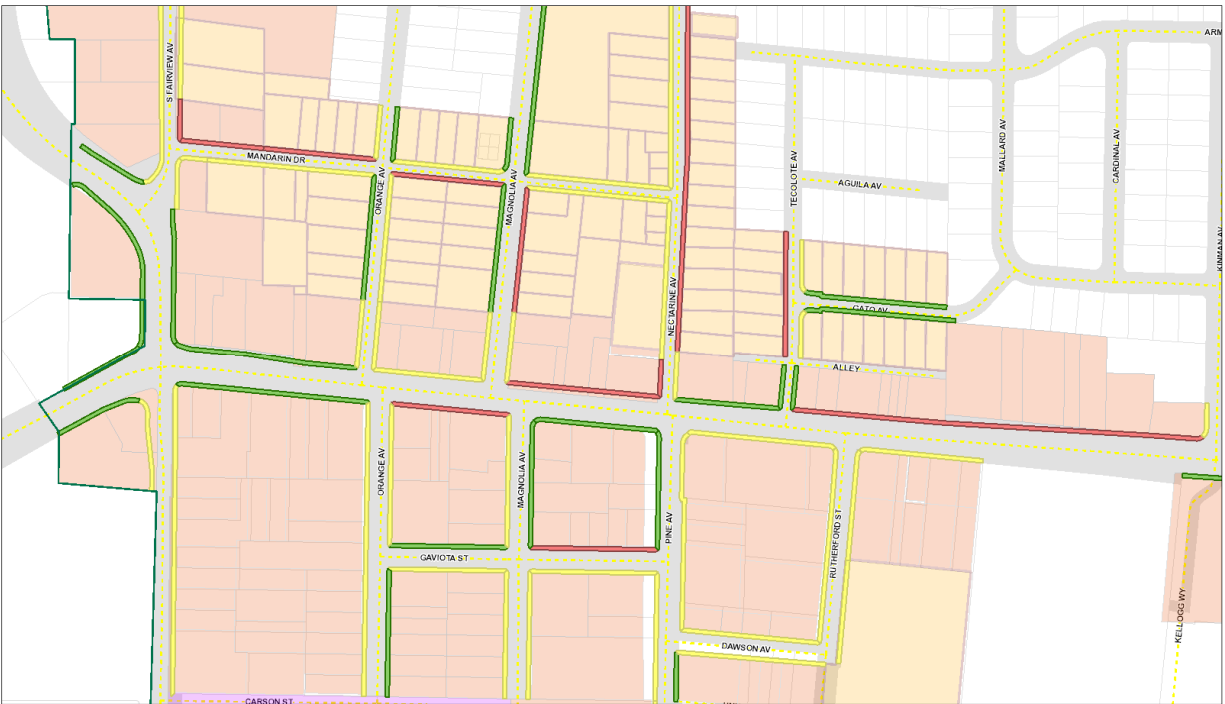
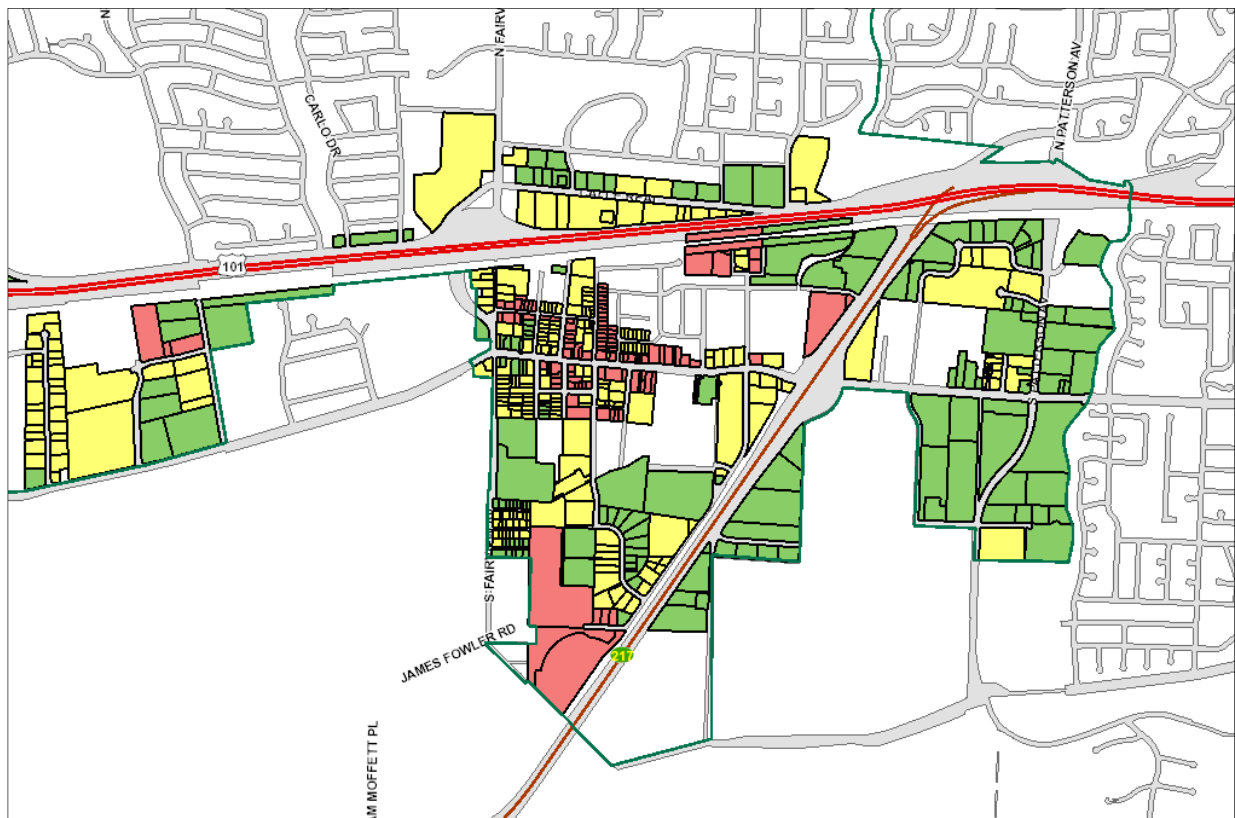


Figure 3: Characterization of assessment reaches following the second round of assessments



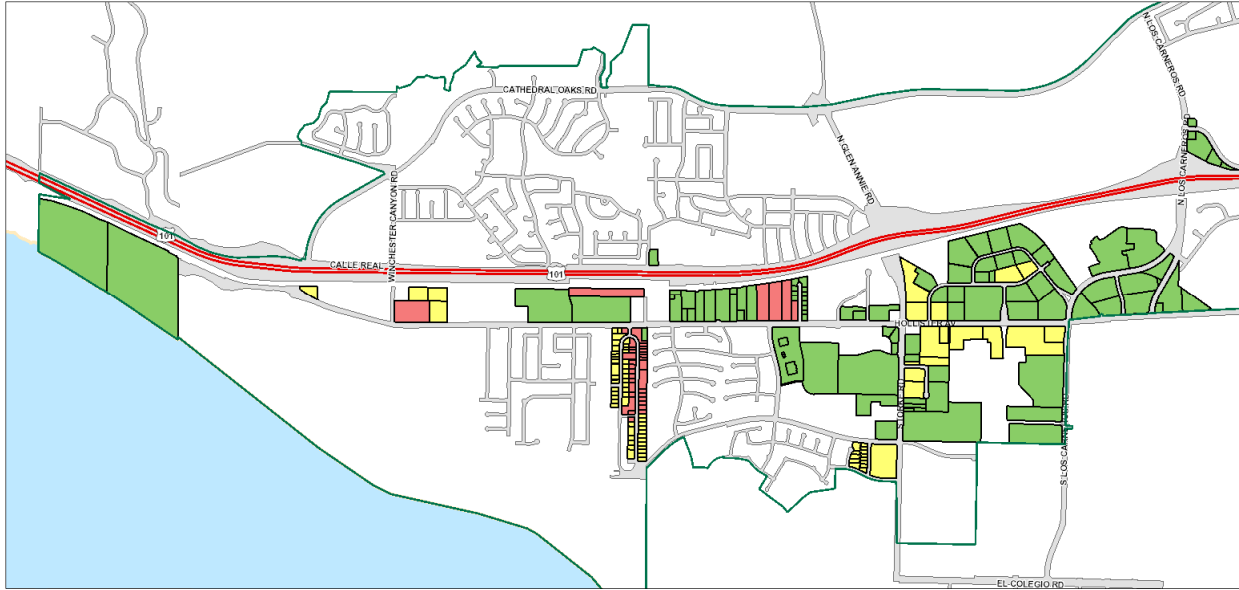


Figure 6: Base Line Condition Map, western half of the City

Baseline Management Measures

Street sweeping

Street sweeping operations currently occur within the City on a bi-weekly basis. The City contracts with a street sweeping company to sweep streets in the eastern half of the City Figure . The Goleta West Sanitary District (GWSD) owns and operates its own street sweeping equipment and sweeps streets in the City's western half.

The City does not currently have parking restrictions for the purpose of street sweeping, which decreases the program's effectiveness since much of the time street sweeping equipment cannot get to the curb, and must operate around vehicles parked on the street.

The results of street sweeping operations for FY 2015-16 to FY 2017-18 are shown in Table 4. The City's sweeping contractor measures debris collected by volume, and the GWSD measures debris collected by weight.

Table 4: Street Sweeping results, 2015-2017

	City of Goleta	Goleta West Sanitary District
2015-16	617 cy	241.74 tons
2016-17	710 cy	264.52 tons
2017-18	1011.1 cy	241.54 tons

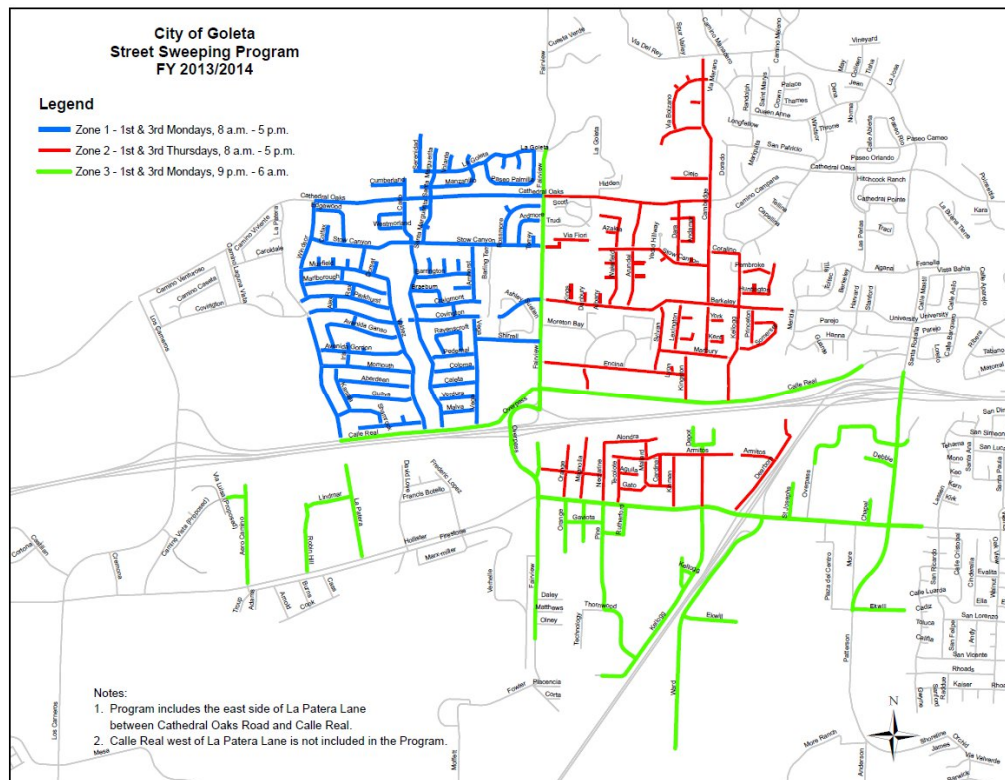


Figure 7: City of Goleta Street Sweeping Map

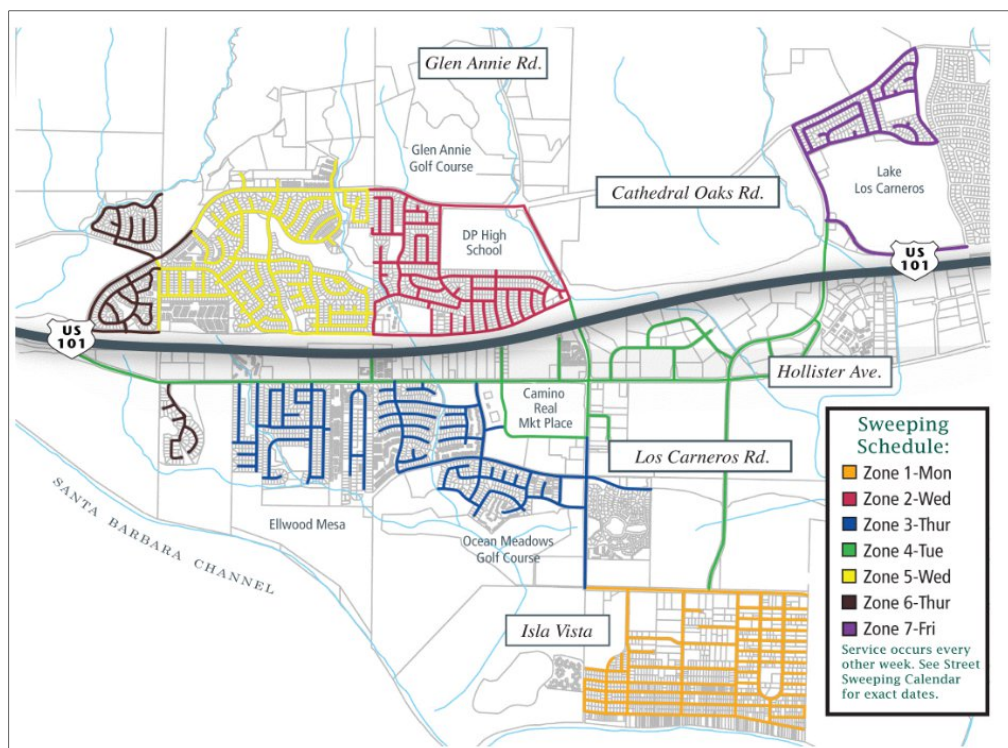


Figure 8: Goleta West Sanitary District Street Sweeping Map

Drain inlet maintenance/basin maintenance

The City performs annual drain inlet/catch basin inspections and maintenance, typically in the late summer or early fall, in advance of the rainy season, or as needed throughout the year. An emphasis on inspection and maintenance procedures are prioritized to focus on basins that are known to capture heavy loads of organic matter and litter, and/or know to be prone to flooding during heavy rainfall. City staff performs inspections and catch basins are assessed based on a ranking of 1-5 depending upon the presence and amount of sediment, litter, organic matter and other debris. Catch basins assessed as priority, are cleaned by a contractor.

Maintenance and repair of surface conveyances, channels, swales, and other storm drain related infrastructure is performed as needed.

Public refuse and recycling receptacles

The City and the Metropolitan Transit District (MTD) have deployed refuse receptacles in a number of locations within the public right-of-way or at MTD bus stops, primarily along the Hollister and Calle Real commercial corridors. These receptacles are serviced 3 times weekly by the City's franchise solid waste service provider, as required by its agreement with the City. Figures 7-10 show the locations of public refuse and recycling receptacles currently deployed with the City. These locations are also provided in Attachment 2.

Refuse/recycling receptacles are located at heavily used MTD bus stops, or adjacent to commercial businesses, such as convenience markets, fast food restaurants, liquor stores or other potential points of litter generation.

There is a greater concentration of refuse/recycling receptacles along the Old Town Hollister Avenue corridor, due in part to the concentration of potential sources of generation, and the fact that Old Town businesses front directly on the street. That is in contrast to the Calle Real commercial corridor located directly north of Old Town, on the other side of US 101, which features relatively few public refuse/recycling receptacles. Businesses along the Calle Real commercial corridor are within strip mall settings, with parking lots separating business fronts from the street, and where the property and business owners have deployed refuse receptacles within these commercial malls that are serviced by the property management.

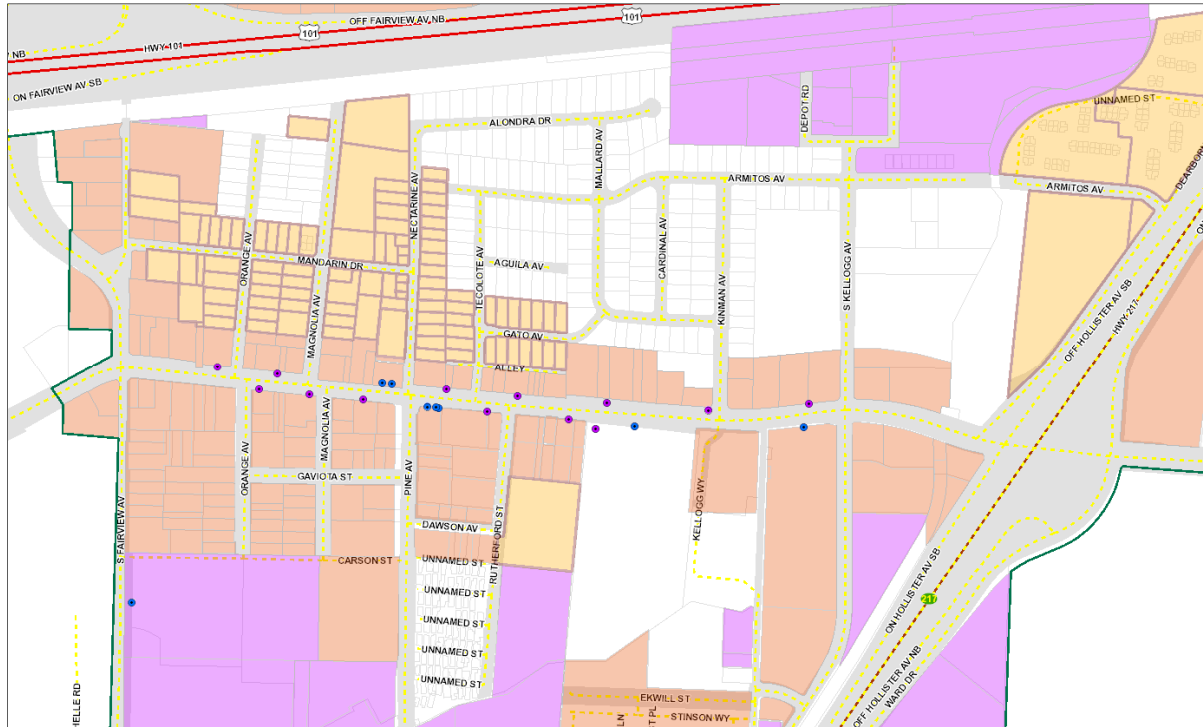


Figure 9: Locations of refuse/recycling receptacles along Old Town Hollister corridor

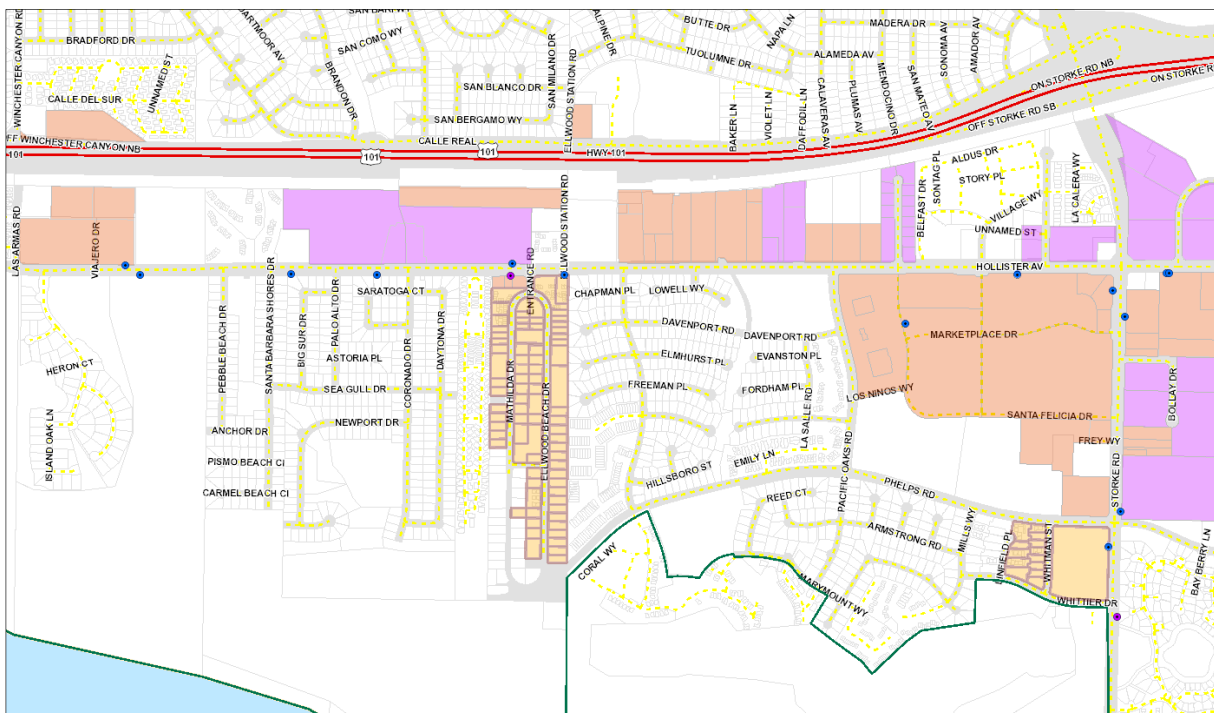


Figure 10: Locations of refuse/recycling receptacles along western Hollister Avenue

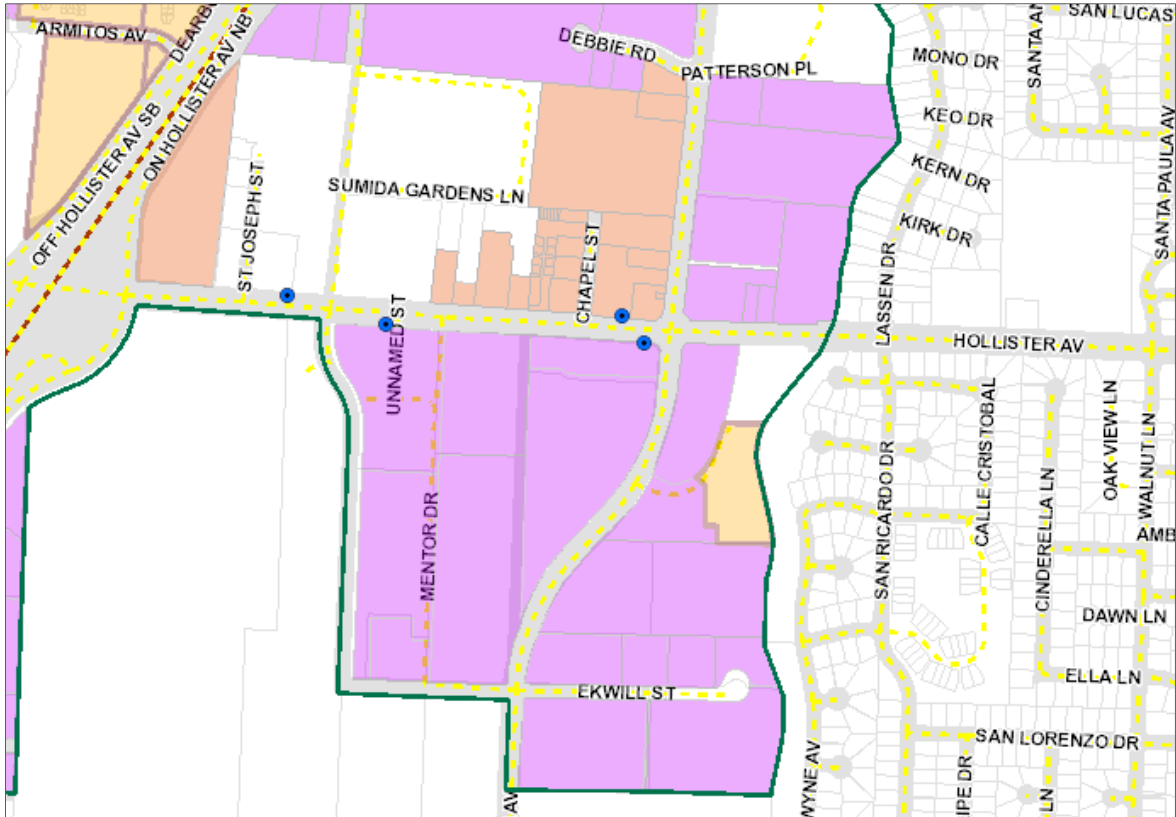


Figure 11: Locations of refuse/recycling receptacles along Hollister Avenue east of SR 217

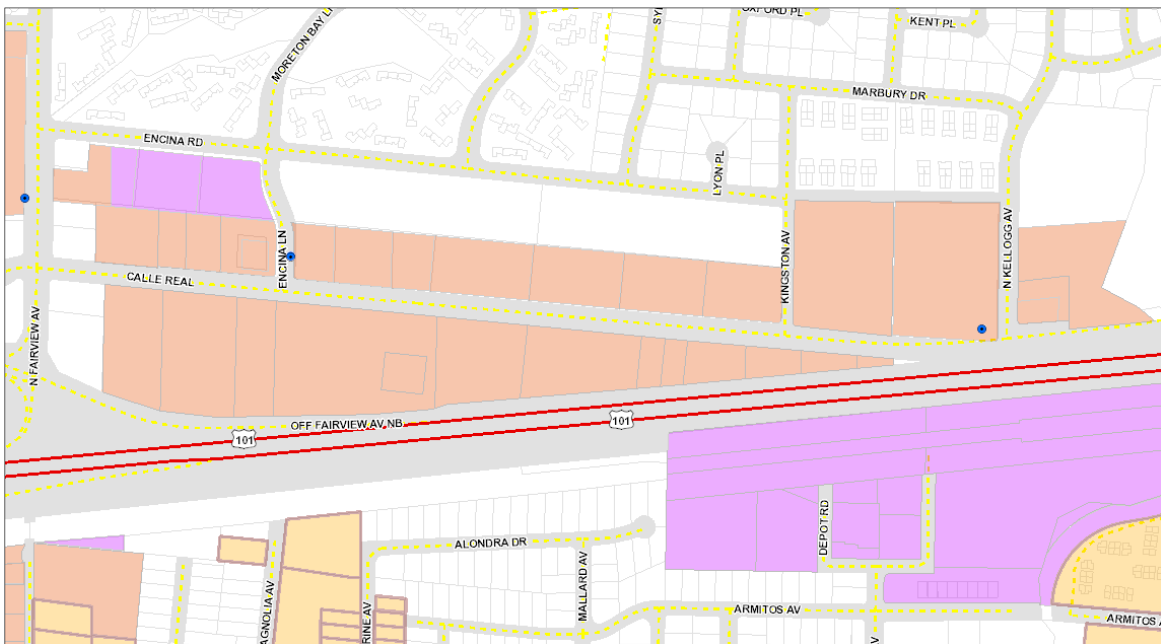


Figure 12: Locations of refuse/recycling receptacles along Calle Real commercial corridor

Adopt-a-Street (or beach, road, park, creek)

The City of Goleta is enrolled in the State Coastal Commission's Adopt-a-Beach program, and offers two beaches, Ellwood Beach and Haskell's Beach, for adoption by local groups and organizations. In addition, the City regularly participates in Coastal Cleanup Day.

Annual or seasonal Creek/Beach/Park cleanups

The City has sponsored or supported creek cleanup events for several years either directly or by supporting the efforts of partnering organizations such as Santa Barbara Channel keepers (SBCK) and the Environmental Defense Center (EDC). The results from 2015-2017 are presented in the following table.

Table 5: Creek Cleanup results, 2015-2018

	Number of events	Number of volunteers	Volunteer hours	Lbs. trash removed
2015	10	54	108	2647
2016	7	78	156	2472
2017	4	83	166	2084
2018	6	108	270	4748

Education and Outreach Efforts

The City conducts stormwater and solid waste education and outreach through a variety of means, focusing on different target audiences, and/or pollutants of concern.

The City provides outreach and guidance materials for water quality to residents and businesses. For example, "The Ocean Begins On Your Street", is a regionally developed brochure that advises residents of the impacts that every day activities such as vehicle washing, application of fertilizers and herbicides to their landscaping, or pet waste management can have on water quality, and provides best management practices that can minimize those impacts.

The City contracts with a non-profit environmental education organization to provide K-6 Stormwater and watershed educational services to all Primary students attending public and private Elementary schools within the City. The program involves three separate modules, two of which are presented in the class room and the third consisting of a field visit to the County's Watershed Resource Center located at Arroyo Burro County Beach Park, and the adjacent Arroyo Burro Creek. Students are provided information about healthy watersheds, common urban pollutants, and how to prevent pollution of water resources.

As part of its Stormwater Management Program, the City conducts stormwater outreach to local businesses. Site visits are scheduled with individual businesses to review

business operations and housekeeping practices that could potentially impact stormwater management, using a comprehensive questionnaire/checklist that applies to a variety of business operations. As part of the site visit, a walk around the business premises, to inspect outdoor processing and storage areas, trash enclosures, and loading docks and note where runoff discharges to internal private drainage systems, or the public ROW. Business owners are also provided with information about the importance of stormwater management, and literature on applicable BMPs for stormwater management.

As a Permit requirement, the City collaborated with the other Municipal Permittees in the County, in developing and implementing a pilot Community Based Social Marketing Campaign, “Close the Poop Loop”, that focusses on pet waste management, and encourages residents to not only pick up after their pet, but to place the bagged waste in a proper container for disposal.

A newsletter, The Monarch Press, is regularly published by the City for residents that highlights important city projects, programs, and priorities.

The City's franchise solid waste service provider also publishes a newsletter for its residential and commercial customers, informing them of important solid waste issues, new regulatory requirements such as organic waste diversion, and programs and services that they offer to service subscribers.

The Green Business Program of Santa Barbara County is another method of outreach to the business community. Businesses that are interested in being certified under the program are audited to assess sustainable practices in a number of areas, including energy usage, water conservation, and solid waste and recycling.

Baseline Trash Loading Estimates

The results of the City's OVTA surveys are shown at the Baseline Parcel Condition Map in Attachment 3.

Table 6. Estimated Annual Trash Loading

Rating	Number of Parcels	Number of Catch Basins	Average Trash Generation Rate	Acres	Estimated Annual Baseline Trash Load (Acres X Rate)
Low (A)	252	90	N/A	643.5	N/A
Moderate (B)	350	69	7.5	291.5	2186
High (C)	150	18	30	107	3203.5
Very High (D)	0	0	100	0	0
	752	177		1042	5389.5

Estimated Annual Trash Loading is shown in Table 6. Approximately 62 percent of the PLUs were assessed at level A, representing full trash capture equivalent. Approximately 28 percent were assessed at level B, and approximately 10 percent were assessed at level C.

TRASH CONTROL MEASURES

Municipal Housekeeping

The City contracts for the maintenance of its parks and open spaces, and landscaped medians. Most of the parks and open spaces are outside the PLUs. Landscaped medians are typically located in commercial or industrial areas of the City. The City will review those maintenance contracts to ensure that litter abatement is part of the scope of maintenance services.

Parking Restrictions on Sweeping Days

The implementation of parking restrictions within the City to allow more efficient and effective street sweeping would increase the amount of debris and litter that is able to be recovered, thereby reducing the amount of trash likely to enter the storm drain system. Because of heavy on-street parking demand in some areas of the City, street sweeping equipment is unable to get to the curb at least half the time. Parking restrictions could increase the amount of debris collected during street sweeping operations by an estimated 40-60 percent.

It may not be necessary to impose parking restrictions City-wide, and such measures could be restricted to the identified PLUs, or even further to those areas that the OVTA survey's identified as level C or B.

The potential implementation of parking restrictions will require additional analysis and planning efforts to determine details such as their extent and frequency, how to phase them in over time, how current street sweeping operations may need to be modified, designing, procuring and installing signage, how they may impact the City's parking enforcement program and coordination with trash collection schedules. The City's Municipal Code may need to be amended to implement parking restrictions.

Areas assessed as level C are concentrated in the Old Town Hollister Avenue Corridor. Old Town is a densely populated area of Goleta, and some of the residential streets within PLU located there currently lack sidewalk, curb and gutter. Parking is heavily impacted, and residents rely on on-street parking. The lack of available on-street parking in adjacent residential areas, and a lack of public parking capacity in Old Town present challenges to imposing parking restrictions there.

Increasing the frequency of street sweeping from bi-weekly to weekly would be less effective without at the same time imposing parking restrictions.

Street sweeping parking restrictions to allow more effective street sweeping would potentially play a major role in reducing the City's trash levels to full trash capture equivalent over time. Because of the above identified challenges, however, it is an option that will take time to authorize and implement, and this plan envisions initially taking easier to implement, and less expensive measures to reduce trash levels to full trash capture equivalent, and considering parking restrictions if other measures do not demonstrate measurable reductions in trash levels after a year or two.

There are already many curb miles within the PLUs where parking is not allowed because of bike lanes or red curb, so no additional signage would be required in those locations.

Review of drainage/catch basin maintenance

The City will review the current storm drain maintenance program to identify enhancements and refinements. Currently, priority catch basins are inspected at least once annually, and those identified as requiring service are cleaned out in the late summer or early fall. With the installation of FCS over time, those basins will require more frequent inspections and maintenance, and a maintenance schedule and maintenance procedures specific to installed FCS will be developed for use by field staff within the first year following approval of this Plan.

Review of curbside bulky item collection program

The City's Franchise solid waste service provider, currently offers residential customers up to two bulky item collections per year as part of their service. Residents with large bulky items that would otherwise not fit in the provided trash receptacles, may call the Franchise service provider to have such items picked up at the curb. Bulky item collection in Goleta occurs on Thursdays. The Franchise service provider also offers unlimited residential curb-side collection of electronic items such as computers, televisions, and etc.

Bulky item collection is also offered to Multi-family residential (MFR) complexes, though on a more restricted basis. MFR complex managers/owners may request a 40-yard roll-off for the use of their tenants, once per year. Because MFR tenants tend to turn-over more frequently than residents in single-family homes and move in and out at all times during the year, this bulky item collection program has limitations.

MarBorg advises its customers of the bulky item collection program through its new customer packet, and periodic reminders in a newsletter that is sent to residents and businesses three times annually.

Beautify Goleta Program

The City administers a community cleanup program – Beautify Goleta – that provides residents an opportunity to dispose of solid waste and bulky items. The program focusses on small residential areas, consisting of a few streets and anywhere from 100 to 600

residents, depending upon the ratio of single and multi-family units in the identified service area.

Transient Encampment Clean Ups

The presence of homeless encampments within area creeks is a prevalent and growing challenge for the City and surrounding jurisdictions, including CalTrans and the Union Pacific Rail Road (UPRR), and are a major source of trash and litter within the City's creeks that does not originate from the City's storm drain system. In some cases, encampments are obscured by dense vegetation and may go undetected for significant periods of time, during which large amounts of trash and debris may accumulate. Difficulty of access can make cleanup efforts challenging.

Where homeless encampments are identified within area creeks and riparian corridors, the City's Community Resource Officer makes initial contact with the encampment occupants to advise them that they cannot remain there, provide information about support services available to them, and post the encampment with the required 72-hour notification prior to removal of personal property and to clean up the encampment.

The City has a contract with a cleaning service company to remove trash and debris from identified homeless encampments that are, or have recently been occupied and noticed for cleanup.

Homeless encampments and their occupants pose a risk to the public. The presence of hypodermic needles, used condoms, and human waste presents a health threat. The City's contracted cleaning service personnel tasked with cleaning up active homeless encampments are properly trained, employ adequate safety equipment and protocols and are vaccinated for Hepatitis B.

Education and Outreach

As a way of leveraging this program to help meet the Trash Amendment, the City will review the current K-6 stormwater and watershed educational outreach curriculum with contractor staff, and neighboring jurisdictions that also contract with the non-profit organization for similar services, and integrate content specific to the importance of reducing litter, single-use plastics, and source reduction.

The City will review the business outreach program, and revise the outreach approach to emphasize the importance of trash and litter control for businesses located in Old Town or other high trash generation areas within the City.

The other Permittees in the County have elected to shift the emphasis of their CBSM campaigns from a focus on pet waste management to litter reduction, and less use of single use plastics (focus on behaviors that reduce single use plastic straws, cutlery, bags, cups, condiment packets, coffee stirrers, and the like), in order to compliment and supplement compliance with the Trash Provision. The City will also consider refocusing

its CBSM campaign to as a way of further leveraging existing education and outreach efforts.

The City currently partners with the County and City of Santa Barbara on stormwater media outreach campaigns, including MTD bus ads, and bilingual television ads. The annual costs are allocated proportionately. This provides an additional opportunity for outreach targeting trash and litter reduction, and the City will work with the County and City of Santa Barbara to focus future stormwater media campaigns on litter reduction.

Municipal Code Review and Optimization

The City conditions all private land development projects to require source control measures for stormwater management, including for solid waste enclosures. Enclosures must be covered with a roof structure, and surrounded by a screening wall to prevent stormwater run-on and run-off.

Trash, recycling, greenwaste and food scrap collection containers, either bins or carts, are provided to residential and commercial customers by the City's Franchise Hauler, MarBorg Industries. All bins and carts have attached lids to control odors, exclude vectors, and keep the contents dry during rainy weather. Upon request by the account holder, MarBorg can provide locks for all solid waste bins and carts to prevent scavenging and/or illegal dumping.

Bins, ranging in size from 1.5 to 4 cubic yards, are typically provided to commercial accounts for solid waste, recyclables, and greenwaste collection. Commercial bin collection can occur up to 6 days per week depending on the generation rate and the capacity of the bin(s). Commercial cart service is also available, collected 1 time per week. Commercial food scrap collection is also offered, using 35 or 65-gallon wheeled carts with lids. Collection currently occurs twice weekly, on Wednesdays and Fridays

Solid waste collection services to Multi-family housing (which constitutes nearly all the City's high-density housing stock), is usually provided through a common account and shared bins.

As with commercial bin service, collection can range between 1 and 6 times per week, depending. All refuse within the City is removed at least once every 7 days, per State law.

Inclusion of Full Capture Requirements

The City may consider conditioning new private land development and redevelopment projects within all PLUs to install full trash capture devices, where feasible, within their private storm-drain systems, and within the public ROW as part of public improvement requirements. Where installation of FCSs is not feasible, projects could be required to submit a plan that will ensure that the project will achieve full trash capture equivalent using alternative approaches, such as periodic sweeping of parking lots, and manual litter collection from the premises.

Similarly, City CIP projects which add to or modify the existing storm drain system will also be designed to include FCS where feasible.

Event Permits/Litter Removal Requirements

The City requires a Special Event Permit for any special event, race, festival, etc. that is held on public property or effects the public right of way. A Special Event is any organized formation, parade, procession, race, marathon or assembly of one hundred participants or more that assemble or travel in unison on any public street, highway, alley, sidewalk or other public right of way, or on City owned, controlled or maintained property.

Special Event Application Condition No. 19 specifies that “Upon completion of this event, the Event Sponsor shall return the road right-of-way to its pre-event condition. This includes collecting and disposing of all trash and debris, and removing all posters and markings on paved surfaces.”

Film Permits are also required for all film and production activities that take place within the City. The City’s Filming Code of Conduct specifies that “all catering, craft service, construction, strike and personal trash is removed from the filming location and adjacent neighborhoods.”

Optimization of Post-construction Requirements

The central coast post-construction stormwater management regulations require certain land development projects that add or replace a specified amount of impervious surface to treat stormwater generated on the project site prior to discharge to the City’s storm drain system. Full trash capture requirements could be considered as part of that treatment requirement.

Product Bans and Restrictions

Bans and prohibitions on the sale, distribution and use of single-use plastic and expanded polystyrene foam (EPS) products is gaining traction at the state and local level. In particular many coastal communities, including the cities of Carpinteria and Santa Barbara, have enacted ordinances targeting plastic straws and other single use plastic and EPS items. A recent statewide restriction on the distribution of single use plastic straws and similar measures can help reduce the presence of these materials in the ROW over time.

Leveraging Partnerships

Partnership with CalTrans, UPRR. Under its NPDES permit, CalTrans must also comply with the provisions of the Trash Amendment. Because some of CalTrans drainage ultimately ties into the City’s storm drain system, there are potential opportunities for cooperation in implementing these requirements. CalTrans is represented on the Santa Barbara County Association of MS4 Managers (SBCAMM), and City staff forwards

reports of homeless encampments that are identified within the CalTrans ROW to Caltrans regional staff for follow up.

One area the City and CalTrans could cooperate with respect to trash abatement is the Adopt-a-highway program. It is important to make sure that all adopt-a-highway reaches within the City Limits have adopting sponsors who regularly collect litter from within the CalTrans ROW. Where there may be adopt-a-highway reaches without current sponsors, the City can encourage local businesses to consider joining the program. The City could also explore the possibility of sponsoring an adopt-a-highway reach, as a volunteer opportunity for City staff who may be interested in participating.

It is unclear whether the UPRR must comply with the Trash Amendment. the City will seek to work cooperatively with the UPRR, to the extent practicable, to address homeless encampments and other potential sources of litter that are located within its ROW.

Partnership with Adjoining Municipal Permittees

The City currently partners with the County and City of Santa Barbara, on implementing various aspects of the Municipal Permit, such as cooperative 303(d) outfall monitoring and testing, and educational and outreach efforts, and anticipates increasing those collaborative relationships in implementing the Trash Amendments, in particular where PLU drainage areas or components of our respective storm drain systems may cross jurisdictional boundaries.

Partnership with Community Groups

Existing partnerships with citizen and non-profit organizations such as Santa Barbara Channelkeeper, Explore Ecology, Environmental Defense Council, and Urban Creeks Council, will be enhanced to the degree possible in working towards reducing trash levels within the City's PLUs.

Partnerships with Commercial Entities

The City will also work with the Goleta Chamber of Commerce and other commercial associations and civic organizations to encourage private businesses to increase their efforts at good housekeeping and litter control on and around their place of business. Hotels and restaurants that have a stake in presenting a clean exterior appearance at their places of businesses can be recruited in the effort to reduce the generation of litter within the City's commercial areas.

Partnerships with Homeless/Social Services Groups

Homeless encampments as a major source of litter and debris in area creeks and open spaces is a problem that cuts across jurisdictional boundaries. Early identification of nascent encampments, better reporting, enforcement and abatement efforts can reduce

the impact of these sites, but a larger, more comprehensive regional approach will likely be required in order to effectively solve the issue at its root causes.

Full Capture Systems

Full Capture Systems are defined as a treatment control, or series of treatment controls, including but not limited to, a multi-benefit project or a low impact development (LID) control, that trap all particles that are 5 mm or greater, and have a design treatment capacity that is either:

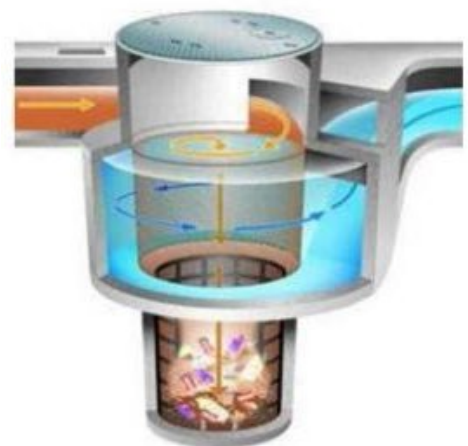
- a) Not less than the peak flow rate, Q , resulting from a one-year, one-hour, storm in the subdrainage area; or
- b) Appropriately sized to, and designed to carry at least the same flows as, the corresponding catch basin.

Potential Regional Full Capture Systems: Outfall Devices

Regional FCSs are designed to accommodate medium or high flows, and are often installed at or near the end of storm drain lines that serve multiple drop inlets or catch basins. They are more expensive facilities than distributed FCSs such as drain inlet devices, require more intensive engineering and design efforts, and typically require significant excavations, sometimes in the roadway. Siting these kinds of facilities can also be complicated by the presence of existing sub-surface utilities. Their advantage comes in their maintenance, which can be conducted once annually in any weather condition, with a vactor truck. A list of State approved Regional FCSs that may be suitable for potential use in the City are shown in Attachment 4.

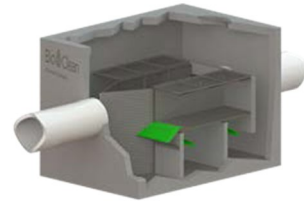
Hydrodynamic Separators

Hydrodynamic Separators (HDS) are devices that utilize the flow of water to create a vortex motion in order to separate solid materials from stormwater flows. The vortex motion forces larger, heavier objects to move towards the center of the device where they are deposited into a separation chamber. Additionally, the vortex motion forces floatable materials to the sides where they can be collected as well. Hydrodynamic separators are generally installed near a stormwater discharge point, but can be installed at almost any point along the storm drain system. The solids are removed using a vactor truck, a removable basket, or a clam shell depending on the user's preference and size of the unit. There are several types of HDS units and models approved by the State Water Board, including continuous deflective separation (CDS), dual vortex separator, and hydrodynamic vortex separator.



Debris Separating Baffle Box

The debris separating baffle box (DSBB) is a storm water treatment system that utilizes a screening technology, three chamber separation, and inline installation. The inline design eliminates the need for diversion structures. The DSBB triple compartment scour-free design and screening system captures sediment and suspends trash and debris in a dry state. Dry state storage minimizes nutrient leaching, bacteria growth, and odors. The unit stores trash in a screening system that is separated from water below. DSBB are good for areas with high groundwater due to their low profile.



Potential Distributed Full Capture Systems: Drain Inlet Devices

Distributed FCSs such as media filters, trash baskets, and connector pipe screens are designed for lower flows, and are installed within individual catch basins or drop inlets. They are relatively inexpensive to install, and due to the wide variety in catch basin sizes and configurations are usually custom built and installed on site. Distributed FCSs are more expensive to maintain than Regional FCSs and must be inspected and cleaned out 2-4 times annually, depending upon the amount of captured debris. Maintenance can only occur during dry season, and is much more labor intensive, requiring manual removal of debris. A list of State approved Distributed FCSs that may be suitable for potential use in the City are shown in Attachment 5.

Connector Pipe Screens

A Connector Pipe Screen (CPS) is a drain inlet filter that is designed to capture trash. CPS inserts are installed in front of the outlet pipe - trapping trash and debris inside the drain inlet while allowing filtered stormwater to exit into the storm drain infrastructure. CPS inserts also allow stormwater overflow when discharge is greater than the design storm volume to reduce flooding potential. Cleanout of CPS units is necessary prior to the wet season, after the first flush and other large storm events, and routinely during leaf season. Regular inspection is necessary to ensure the CPS units are not full of trash or organic litter. Installation should include a gauge painted on drain inlet wall so that the inspection crew knows when the inlet requires cleaning.



Multi-Benefit Treatment Systems

In addition to the FCS described above, the State Water Board and Regional Water Boards promote LID- based designs to capture, reuse, treat, and/or infiltrate storm water runoff.

The LID systems and treatment controls that meet the FCS definition within the Statewide Trash Amendments are termed “Multi-Benefit Treatment Systems.” Currently, there are five types of Multi-Benefit Treatment Systems that have been approved as FCS as long as they are designed consistent with the Statewide Trash Amendments:

- Bioretention;
- Capture and Use Systems;
- Detention Basin;
- Infiltration Trench or Basin; and
- Media Filter

Bioretention Basins

Bioretention BMPs, including bio-swales, remove pollutants from storm water runoff through physical filtration as water passes through media layers. The treatment area consists of: a ponding layer; vegetated, mulched, and engineered soil layer; and supporting bed layer of sand or gravel. Storm water entering the treatment area evapotranspires or gradually passes through the mulch/soil/gravel layers where it then infiltrates into native soil or collects in an underdrain that conveys to a discharge point.

Capture and Use Systems

Storm Water Capture and Use BMPs capture and store runoff for use in a variety of applications including irrigation, toilet flushing, and other non-potable uses. There are numerous methods of capturing storm water for use including some of the other certified Multi-Benefit Treatment Systems.

Detention Basins

A detention basin is a local topographic depression designed to reduce potential for flooding by reducing peak flow rates. These basins are also called "dry ponds," "holding ponds," or "dry detention basins," and are distinguishable from basins that are designed to contain some water all-year-round. Detention basins may also be located underground in an array of pipe, chambers, or concrete vaults.

Infiltration Trenches or Basins

An infiltration trench or basin BMP captures and infiltrates storm water runoff into native soils. Infiltration trench or basin BMPs come in a variety of shapes and sizes and the final appearance may vary substantially. Infiltration trenches may be backfilled with porous media such as gravel, sand, Cornell Soil, or various locally earthed rocks known not to generate pollutants of concern to the downstream waters. Subsurface designs may be comprised of perforated pipe, chambers, open bottom concrete galleries or other high voids structures. These trenches and basins store the design water quality volume for infiltration to underlying soils. However, it should be noted that the City does not consider basins or trenches to be trash mitigation unless capture devices are included upstream.

Media Filters

A media filter BMP uses a bed of sand, peat, zeolite, anionic and/or cationic media, granite or other fine-grained materials or fabrics to physically separate sediment and sediment-bound pollutants and/or electrochemically remove dissolved constituents from storm water.

IMPLEMENTATION

The Statewide Trash Amendments require that full compliance occur within 10 years of the effective date of the first implementing permit or 15 years from the effective date of the Amendments (December 2, 2030) and that the municipalities identify and meet interim milestones that demonstrate progress to full implementation. This section describes the phased approach that the City will use to meet its milestones and final compliance deadline.

One of the key drivers for the phased approach is the identification of priority areas for device installation based on design and engineering costs, maintenance needs of devices, whether right-of-way or easements are required, and levels of highest need. It is generally most advantageous to start with a focus on heavy trash areas, or highly visible areas, where installations will demonstrate to the public the importance of this work. The City has also considered that spacing the installations as evenly as possible over the implementation timeframe is most reasonable from a budgeting standpoint.

There are approximately 87 catch basins receiving runoff from PLU areas assessed at level B or higher that are potential candidates for retrofitting with distributed FCS. There are also several locations where Regional FCS may potentially be sited, treating the runoff from multiple catch basins located upstream in the storm drain system. The locations of these catch basins and potential Regional FCSs are shown in Attachment 6.

The City proposes installing up to 4 pilot distributed FCS, in locations to be determined. Following the scheduling of these locations, the remaining installations will be distributed by area of the City and type of device, for efficiency (e.g., purchase of devices in bulk may result in cost-savings). After considering these priorities, the initial FCS installations are proposed to occur in those areas of the PLUs that have been assessed at level C.

As the target catch basins are further assessed for potential retrofitting with distributed FCSs, a Full Capture System Field Verification and Site Evaluation Form will be used to document the assessment (Attachment 8).

As installation begins, the City may discover that there are locations within their storm drain network where FCS cannot be implemented, or are better implemented within another land use area. The Statewide Trash Amendments allow for the substitution of one or more PLUs with equivalent alternate land uses (equal or greater trash levels) within the City's jurisdiction. This option may be utilized as needed.

Estimated Costs

There exists a broad range of estimated costs for installation, operation and maintenance of new FCS throughout the City's PLUs, depending on the area needing treatment, sizing of the device, and installation/construction costs. Cost can be better refined once exact locations and devices (including sizing and vendor) are selected.

The costs of compliance, including FCS installation, manual litter abatement efforts, development of a Storm Drain Master Plan, a thorough analysis of options for implementing parking restrictions, and educational and outreach programs will be included in the next two-year budget (FY 2019-20, 2020-21)

Opportunities and Constraints

There are some limitations to retrofitting catch basins. Some catch basins are too small or shallow to reasonably accommodate FCSs. The Old Town Hollister Corridor, where some of the City's most problematic areas are located, is very flat, with little fall between catch basins and the adjacent receiving water, San Pedro Creek. The storm drain system in some areas is undersized, and flooding regularly occurs in some areas due to this, such as the intersection of Hollister and Fairview Avenues. The installation of FCSs in these areas would likely exacerbate this problem, even with regular maintenance.

The use of Hydrodynamic Separation devices is also not deemed feasible for a number of reasons, the initial upfront cost being one of them. Hydrodynamic separation devices make sense at the end of a long storm drain line that includes many catch basins. There are not many of those in Goleta. In some cases, the depth of excavation required for installation would not allow enough fall.

End of pipe FCSs such as trash nets, typically work where there exists a lined channel, or concrete abutments or wing walls at the outfall that could provide anchoring points for such devices, and sufficient space below the outfall for the devices to be deployed. Outfalls that are simply pipes that outfall into the stream channel are not considered candidates for this approach. Trash nets are problematic to maintain, and would have to be replaced periodically. Maintenance would require a crane to pull the full nets out of the channel. It is unclear as to how to empty the contents without damaging the nets.

One example of drainage infrastructure that does not lend itself to retrofitting with an approved FCS is in the High Density Residential area on Mathilda Dr., Ellwood Beach Dr. and Strehle Lane. There are no catch basins or drop inlets on these streets, with the runoff flowing down the gutter to the end of Mathilda and Ellwood Beach Drives, where it discharges into the open space area via open pipes.

Location and Justification

The City plans to retrofit catch basins draining PLUs assessed at level B or higher, using primarily low flow devices within individual catch basins. In locations where the installation of FCS within catch basins is infeasible, medium and/or high flow devices such as baffle boxes, are proposed for outfalls. This is the case for the western portion of Old Town, where system capacity issues or flooding is already known to occur. Two storm drain lines with multiple catch basins draining western Old Town may be suitable for this approach.

The City will maintain a data base that tracks the installation, inspection, maintenance and replacement of all installed FCSs. This will be summarized and reported annually.

Cleaning and Inspection Frequency

Inspection and maintenance of any installed FCSs will be conducted in accordance with manufacturer's recommendations, modified by experience in the field as they are installed and function over time. The City will prepare a maintenance guidance document that will provide schedules and procedures for the maintenance and replacement of all installed FCSs.

Old Town Litter Control

As an interim measure to reduce the presence of litter in priority areas and until parking restrictions for effective street sweeping are implemented and/or FCS installed, the City will potentially contract for manual litter abatement.

The City may elect to amend its contract with the current cleaning service company, or another similar company to provide a two-person litter abatement crew to spend a yet to be determined number of hours per week collecting litter from areas to be designated by the City. This could be on a biweekly basis, alternating with the street sweeping schedule in order to focus efforts where street sweeping is ineffective.

As part of this program, the City should ensure that a trash abatement crew is publicly identified as City of Goleta contractors, to increase their visibility to the local business community and residents, and as a way of demonstrating that the City is taking steps to abate litter where it is most prevalent.

Parking Restrictions for Street Sweeping

The City will concentrate its initial focus for implementing any parking restrictions for street sweeping in those areas that were assessed at level C – Old Town and the Ellwood Beach/Mathilda Dr. Neighborhood. A more detailed analysis of the extent of proposed restrictions, coordinating with the City's contract sweeper and GWSD's sweeping operation, phasing in of restrictions in other areas of the PLU over time, options for timed restrictions and other considerations will be made in the first year following approval of this plan.

PROGRESS ASSESSMENT STRATEGY

Baseline and Long-term Quantification

The goal for long term assessment is to demonstrate over time that either full trash capture has been achieved in PLU drainages where FCDs have been installed, and/or that full trash capture equivalent has been either maintained in areas initially assessed as level A using the OVTA methodology, or attained through the use of institutional, operational, source control or other methods in areas initially assessed as Level B or higher. Over time, the reduction in trash generation levels will be reflected in changes in the Baseline Parcel Condition map, with those areas assessed at level C moving to level B, then A, and all areas assessed at level B moving to level A.

Annual Assessments

A randomized sample of the OVTA curb assessment reaches that is representative of the PLUs, the levels of assessment (level B or higher), and geographic distribution will be identified to serve as annual assessment reaches to measure the reductions in trash generation rates. A similar randomized sampling of OVTA area assessments will be used to gage the changes in trash generation rates within those sites, using pre-determined transects of the assessment areas. All the MTD bus stops located outside the PLUs were assessed at level A during the baselined assessments, and the City does not currently plan to re-assess those locations as part of annual assessments going forward.

Annual assessments will be conducted following the OVTA methodology described earlier in this report. A team of two OVTA trained staff will conduct the surveys during the summer, when tourism and visitation in the City may be expected to be at a peak, and rain events that could wash trash and litter into the storm drain system are unlikely to occur. Assessments will be conducted at the mid-point between scheduled street sweeping and any other identified litter abatement efforts to capture the “median” level of trash that may be present.

Annual Reporting via Program Effectiveness Assessment and Improvement Plan

The City will report the results of the annual assessments, and reductions in trash loading, via the Program Effectiveness and Improvement Plan (PEAIP) submittal that is part of the annual Stormwater reports due October 15 of each year.

Annual Progress Metrics

The Water Board expects permittees to demonstrate consistent progress in complying with the provisions of the Trash Amendment, with the ideal goal of retrofitting approximately ten percent of catch basins within the PLUs, or reducing trash loading by a similar amount through alternative means, each year. In term so load reduction, the results of the OVTA surveys yielded a cumulative annual trash loading within the PLUs

of approximately 5,390 pounds. An annual reduction of approximately 10 percent of that equates to 539 pounds per year.

The City intends to demonstrate consistent progress, though during the first couple of years following approval of the City's Alternative Compliance Plan, it is expected that less than the targeted 10 percent of retrofitting or load reduction may be attained, as the City conducts a more detailed engineering analysis of what types of installations will work within the existing storm drain system, works out the details of any parking restrictions that are deemed necessary in order to allow more effective street sweeping operations, and the performance of initial pilot installations of Full Capture Systems is assessed. That will mean the City will need to attain a slightly higher annual progress target in the latter years of the compliance period.

As FCS are installed to treat the runoff generated by PLU areas assessed at level B or higher, the City will document their installation on an Reporting Form of Full Capture System Installation (Attachment 9).

Data Analysis Approach

Those subdrainages within PLUs assessed at level B or higher that are retrofitted with Full Capture Systems will be considered to be in compliance, with a corresponding reduction in the overall trash load, and following the certification of installation, will be removed from subsequent annual reporting requirements. Areas within PLUs assessed at level B or higher that are planned for future retrofitting will be assessed annually to determine whether any alternative approaches that may be applied (e.g. manual litter removal, effective street sweeping operations, source control measures) have resulted in measurable reduction in loading (moving from level C to level B).

The reductions in loading will be measured using the procedures outlined in the EOA OVTa methodology.

Implementation Schedule

The City's proposed implementation Schedule is displayed in Attachment 7.

The City will comply with the Trash Amendment through a combination of retrofitting the City's storm drain system where feasible, and alternative measures such as manual litter abatement and more effective street sweeping operations. The City will phase it's compliance approach in order to provide time for additional analysis of the storm drain system and the scope of alternative measures that will be implemented. The City will identify four locations for pilot installation of FCSs within the first year following submittal of this plan. Those pilot installations will then inform the City as to their effectiveness, and any challenges that may arise due to maintenance or flooding, prior to retrofitting remaining portions of the storm drain system that receive runoff from the effected PLU areas.

During the first two years of implementation, the City will also conduct detailed analysis of the various options for imposing parking restrictions for effective street sweeping, develop a storm drain master plan, and conduct extensive outreach to the local business community regarding the importance of good housekeeping efforts to reduce trash loading.

The proposed costs associated with the proposed pilot FCS installations, additional planning and analysis of the storm drain system, potential manual litter abatement efforts and the potential implementation of parking restrictions for effective street sweeping operations will be included within the next 2-year budget cycle (FY 2019-20, 2020-21).

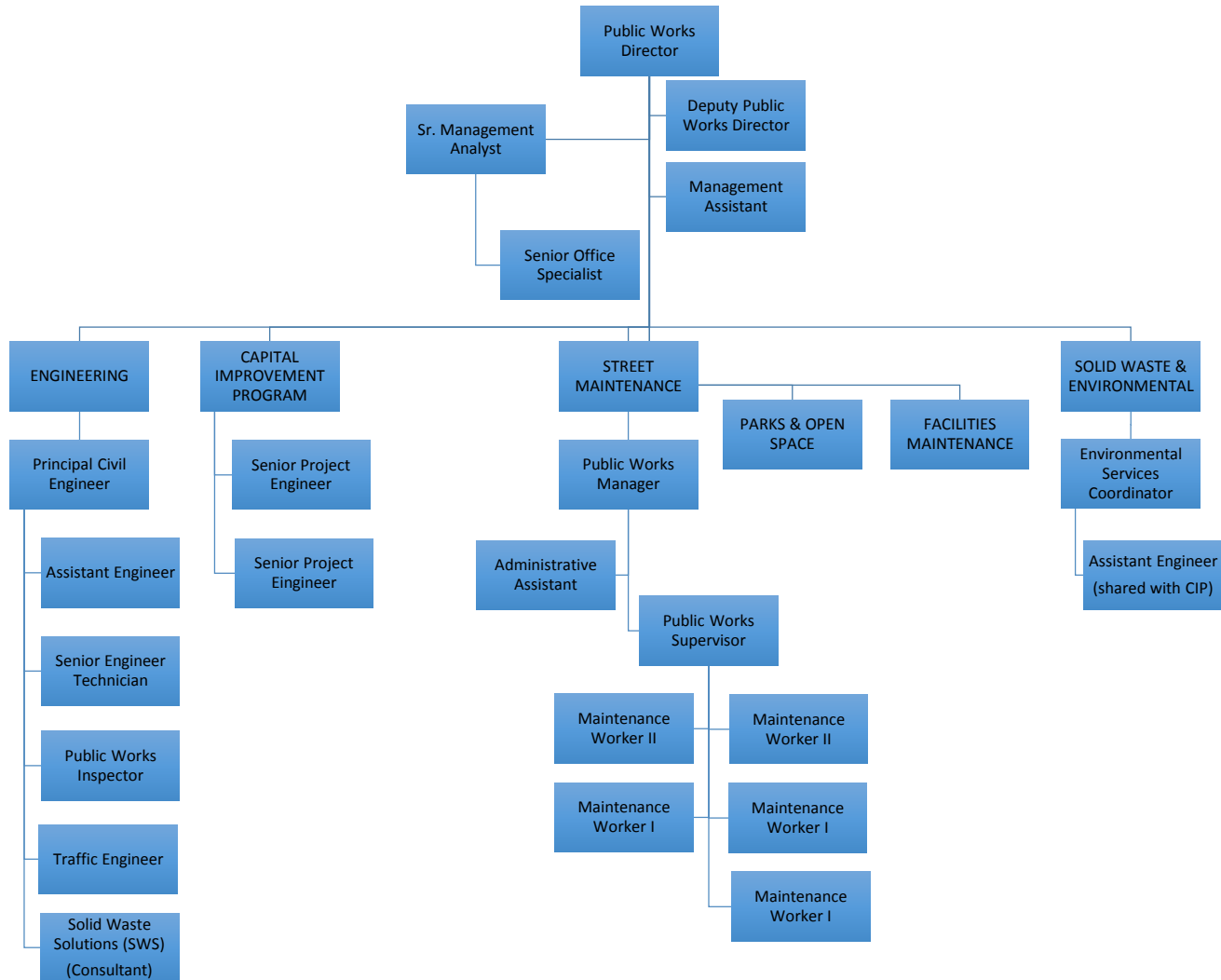
Adaptive Management and Re-evaluation

This Implementation Plan is intended to provide an overall framework and roadmap for compliance with the State's Trash Amendment. It is expected that this Plan will require modification and amending as the City moves forward with implementation, and a more detailed and thorough engineering analysis for potential FCS installation is conducted. Uncertainties regarding funding, staffing, and potential partnerships may also require a flexible approach. New technologies, and FCS may be developed during the next decade, some of which may be applicable to complying with the Trash Amendment.

Where planned measures to reduce trash loading prove to be technically infeasible or cost prohibitive, the Public Works Director will consult with the Environmental Services Coordinator, engineering and operations staff, as necessary, to develop and implement alternative measures that will result in equivalent reductions in trash loading. Any substantive changes in the Implementation Plan will be logged in the Implementation Plan Change Log (Attachment 10), and reported as part of the annual PEAP submittal.

Attachment 1.
City of Goleta Public Works Department Organization Chart

City of Goleta Public Works Organization Chart

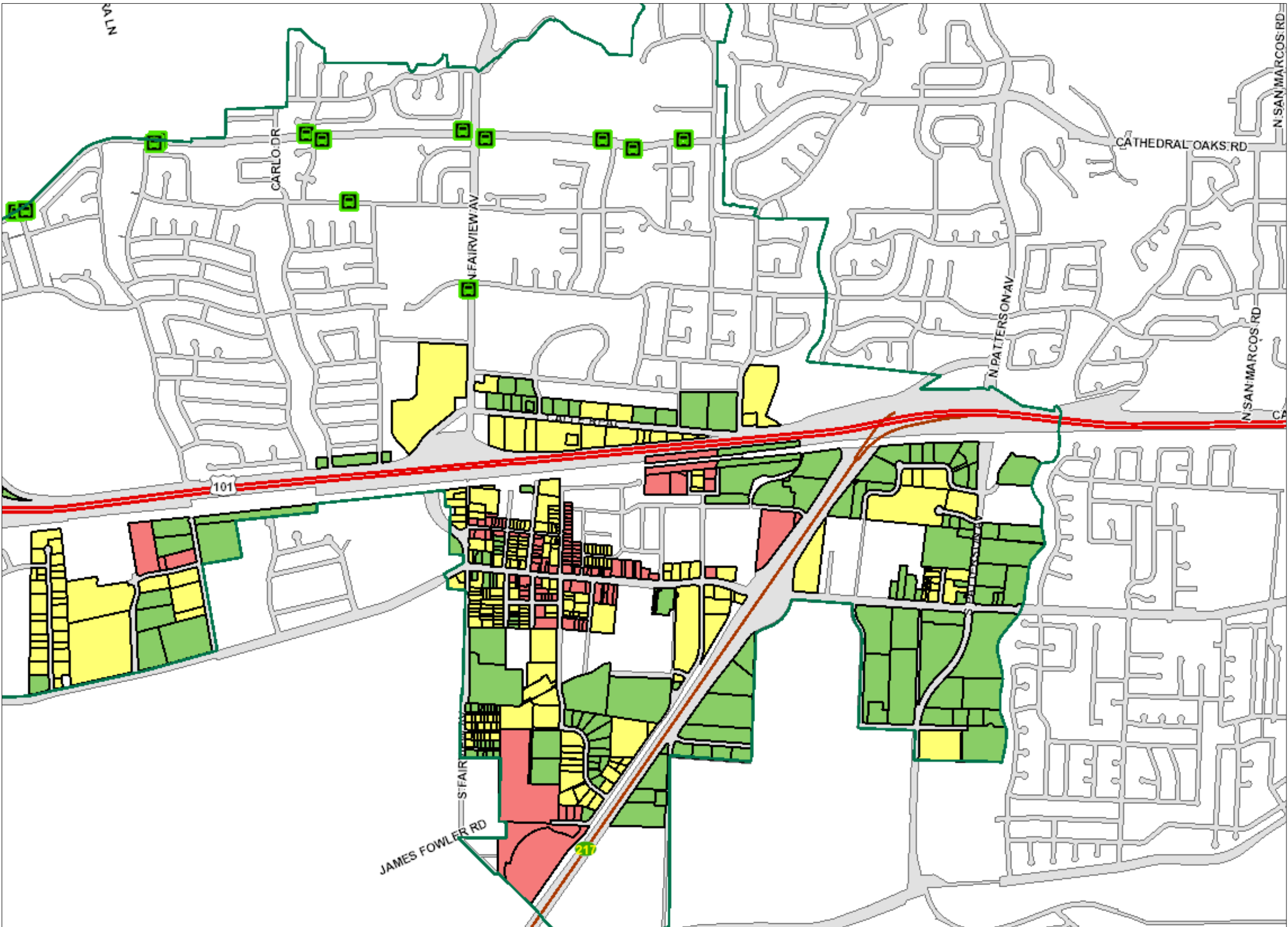


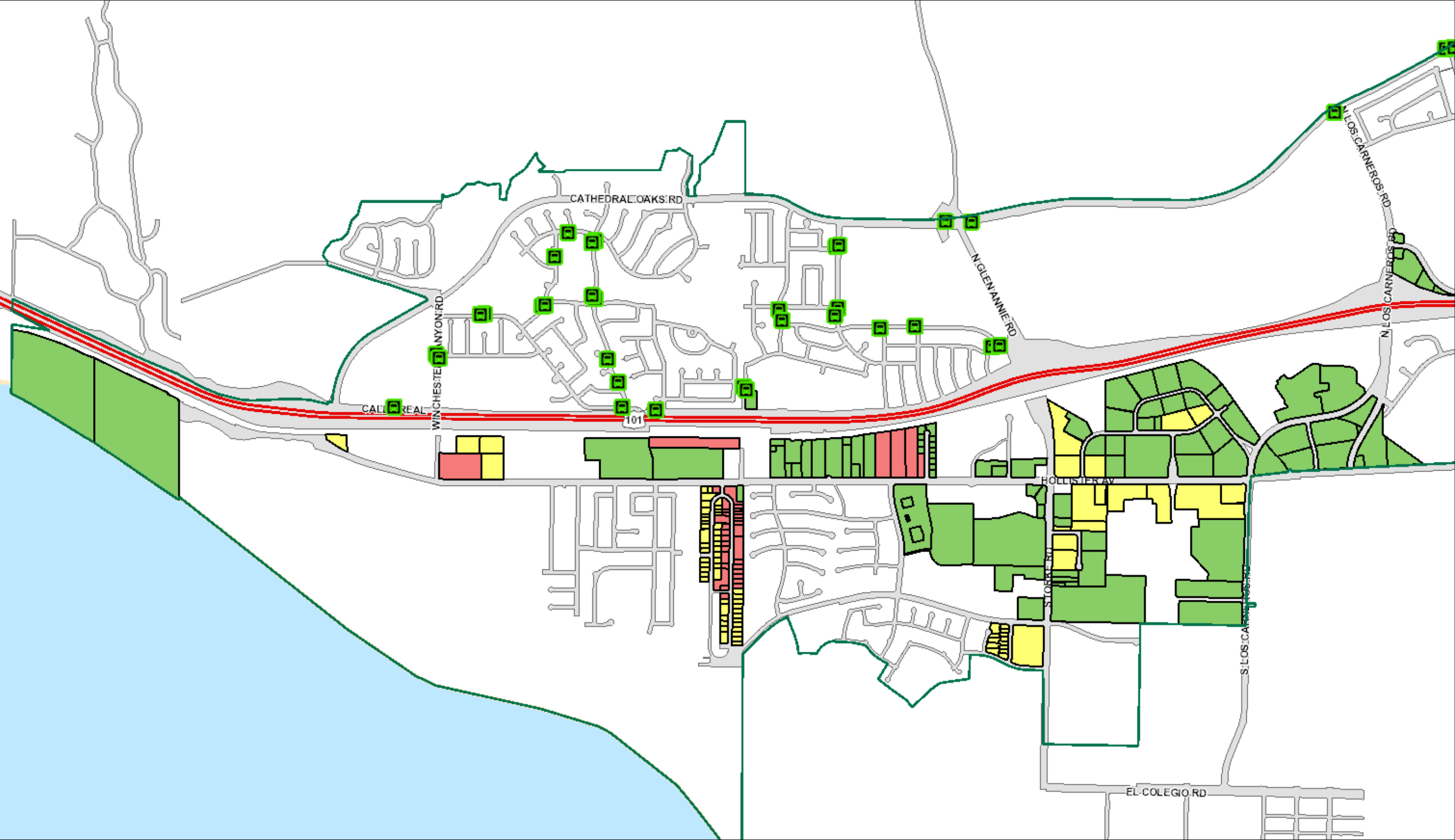
Attachment 2
Public Refuse/Recycling Receptacles
Serviced by MarBorg Industries

List of Public Refuse/Recycling Receptacles Serviced by MarBorg Industries

Location/Address	Type	Number of Containers	Collection
5300 Hollister (Hollister & Patterson)	MTD	1	3X/week
5301 Hollister - Cottage Hospital (Hollister & Patterson)	MTD	1	3X/week
5400 block Hollister - Sumida Gardens)	MTD	1	3X/week
5444 Hollister - St. Raphael's	MTD	1	3X/week
5611 Hollister - Toyota (Hollister & Kellogg)	City	1	3X/week
5610 Hollister - Carpeteria (Hollister & Kellogg)	City	1	3X/week
5679 Hollister - Goleta Community Center	City	1	3X/week
5680 Hollister - Freedom Motors (Hollister & Kinman)	City	1	3X/week
5720 Hollister - Goleta Motors	City	1	3X/week
5754 Hollister - O'Reilly's Auto Parts	City	1	3X/week
5729 Hollister - International Travel	City	1	3X/week
5757 Hollister - Santa Cruz Market	City	1	3X/week
5780 Hollister - Goleta Bakery	City	1	3X/week
5799 Hollister - Old Town Antiques (Hollister & Pine)	City	3	3X/week
5810 Hollister - 7/11 (Hollister & Nectarine)	City	2	3X/week
5827 Hollister - Community West Bank	City	1	3X/week
5855 Hollister - Larry's Auto Parts	City	1	3X/week
5880 Hollister - Gil's Fireplaces	City	1	3X/week
5887 Hollister - Velo Pro Bikes	City	1	3X/week
5918 Hollister - Pattaya	City	1	3X/week
6434 Hollister - Willow Springs	MTD	1	3X/week
6875 Hollister - Jack in the Box	MTD	2	3X/week
400 block Los Carneros (Los Carneros & Discovery)	MTD	1	1X/week?
6900 block Hollister - Camino Real Marketplace	MTD	1	3X/week
7190 Hollister at Pacific Oaks	MTD	1	3X/week
7400 Hollister (Hollister & Ellwood Station)	MTD	1	3X/week
7433 Hollister - 7/11 (Hollister & Entrance)	City	1	3X/week
7433 Hollister - 7/11 (Hollister & Entrance)	MTD	1	3X/week
7500 block Hollister (Hollister & Palo Alto)	MTD	1	3X/week
7600 block Hollister - Santa Barbara Shores	MTD	1	3X/week
7600 block Hollister (Hollister & Viajero)	MTD	1	3X/week
7686 Hollister - Ellwood School (Hollister & Viajero)	MTD	1	3X/week
5600 Calle Real (Calle Real & N. Kellogg)	MTD	1	3X/week
Encina Lane & Calle Real	MTD	1	3X/week
195 N. Fairview - Wells Fargo	MTD	1	3X/week
400 S. Fairview - Airport Plaza	MTD	1	3X/week
200 block Storke - Camino Real Marketplace	MTD	1	3X/week
270 Storke - Rusty's Pizza	MTD	1	3X/week
400 block Storke (Storke & Phelps inbound)	MTD	1	3X/week
400 block Storke (Storke & Phelps outbound)	MTD	1	3X/week
500 block Storke (Storke & Whittier)	City	1	3X/week
Santa Felicia & The Plaza	MTD	1	3X/week
5800 Cathedral Oaks - CO Athletic Club	MTD	1	3X/week

Attachment 3
City of Goleta Baseline Condition Parcel Map





Attachment 4
Potential Regional Full Capture Systems:
Outfall Devices

Potential Regional Full Capture Systems: Outfall Devices

BMPs	Manufacturer	Size Range	Treatment Flow	Storage Capacity	Efficiency	Maintenance	Cost	Limitation	Other Benefits	Recommendations
Hydrodynamic Separators										
Continuous Deflective Separation (CDS)	<u>Contech Engineered Solutions</u> Sales (Novato, CA): Curt Kruger, 415-897-8587 krugerc@contech-cpi.com	For drainage area of 3-1000 acres; device can be sized to drainage area, runoff coefficient, and rain intensity		25-134 cu.ft	Sediment smaller than 50 microns (0.05 mm)	Once/year, no entry required. (\$700-\$1,500)	\$10,000-\$100,000	Vector control issues; large depth placement; Large sizes may require an external bypass vault at additional ~\$15,000.	Removes sediment, oils, petroleum hydrocarbons, debris; 2 yr warranty	For areas with high trash generation rates (TGR) or large drainage areas; Not restricted vertically; Not good in heavily populated area due to vector control issues
Dual Vortex Separator (DVS)	<u>Oldcastle Precast</u> Sales (Santa Rosa, CA): Gregory Bull, 707-849-1530 Greg.Bull@oldcastle.com	Sized to meet site-specific requirements; Considers mean particle size, local rainfall data, and hydraulic capacity; Unit size: 3-12 feet in diameter	26 cfs max	8-481 cu.ft	unspecified	After it reaches 50% capacity; 2 inspections/year, no entry required	\$8,000 - 60,000	unspecified	Square configuration to accept multiple inlet pipes; 5 yr warranty, replacement parts available; Multiple access points	For areas limited in space; For areas with high erosion/sediment and trash problems; Rectangular or circular
Downstream Defender™	<u>Hydro Internationals</u> Sales (Santa Rosa, CA): Sue Lillo, 800-579-8819 slillo@kristar.com	Acceptable inlet/outlet pipe sizes range from 12 inches to 36 inches	3.0-38 cfs	Storage capacity: 21.2 cu.ft (for 6ft model)	90% removal of particles greater than 150 microns	As needed; 2 inspections/year; no entry required	\$13,000 - 65,000	1 review stated poor performance	Removes solids, debris, and petroleum hydrocarbons; 5 yr warranty	For area limited in space and high trash generation area
Debris Separating Baffle Box										
Nutrient Separating Baffle Box	<u>Bio Clean Environmental Services</u> Sales contacts: Greg Kent, (760) 433-7640 or Kirk Vallejo, (760) 681-9583 gkent@biocleanenvironmental.net; kvallejo@biocleanenvironmental.net	72 inches to 114 inches	>1 year, 1 hour storm with proper sizing	48 - 1190 cu.ft	unspecified	2 inspections/year; clean once/year; replace HC boom once/year; no entry required	\$18,000 - \$70,000 + delivery	unspecified	Inline Treatment System for TSS, hydrocarbons, and gross solids with trash screens. 5 yr warranty	Low head loss, easily installed inline

Attachment 5
Potential Distributed Full Capture Systems:
Inlet Devices

Potential Distributed Full Capture Systems: Inlet Devices

HIGH FLOW BMPS	Manufacturer	Size Range	Treatment Flow	Storage Capacity	Maintenance	Cost	Other Benefits
G2 CPS-MOD Series	G2 Construction, Inc.	Device handles flows greater than the design capacity of the stormwater pipe.	unspecified	unspecified	Entry needed; sharp edges are a hazard to muni works	\$425/unit for 20 devices; \$250/unit for 100-500 devices	unspecified
Drop-In CPS Screen	G2 Construction, Inc.						
REM Triton Full Capture Device Filter	Revel Environmental Manufacturing Inc.	12 - 48 inch diameter	0.42-20.59 cfs	0.24-35.6 cu. ft	Maintenance as needed, but typically replace filters once a year	smaller units -\$260-\$590/unit; larger units - \$360-\$390/unit; Installation cost: \$100-\$195/unit; \$14.75-\$19.5 for media replacement	High flow bypass; 3-D filtering for higher flow
MEDIUM FLOW BMPS	Manufacturer	Size Range	Treatment Flow	Storage Capacity	Maintenance	Cost	Other Benefits
Grate Inlet Skimmer Box (square design)	Bio Clean Environmental Services, Inc.	12x12 inches to 48x48 inches	0.5-6.6 cfs (Bypass 0.5-13.3 cfs)	unspecified	Clean filter when over 40% full; prefer round design for ease of maintenance; No entry required; Replace hydrocarbon boom at least 2x year	\$1,140-\$2,235/unit; discount available based on quantity	media filter available; 8 year warranty
FloGard Plus Catch Basin Filter Insert (combination inlet)	Oldcastle Precast	Inlet: 16x33 inches to 24x36 inches Outlet: 12x14 inches to 24x36 inches	1.1-2.0 cfs	1.4-1.95 cu. ft	No entry	\$500-900/unit	unspecified
Connector Pipe Screen (CPS)	United Stormwater, Inc.	28x18 inches to 60x52 inches	unspecified	unspecified	Entry Needed; Cleaned when screen is >40% covered	\$380/unit	unspecified
LOW FLOW BMPS	Manufacturer	Size Range	Treatment Flow	Storage Capacity	Maintenance	Cost	Other Benefits
Curb Inlet	Bio Clean Environmental Services, Inc.	24 to 264 inch basket	0.85 cfs (Bypass Unlimited)	unspecified	No entry; Clean filter when over 40% full; Vacuum truck; replace hydrocarbon boom at least 2x year	\$1,465-\$2,455/unit installed; discount available based on quantity	removes TSS, nitrates, zinc, BOD, and turbidity; 8 year warranty
Round Curb Inlet	Bio Clean Environmental Services, Inc.	24 to 264 inches	2.4 cfs	unspecified	No entry	\$1,611-\$2,601/unit; discount available based on quantity	8 year warranty

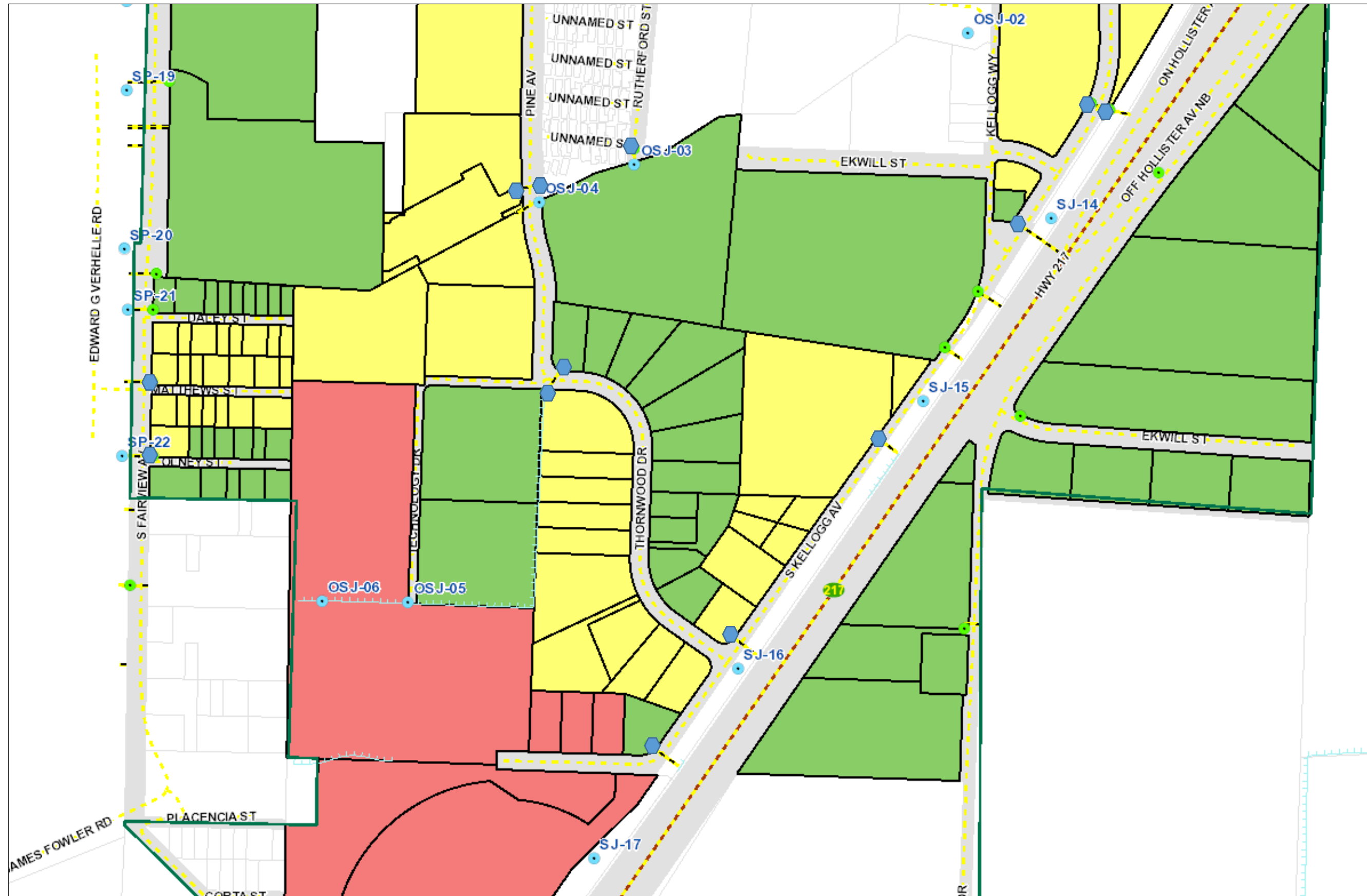
LOW FLOW BMPS	Manufacturer	Size Range	Treatment Flow	Storage Capacity	Maintenance	Cost	Other Benefits
FloGard Plus Catch Basin Filter Inserts (flat grated inlet)	<u>Oldcastle Precast</u>	Inlet: 12x12 inches to 22x34 inches Outlet: 12x14 inches to 24x36 inches	0.25-2.0 cfs (shallow or standard depth);	0.15-3.4 cu. ft	No entry	\$750-\$3,000/unit	unspecified
FloGard Plus Catch Basin Filter Inserts (curb inlets)	<u>Oldcastle Precast</u>	Inlet diameter: 15 inches to 36 inches Outlet diameter: 18 inches to 39 inches	0.4-2.0 cfs	0.3-3.6 cu. ft	No entry	Price based on diameter: 24" = \$450; 36" = \$610; 48" = \$800	unspecified
DrainPac - Drop Inlet for curb inlet	<u>United Stormwater, Inc.</u>	24-48 inches x 12 inches; customized to any size/shape	140 cfs/sq.ft	unspecified	No entry	\$424-662/unit installed	unspecified

Attachment 6
Jurisdictional Maps and Identification of Potential
Full Capture Systems

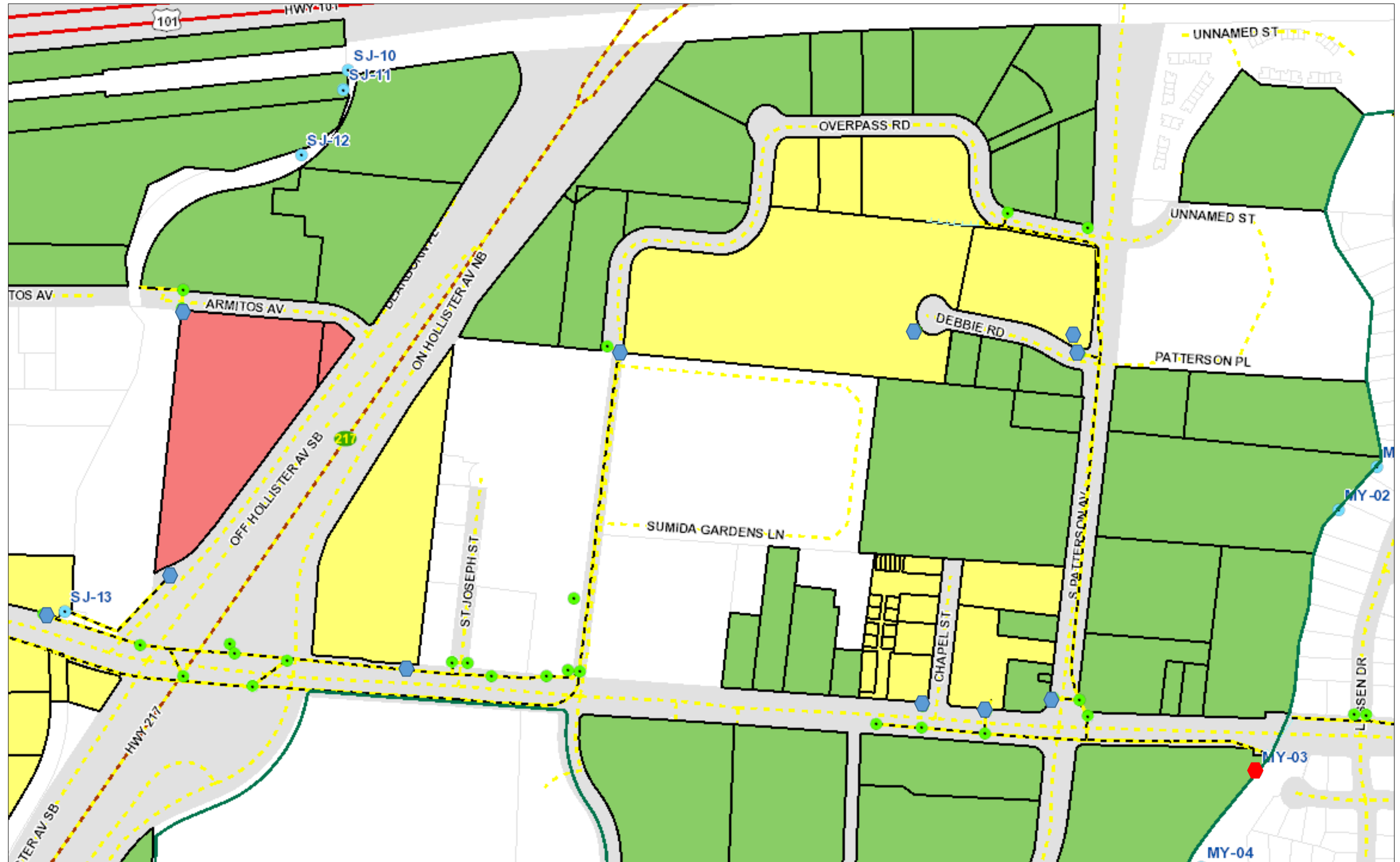
◆ Catch Basins for potential distributed FCS installation
 ◆ Potential locations for Regional FCS installation
 ● Catch Basin
 ● Outfall



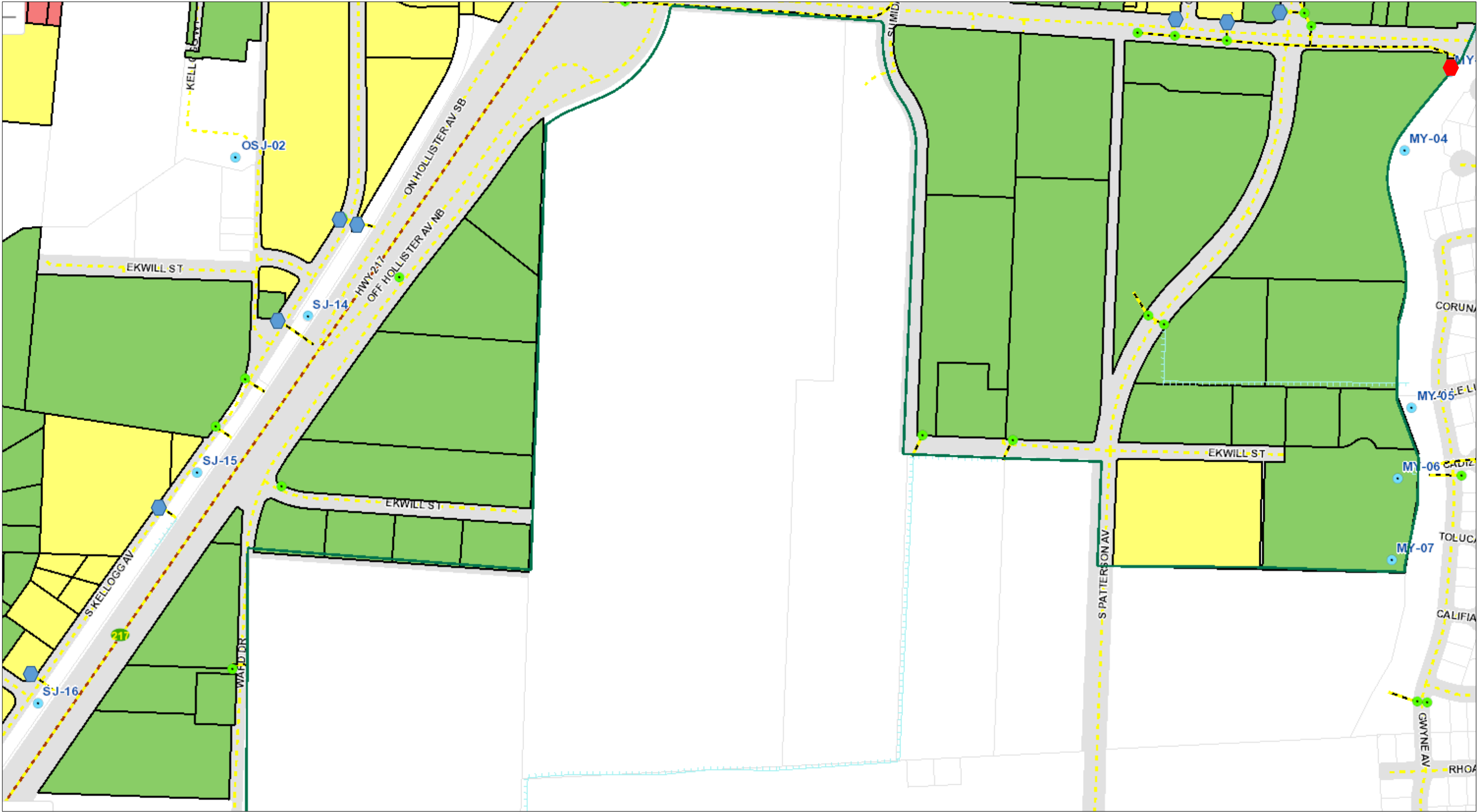
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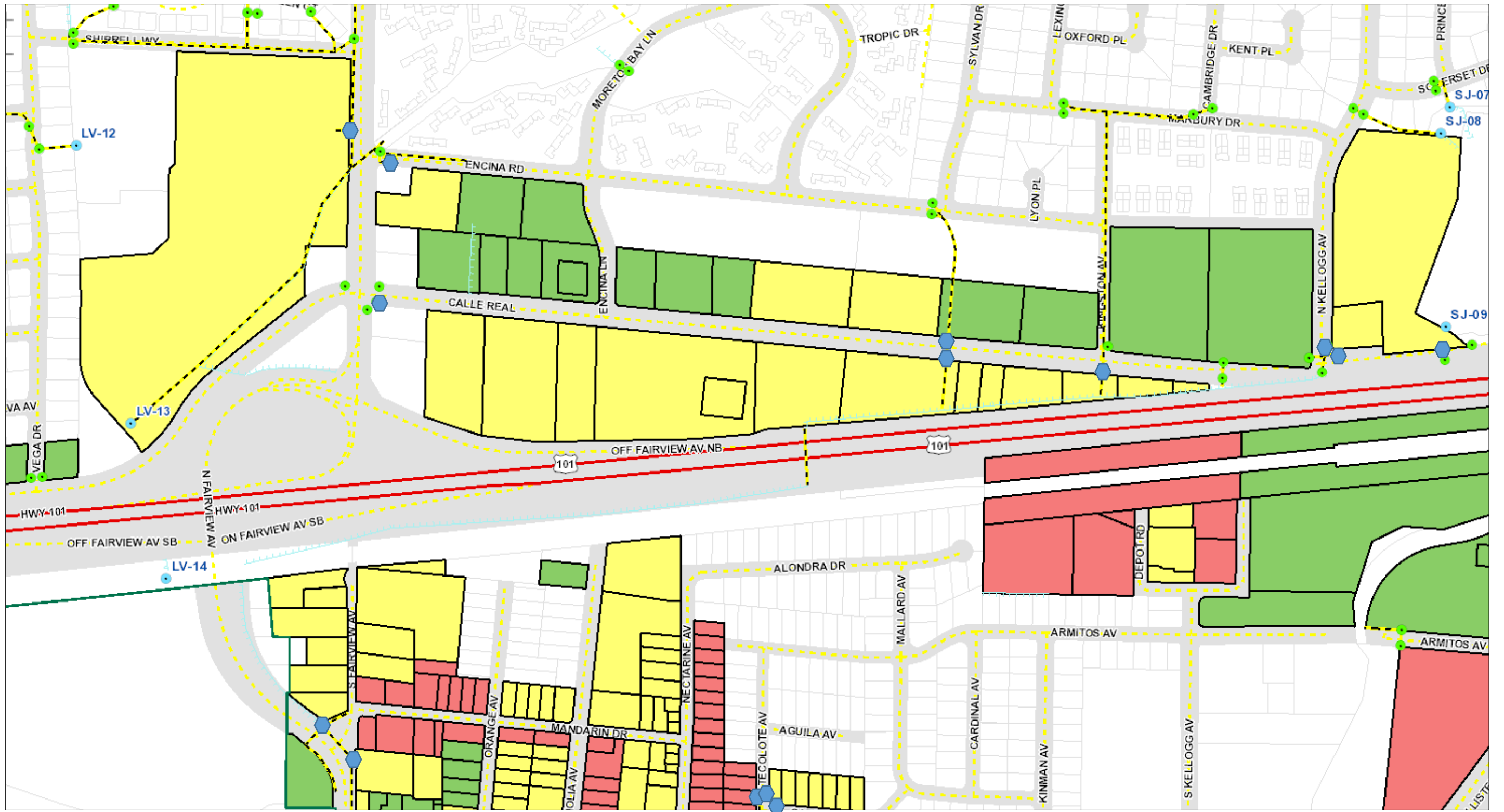
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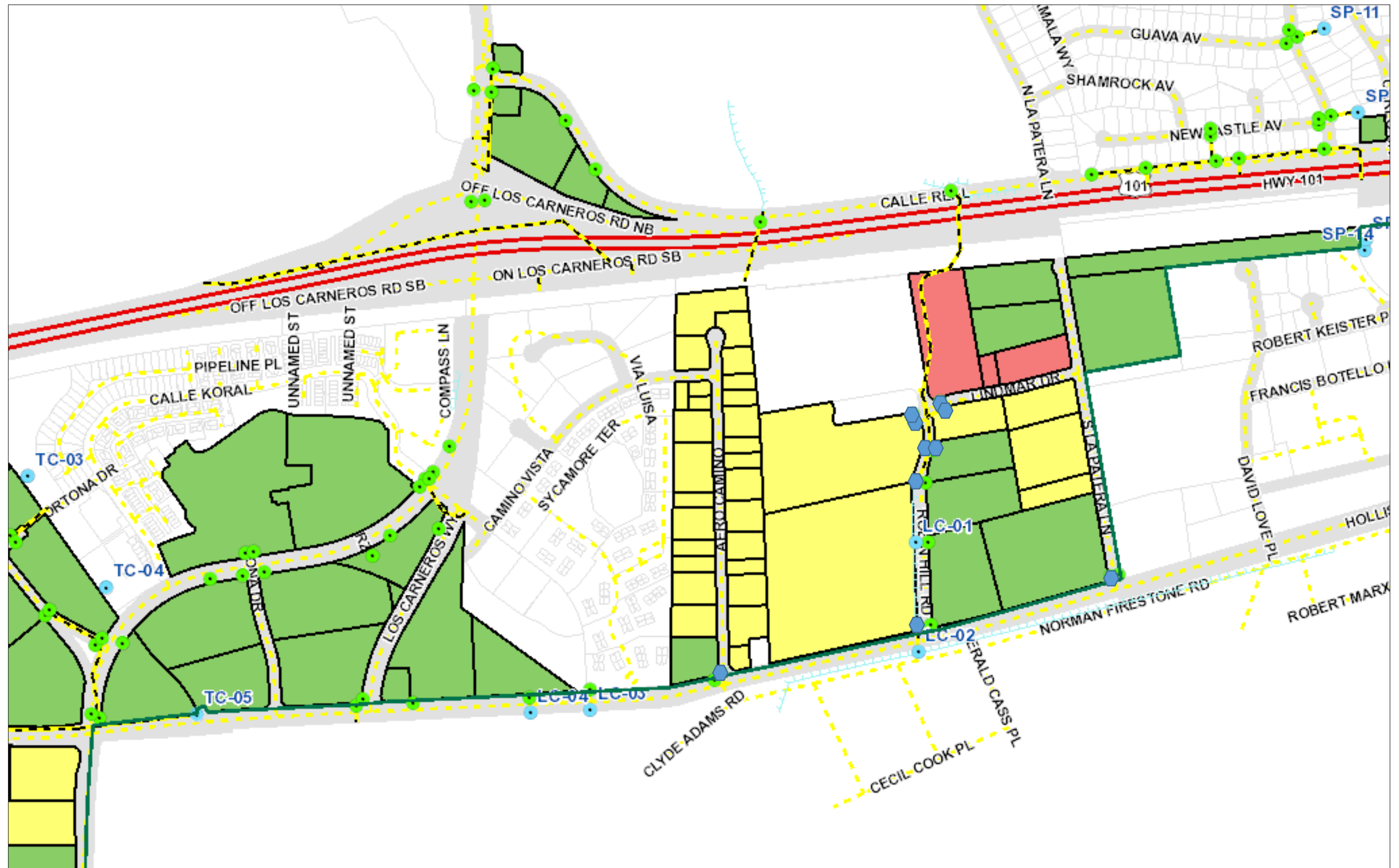
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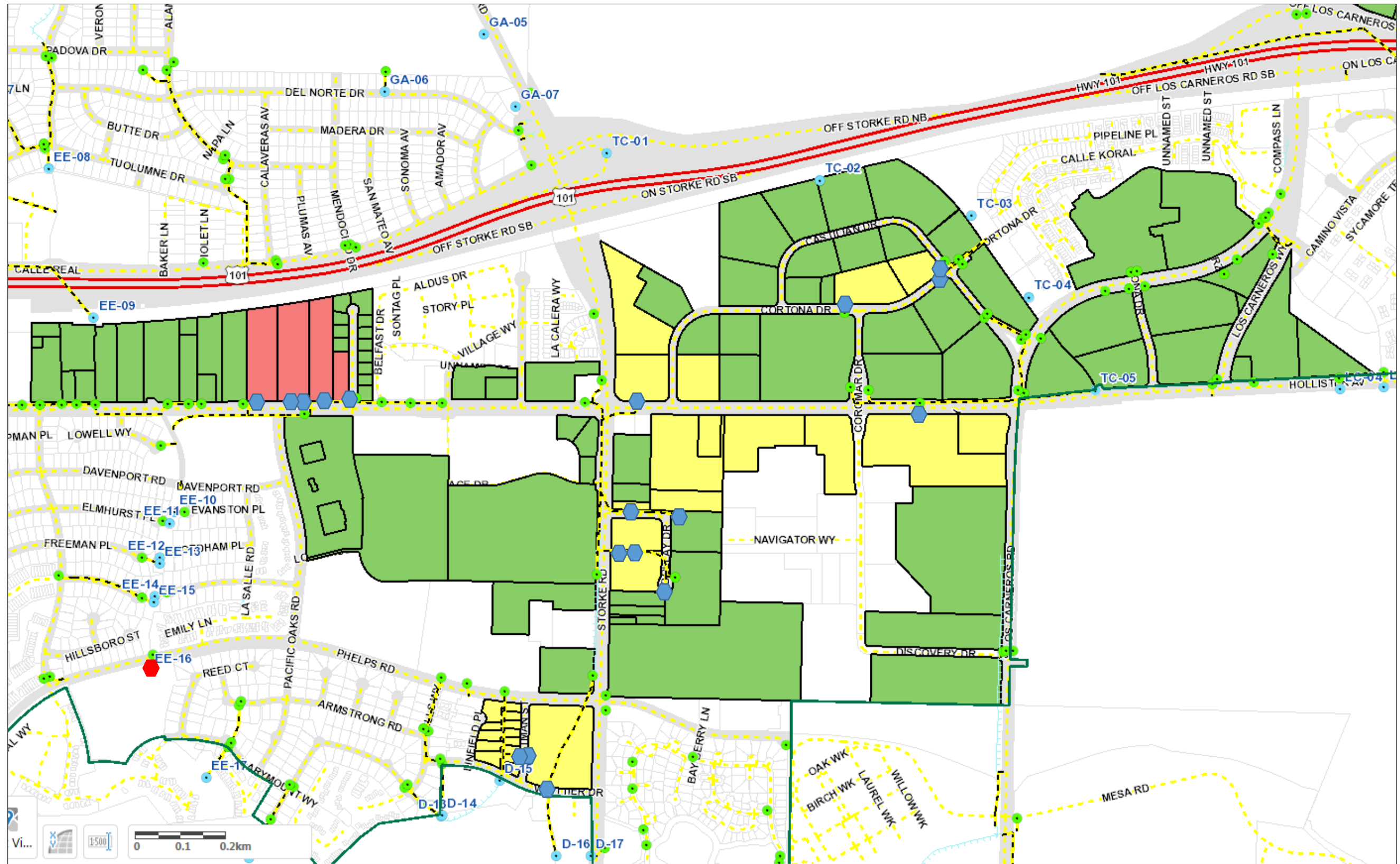
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 ● Catch Basin
 ● Outfall



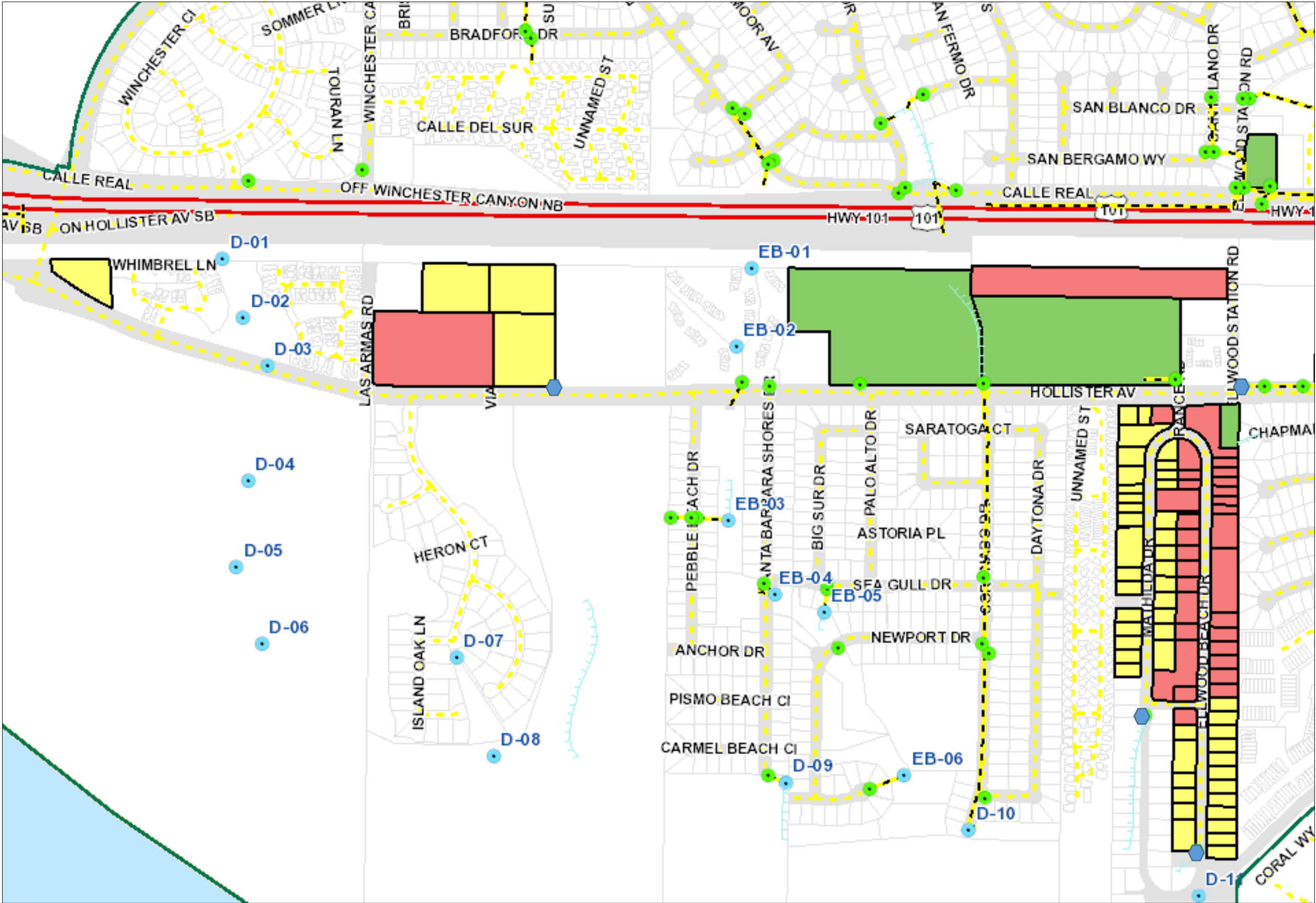
◆ Catch Basins for potential distributed FCS installation
 ◆ Potential locations for Regional FCS installation
 ● Catch Basin
 ● Outfall



◆ Catch Basins for potential distributed FCS installation
 ◆ Potential locations for Regional FCS installation
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Attachment 7

Implementation Schedule

Year	Planning Activities	FCS installation	Alternative approaches	Verification Activities
1-4	<p>Develop a Storm Drain Master Plan</p> <p>Identify potential locations for pilot FCS installations and conduct engineering analysis</p> <p>Review and revise MS4 maintenance schedule and procedures</p> <p>Develop FCS Operations and Maintenance Plan</p> <p>Initiate planning and outreach for street sweeping parking restrictions</p> <p>Implement a parking restriction ordinance</p> <p>Refocus educational and outreach campaigns and CBSM program to address litter reduction</p>	<p>Install distributed FCS at pilot locations (5)</p> <p>Install distributed FCS at additional locations (15)</p> <p>Inspection and maintenance of Installed FCS</p>	<p>Contract w/ service provider for manual litter abatement services</p> <p>Implement parking restrictions for street sweeping</p> <p>CBSM campaign</p> <p>Refocus existing stormwater media and educational outreach campaigns to address litter reduction</p> <p>Maintain and where feasible expand existing adopt-a-beach and creek cleanup programs</p>	<p>Verification of xx public BMPs;</p> <p>Documenting the amount of litter collected by crew in Old Town, beach and creek cleanup events</p> <p>Documenting the amount of debris collected by enhanced street sweeping operations</p> <p>Annual OVTA surveys</p> <p>Annual Reporting</p>
5-8	<p>Continue identifying and analyzing potential FCS installations</p> <p>Planning and engineering for MS4 System repairs</p>	<p>Install distributed FCS at additional locations (21)</p> <p>Install 1 regional FCS (collecting from 11 catch basins)</p> <p>Inspection and maintenance of installed FCS</p>	<p>Expand parking restrictions to additional areas within the PLUs</p>	<p>Annual OVTA surveys</p> <p>Annual Reporting</p>
9-12	<p>Installation of final FCS</p>	<p>Install distributed FCS at additional locations (25)</p> <p>Install 1 regional FCS (collecting from 10 catch basins)</p> <p>Inspection and maintenance of installed FCS</p>	<p>Optional expansion of parking restrictions to areas outside PLUs</p>	<p>Annual OVTA surveys</p> <p>Annual Reporting</p>

Attachment 8
Full Capture System Field Verification and
Site Evaluation Form

FCS Field Verification and Site Evaluation Form

Site ID: _____

General Staff name(s): _____

Date: _____

Time: _____

Location: _____

Material: _____ Size: _____ Other info (bars, screens, gates, etc.) _____

Structure considered for BMP

☐ Manhole

☐ Catch Basin

☐ Curb Inlet

☐ Outfall

Location in relation to outfall: _____

Dimensions: _____

Inlet size: _____ Depth from rim to inlet invert: _____ Material: _____

Inlet size: _____ Depth from rim to inlet invert: _____ Material: _____

Inlet size: _____ Depth from rim to inlet invert: _____ Material: _____

Outlet size: _____ Depth from rim to outlet invert: _____ Material: _____

Other info (inlet/ outlet pipe angle, screens, etc.) Use back to sketch if needed. _____

Area observations Surrounding land uses: ☐ Residential ☐ Commercial ☐ Industrial ☐ Transit Describe any potential concerns for access / setup for periodic maintenance. Take photos!



Pavement type: ☐ paved ☐ gravel ☐ dirt ☐ other: _____

Access (e.g.: street, easement, etc.) _____

Parking availability _____

Traffic management _____

Overhead obstructions (power lines, trees, etc.) _____

Risk for clogging (nearby trees?) _____

Risk for vandalism _____

General trash observations in area: ☐ low ☐ medium ☐ high ☐ very high

Additional notes / missing info needed, etc. _____

Additional notes or sketches

Attachment 9
City of Goleta Annual Report of
Full Capture System Installation

City of Goleta Annual Report of Full Capture System Compliance

Date:

[illegible]

Attachment 10
Implementation Plan Change Log

Trash Implementation Plan Change Log

Date	Summary of Changes Made	Personnel	Comments