

City of East Palo Alto



Long Term Trash Load Reduction Plan

For Municipal Regional Permit (MRP) Compliance

February 1, 2014



CITY OF EAST PALO ALTO
OFFICE OF THE CITY MANAGER
2415 University Avenue • East Palo Alto, CA 94303

January 31, 2014

Ms. Sue Ma
California regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street Suite 1400
Oakland, CA 94612

Subject: Long Term Trash Load Reduction Plan Submittal for Municipal Regional Permit for National Pollutant Discharge Elimination System Permit Order R2-2009-0074 City of East Palo Alto

Dear Mrs. Ma,

The enclosed report contains City of East Palo Alto's Long Term Trash Load Reduction Plan for consideration of compliance with our MRP requirements as set forth in the above referenced permit.

I certify under penalty of law that this document and all attachments (submitted electronically) were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Based on my inquiry of person or persons who manage the system, or those persons directly responsible for gathering the information, the enclosed details are, to the best of my knowledge and belief, true, accurate and complete, and have been reviewed and approved by motion for submittal by the City's Public Works and Transportation Committee as well as the City Council of the City of East Palo Alto. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

The City remains committed to full compliance with the Municipal Regional Permit and is actively working to prevent pollutants from entering our storm water system. If you have any questions about our Clean Bay Program, please contact Ms. Michelle Daher at (650) 853-3197 or via email at mdaher@cityofepa.org.

Sincerely,


Kamal Fallaha, City Engineer

Preface

This Long Term Trash Load Reduction Plan (Plan) is submitted by the City of East Palo Alto in compliance with provision C.10.a(i) and C.10.a(ii) of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). This Plan was developed by the City of East Palo Alto based on all presently available information, and will be modified as needed when new information becomes available during the implementation of this Plan, or when updated information about effectiveness become available. If the City of East Palo Alto determines it is necessary to amend or revise this Plan, revisions or amendments shall be provided via the City of East Palo Alto's annual reporting process, to the San Francisco Bay Regional Water Quality Control Board.

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1. Introduction

The Municipal Regional Stormwater NPDES Permit for Phase I communities in the San Francisco Bay (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP), became effective on December 1, 2009. The MRP applies to 76 large, medium and small municipalities (cities, towns and counties) and flood control agencies in the San Francisco Bay Region, collectively referred to as Permittees. Provision C.10 of the MRP (Trash Load Reduction) requires Permittees to reduce trash from their Municipal Separate Storm Sewer Systems (MS4s) as follows:

- By 40 percent before July 1, 2014;
- By 70 percent before July 1, 2017; and
- By 100 percent by July 1, 2022.

Progress reports of accomplishment towards meeting these goals were provided through required submittals to the San Francisco Bay Regional Water Quality Control Board (Water Board) by February 1, 2012, under MRP provision C.10.a (Short-Term Trash Loading Reduction Plan), which included:

- a. (a) Baseline trash load estimate, and (b) description of the methodology used to determine the load level;
- b. A description of the Trash Load Reduction Tracking Method that was used to account for trash load reduction actions and to demonstrate progress and attainment of trash load reduction levels;
- c. A **Short-Term Trash Loading Reduction Plan** that described control measures and best management practices to be implemented to attain a 40 percent trash load reduction from its MS4 by July 1, 2014;

Short-Term Trash Load Reduction Plan

The required Short-Term Trash Load Reduction Plan (Short-Term Plan) was submitted by the City of East Palo Alto for compliance with the portions of MRP provision C.10.a.i listed as “a.” and “c.” above. In compliance with “b.” above, Bay Area Stormwater Management Agencies Association (BASMAA) submitted a progress report on behalf of Permittees that briefly described the methodologies used to develop trash baseline loads (BASMAA 2011a). These methods are more fully described in BASMAA 2011b and 2011(c). Lastly, the Trash Load Reduction Tracking Method Technical Report (BASMAA 2011d) was submitted by BASMAA on behalf of Permittees in compliance with submittal “b.” described above. The Baseline Loading Rates and Tracking Method were detailed in the City of East Palo Alto’s Short Term Trash Load Reduction Plan, developed based on meetings between BASMAA and the Water Board, where consensus was reached as to the details of how baseline trash loading rates could be calculated. Tracking methods were developed based on what was observed in a major analysis of trash distribution in various land uses throughout the Bay Area through the BASMAA Baseline Trash Generation Rates Project. This BASMAA Baseline Trash Project was a regional collaborative which studied various land uses in a variety of socioeconomic areas throughout the region, detailing a “default trash generation rate”. This “default” data was then corrected for jurisdiction-specific parameters in order to reflect more accurately local conditions, by providing estimated generation rates according to specific land use types, based on the Association of Bay Area Governments (ABAG) land use maps. In addition, a Baseline Reduction Tracking Method was

developed, which served to apply numerous “credits” for litter abatement programs and source control measures that municipalities would implement to address the trash load issues throughout their boundaries. Such credits were to serve to provide a quantifiable method of calculating trash load reduction, based on measureable actions. These “credits” were calculated based on what was observed during the BASMAA regional collaborative trash project, wherein litter was measured and estimated according to trash type.

Obstacles to Full Implementation

Upon committing to the Short Term Trash Load Reduction goals, which leaned heavily on the anticipation that the planned “credits” would be approved by the Water Board, the City went forth with commitments made in the Plan. Thereafter, BASMAA informed Permittees that discussions with the Water Board had shifted direction; Permittees were informed of the possibility that “credits” might not be an acceptable means of proving compliance. Many municipalities, including the City of East Palo Alto, in implementing the Short Term Trash Load Reduction Plan, enacted product bans, and initiated extensive discussions regarding a variety of ordinances which were expected to expand enforcement authority for illegal dumping, uncovered loads, and parking during street sweeping days, among other actions, to meet the Short Term Trash Load Reduction Plans; however, many months after submitting the Short Term Trash Load Reduction Plan, the City received notice from the Water Board that these Baselines and Tracking Methods, including the “credits” would not be officially accepted, with official notice being provided to Permittees just days prior to the City Council of East Palo Alto voting on the adoption of the San Mateo County Reusable Bag Ordinance. Inconsistencies between what BASMAA and the Water Board have agreed upon, and what was subsequently approved caused a delay in the proposed ban on polystyrene (Styrofoam) food service ware and other products, and may have negatively affected the prospects for returning to the City Council in the near future for approval to adopt a ban on single use beverage containers.

Other controls that were detailed in the Short Term Plan that have been implemented include the installation of street sweeping no parking signage, additional public information and participation programs, minimizing unsecured loads, installation of full trash capture devices, stormwater conveyance system maintenance, improved municipal trash container management, on land and creek cleanups, anti-littering and illegal dumping campaigns, enhanced enforcement authority, and improved collaboration with local businesses.

Specific ordinances to restrict unsecured loads and ensure anti-littering were deemed unnecessary as enhanced enforcement authority is already generalized enough to cover these matters adequately. However, there are current plans to update the City’s NPDES Ordinance in its entirety to restrict uncovered load as well as update a number of other ordinance provisions to ensure these provisions are able to fully address MRP compliance.

Along with the Short Term Trash Load Reduction Plan, baseline levels of trash were mapped to indicate the estimated trash load on City streets. These levels were modeled after the BASMAA Trash Study, which relied heavily upon loading rates seen in jurisdictions within the study areas, available census data, land uses, and socioeconomic trends that were identified during the Trash Study. During the course of developing the Long Term Trash Load Reduction Plan, the City of East Palo Alto recognized that there were limits to the modeling predictions of trash loading. Collaborative efforts by

co-Permittees determined that on-land verification of trash loads, through methodical visual inspection of city streets, is an appropriate method of verification of trash loads in specific areas. As such, the City of East Palo Alto continues to update the loading rates for the City, based on the BASMAA on-land visual assessment protocols. An updated “Pilot Trash Assessment Strategy” was created for the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) as a methodical means of assessing the trash load reduction of local streets. This protocol has been used to create a map in Geographic Information Systems (GIS) to provide a visualization of pre-MRP trash loads, reflecting the limited trash load efforts implemented in pre-MRP conditions. This method will be used to reflect the reduction of trash load throughout the City during the Short Term Trash Load Reduction Plan implementation, and to generate updated GIS mapping of the affected areas where trash load reduction efforts have taken place.

The baseline map was used as a foundation for assessing particular GIS “layers” of trash, in conjunction with the following: illegal dumping occurrence, street sweeping sign enforcement efforts, and overflowing solid waste bins (recycling and trash). These tools were used in combination to establish specific areas of prioritization for focused litter abatement efforts. The final “Trash Area Prioritization Map” details eight areas of prioritization throughout the City. Each prioritization grouping has similar trash loading characteristics. Numeric values have been provided to these prioritization areas. The particular prioritization areas represent an area of initial focus for each year of implementation of the Long Term Trash Load Reduction Plan. For instance, the first year of implementation will see significant efforts initiated for all areas with a prioritization of “1”. The second year, areas designated with a “2” will be initiated, and so forth. The areas with the highest number are areas where trash load is the highest. For instance, areas given a “1” prioritization have been identified as the areas with the most complex trash sources and highest trash loads.

While prioritization areas will not likely have achieved full compliance, or 100% of trash removal, within the first year of implementation, phasing of particular controls will be initiated in order to reach 70% compliance by July 2017 and 100% compliance by July 2022.

Additional Submittals to Water Board

Efforts towards litter reduction required additional submittals be provided to the Water Board under MRP provision C.10.b, Trash Hot Spot Selection and Cleanup, and C.10.c, Long-Term Trash Loading Reduction Plan. More particularly, the City of East Palo Alto has annually provided the following via the City of East Palo Alto Annual Report to the Water Board:

- d. In each Annual Report, each Permittee shall provide a summary of its trash load reduction actions (control measures and best management practices) including the types of actions and levels of implementation, the total trash loads and dominant types of trash removed by its actions, and the total trash loads and dominant types of trash for each type of action. Each permittee shall also report its percent annual trash load reduction relative to its Baseline Trash Load.

The City has retained supporting documentation of trash load reduction actions and the volume of dominant type of trash removed from full trash capture devices, from each Trash Hot Spot Cleanup, and from additional control measures or best management practices implemented. Data has been

combined for full trash capture devices deployed in the same drainage area. These records have the specificity required for the trash load reduction tracking method established pursuant to subsection C.10.a.iii.

The City intends to further comply with C.10.c through this Long Term Trash Load Reduction Plan submittal.

Modified Loading Rates and Setting Prioritization

The City of East Palo Alto has taken great effort to comply with reducing water-bound trash loads within the jurisdiction. As the City continuously implements enhanced source controls and best management practices, the trash loading on City streets changes. For instance, as increased enforcement in the area of business waste management practices is implemented, we see an increased incidence of illegal dumping in creeks and isolated areas throughout the City. It is difficult to ascertain the original source of such illegal dumping without adequate surveillance. Furthermore, it appears that illegal dumping rarely occurs during daylight and regular working hours when it would be easy to observe. A second of example of shifting trends is with increased code enforcement for parking violations on street sweeping days; when code enforcement occurs on a particular street or in a priority area, vehicles that once obstructed street sweepers in a given area shift to a neighboring priority area or street, reducing the effectiveness of street sweeping in that area and increasing the prevalence of trash remaining on the street. These two examples represent a shifting of the source creating the trash load, which shifts the trash load to another area. It further illustrates how increased trash controls require more resources than initially anticipated.

The City East Palo Alto has continued to reevaluate the representation of trash throughout the City on a street-by-street basis and, more specifically, to update the loading rates to reflect on-street visual observations of trash loads. The updated loading rates not only illustrate shifting trash sources, but also take into account the following additional factors: frequency of illicit discharge, quantity of litter found during on-land and creek cleanups, overflowing solid waste bins, and the rate of illegal dumping in specific prioritization areas. Through this process, the City has established criteria for prioritization of specified trash focus areas, based on the highest need for litter abatement practices. While the City has taken strides to meet the Short Term Trash Load Reduction Plan, providing for quantifiable indication that 40% of the trash load that was present on City streets prior to the MRP adoption has been abated and establishing a robust plan for reducing trash by 100 percent will be much more challenging. This effort has required such tasks as detailing a step-by-step process for reducing litter on a regional level, with efforts joined on a county-by-county, city-by-city, and site-by-site basis. Such a plan has required strong community support, weighted on the basis of establishing what the full scope of the problem is, and most importantly, providing a visual representation of where we have been, and a vision of where we are going to end up.

40% Reductions

The City of East Palo Alto has taken the following steps to prepare a visual representation of what the City looked like, pre-MRP, through these criteria for prioritization of trash loads, in preparation for reaching the 40% trash load goal:

- 1) Identified and mapped trash generating areas;
- 2) Identified trash sources;
- 3) Prioritized management areas and problems to address;
- 4) Identified and selected control measures for specific management areas;
- 5) Defined and documented methods that will be used to assess progress;
- 6) Implemented control measures to meet the goals of litter abatement; and
- 7) Continued to assess current status of trash load reduction efforts to verify compliance through quantifiable methodologies.

70% Reductions

The City intends to conduct the following additional efforts to ensure adequate progress is made towards continue ongoing source and litter reduction to meet the 70% source reduction goal by 2017, and the 100% target of full litter abatement:

- 8) Evaluate document and report progress;
- 9) Modify area designations, reprioritize areas and problems, as needed; and
- 10) Develop new tools to meet trash load reduction goals, as needed.

2. The Scope of the Trash Problem

Demographics

Incorporated in 1983, the City of East Palo Alto covers 1,641 acres in Santa Mateo County, and has a jurisdictional area of 1,214 acres. According to the 2010 Census, the City has a population of 28,155, with a population density of 10,777 people per square mile, and average household size of 4.03. Of the 28,155 who call the City of East Palo Alto home, 31.9% are under the age of 18, 12.4% are between 18 and 24, 31.6% are between 25 and 44, 18.2% are between 45 and 65, and 5.9% are 65 or older. The median household income was \$45,006 in 2000. After adjusting for inflation, median household income in East Palo Alto has decreased since 2000, dropping by nearly \$10,000. A majority of East Palo Alto residents tend to be Hispanic of Mexican descent. Thirty-one percent of City residents are not U.S. citizens, and thirty-seven percent are Spanish speakers who are not fluent in English, many of whom are first- and second-generation Mexican immigrants. Nearly one-fifth of all households in East Palo Alto are shared with relatives (18.9 percent), double the County average of 8.9 percent.

Mobilized Litter

Highway 101 splits the City of East Palo Alto, with a majority of the single family housing stock and retailers on the east side of the highway and a majority of the high density housing, where over thirty-percent of the residents reside, on the west side of Highway 101, as well as University Circle, a high-rise business office complex and high-end hotel site. While Highway 101 transects the City, University Avenue, a major thoroughfare and primary connection between Highway 101 and Highway 84, slices through the entire length of the City, creating a disproportional amount of traffic, with a significant majority of residents impacted by cut-through traffic. These traffic impacts also contribute to increased respiratory illness, obesity rates, and diabetes, as infrastructure for pedestrians and cyclists is extremely limited and traversing around the constant influx of cars is a hazard. The incidence of excessive cut-through traffic in East Palo Alto has also resulted in significant trash being distributed from vehicles. A majority of the visible litter that is identified from on-land cleanups is from single-use fast-food type convenience containers, including beverage containers of all sorts, hamburger packages, French fry boxes, cigarette butts and packaging and cigar pouches.

To accommodate for the large number of motorists seeking convenience foods, the City is host to a large number of fast food chains such as McDonalds, Togo's and Taco Bell, as well as small family owned businesses specializing in Mexican foods and an assortment of restaurants. A majority of fast food restaurants in East Palo Alto serve their convenience foods in polystyrene clamshells and cups, due to the low cost of this disposable packaging. Residents keep their dollars local by frequenting the numerous local small markets that are still sprinkled throughout the City, purchasing convenience foods such as soda, beer, candy bars and chips. Cleanup of local streets indicates that polystyrene packaging items and other single use snack foods are often improperly discarded into local gutters and sidewalks, making their way to the City stormdrain system.

Public Transportation

Public transportation is extremely robust in East Palo Alto, with three all-day bus routes, one nightly bus route, and four free shuttles serving the two-and-a-half square mile community, most days. While there are modest quantities of litter accumulation at the bus and shuttle stops, trash containers are

available and readily used. However, freeway exits that enable cross traffic to flow into the City are blighted entrances to the City, with significant litter and debris along the exits, as drivers sit in traffic and likely clean out their vehicles, tossing single-use convenience packaging out the windows and doors. Along University Avenue, a large amount of litter persists, and in isolated courts and dead-ends throughout the City illegal dumping by motorized vehicles is a significant source of both household litter and trash, as well as contractor-types of refuse, often hazardous, creating hazards for residents and waterways alike. Significant resources are expended to address on-land cleanup of this vehicle transported litter, including increased street sweeping, increased litter abatement, code enforcement and illegal dumping cleanup. The City presently has a single code enforcement officer working full time for all issues pertaining to enforcing municipal and vehicle codes, including housing safety, parking, abandoned vehicles, nuisances, and stormwater. The City presently has a single NPDES Compliance Inspector, who provides inspections for all NPDES mandated inspections, including construction, new and redevelopment, municipal operations, and business inspections; in addition to these programs, this inspector also manages the solid waste issues and shuttle program for the City.

Retail

Leading industries and employers in East Palo Alto include the Ravenswood Family Health Clinic and Ravenswood Gateway 101 Shopping Center with IKEA home improvement store, Home Depot home improvement store, Mi Pueblo grocery store, Sports Authority sporting goods store, and Nordstrom Rack clothing store on the east side of Highway 101, and on the west side the Four Seasons Hotel, and the University Circle office complex. In the past, Mi Pueblo and Home Depot single-use shopping bags were readily visible along the local streets surrounding the shopping center, but in the last two months, the plastic bag impact has been minimized with the implementation of the San Mateo County Reusable Bag Ordinance within the City boundaries. Presently, the dominant types of trash near the retail shopping center tends to be McDonald's fast food packaging, Starbucks cups, Togo's beverage cups, and Jamba Juice cups, along with polystyrene clamshells, which may be attributed to Mi Pueblo's takeout food counter. The City has been working with retailers to encourage less disposable packaging with their convenience foods. This has resulted in Togo's providing dine-in reusable plates for their guests along with the shopping center courier placing 36 new trash bins and 36 new recycling containers throughout the Retail Center. Consistent City inspections for site housekeeping practices, as well as attendance at Retailers Association meetings, provides an opportunity for the City to distribute information about existing services and benefits to "greening" business practices, which has led to a highly collaborative working relationship with all retailers. Working with the Business Inspection Program enables the City to work collaboratively on enforcing appropriate site controls.

Deferred Maintenance

The City of East Palo Alto is a young city, incorporated in 1983. Prior to incorporation, the area was part of unincorporated San Mateo County. Like most such County areas, local storm drains, street lights, sidewalks and streets were also owned and managed by the County. At the time of the incorporation, the local storm drainage system and other utilities continued to be owned, maintained and managed by the County. In 2005, the County and the City made an agreement to transfer ownership and maintenance obligations of the storm conveyance system to the City of East Palo Alto. At that time, NPDES fees were transferred to the City and a Drainage District was planned to be

established. However, due to staffing turnover, the establishment of a Drainage District never transpired. City maintenance was provided to the drainage system only on an as-needed basis, which typically focused on overflowing due to clogs. NPDES compliance was assigned to the City Engineer's technician who attended all countywide meetings and attempted to meet the requirements of the stormwater permit.

By June 2011, the City of East Palo Alto received four notices of violation for non-compliance with the MRP. This prompted the City management staff to pursue bringing in a person whose focus would be ensuring MRP compliance. During the time prior to June 2011, very little focus was given to the effort of trash load reduction. The pre-MRP trash load controls included a basic street sweeping program and installation of partial capture devices in the stormdrain, which were bars spaced at 2-3 inch intervals in the openings of about 20% of the stormdrain inlets, with a purpose of reducing large items, such as basketballs and car parts, from being tossed into the stormdrain system. Starting October 2011, the City has taken a proactive approach to reducing trash loads on City streets.

Peninsula Housing Shortage

There is a considerable population in East Palo Alto that does not have reliable housing with only a limited number of services in the community for providing social supports for the neediest citizens. Ecumenical Hunger Program and St. Francis of Assisi church distribute large quantities of fresh and cooked food to the needy in the community. As Ecumenical Hunger Program serves to provide clothing and house wares to residents, quite often so called "donations" include used mattresses, couches, and other functionally unusable household trash disposed of on the street front. Abatement in these areas will require a robust illegal dumping effort to ensure this issue is resolved fully. Free at Last Community Recovery is a non-profit that serves to reintegrate formerly incarcerated inmates back into society by providing links to social networks in the community. This group has a potential of providing additional community service volunteers to help with reducing the incidence of on-land and water-bound litter. Other services being provided by the City include the Reentry Program, which also serves as a link for newly released prisoners to enter back into East Palo Alto. There is a high potential of partnering with this program to increase support of reducing litter throughout the community.

While former inmates do not always have a consistent place to reside; neither do many families. Nearby cities have banned homelessness and made sleeping in vehicles illegal. Litter and debris from homeless encampments and transient residents is a major contributor to potential waterway litter impacts in San Francisquito Creek and the Baylands, and includes residential trash, human waste as well as intravenous needles, cigarettes, alcohol beverage containers, and other single-use packaging. This material becomes mobilized in the waterway and flows downstream, contributing significantly to the outgoing litter from the San Francisquito Creek into the San Francisco Bay. Often, creek overcrossings and bridges are a primary location for homeless people, as these spaces provide some protection from the weather. Unfortunately, there is significant debris associated with these sites and consistent policing and public assistance for identifying encampments will need to be an element of reducing or eliminating them. Local bus shelters are also used as intermittent housing for those without adequate housing, and the SamTrans transit police are called to reduce vagrancy in the shelters; the potential for litter accumulation around bus shelters is significant and will require a coordinated response between the City and the SamTrans District.

Identifying and Mapping Trash Generating Areas: Residential

Since October 2011, the City of East Palo Alto gained a much clearer understanding of the baseline trash load that can be observed on City streets when trash controls are not yet implemented, reflective of pre-MRP conditions. Using the Baseline Loading Rates (provided February 2012) as a starting point, the City has conducted visual observations of local streets to further refine the specific loading rates and sources of trash throughout the municipal boundaries. The City uses the trash assessment tools designed by BASMAA to estimate trash load on a street-by-street basis and has documented particular trash sources, which were not identified through the original Baseline modeling process, largely due to limitation in census and land use map data. To clarify, the Baseline rates were established using land use characteristics (provided by ABAG), coupled with census data self-reported by participating residents. Once this initial information was provided, BASMAA assisted the City with modeling loading rates based on data collected in areas of similar socioeconomic and density conditions. The usefulness of this data hinges on the reliability of accurate self-reported data. Starting in February 2012, the City has initiated on-land verification of ABAG land use maps. This effort has produced results that generally indicate higher actual residential density, and thus an increased trash loading associated with the increase in density.

Census Data vs. Ground Truthing: Increased Residential Density

As we look more closely at land use maps, there is indication that many neighborhoods have a built environment designed for single-family residential housing throughout the City. However, when field-verification is conducted, the actual use of this housing stock differs significantly from what the land use maps provided by ABAG indicate - often by a factor of two or three. When endeavoring to understand these variations of actual density versus reported density, the situation is made clear when considering the lack of affordable housing on the San Francisco Peninsula. The City of East Palo Alto has ensured that affordable housing and rent controls on local rental stock are available for the underserved. This has ensured the affordability of housing in the City. However, due to the increased need for housing at these low rates, many residents are attracted to housing in the City, which historically has been significantly lower in cost than in neighboring cities.

To meet the demand for low income housing, many of the City's single family residential parcels house multiple families by converting garages and adding attached and stand-alone structures to the homes to provide additional living space, often without appropriate City permits. Recent estimates of residents background indicates that many, if not most, of the residents in East Palo Alto, self-report as Hispanic of Mexican descent, and estimates also indicate the potential that a majority are undocumented immigrants.

The observed increased density results in significant numbers of residents living unreported in single-family residential structures. These numbers are also likely to be considerably higher than reported in the most recent census data (2010). These factors, among others, result in the flawed census data which was used to estimate the original baseline trash load. With increased density comes additional factors that contribute to the potential for litter, including: increased parking density, which then reduces access to the curb for street sweeping and stormdrain inlet cleaning, and overwhelmed trash service, which increases the incidence of overflowing trash containers and illegal dumping. Furthermore, due to the low socioeconomic conditions that the residents in these neighborhoods face,

and the fear of being reported as undocumented immigrants when obtaining employment, there is also a higher incidence of unlicensed home-based businesses in operation. In the same neighborhoods, there is an increased occurrence of paint waste, construction debris, cleaning products, and other household- and business-derived hazardous and other waste present in local residential yards, and illegally dumped onto nearby streets. Due to the lack of reliable jobs, large portions of the community tends to be severely low-income and lacking stable housing; there is a significantly higher proportion of illegal dumping associated with move-out-day trash during the first week of the month, suggesting rental property turnover. Addressing large scale illegal dumping of bulky waste such as mattresses and couches is also an ongoing educational process as single family residential owners do not always provide adequate disposal for additional tenants, and high density apartment complexes lack incentive to provide added trash service as there has been lax enforcement on ensuring adequate trash bin management.

Highest High-Density Residential Neighborhoods

Similar trash-related issues present themselves in the City's higher density neighborhoods, as site management is often located in a centralized location, to consolidate services and reduce costs. East Palo Alto has the highest residential density of San Mateo County, and it appears to be getting increasingly dense. When compared with prior conditions when building managers lived on-site, the off-site management of the complexes creates an opportunity for extremely high occupancy in many dwelling units. One example is that not having a property manager on-site enables residents to sub-let apartments, and reduces their own housing costs by having additional persons to share the expense. This increase in density also places a higher demand on city infrastructure and utilities, as well as an additional source of water-bound trash load. The effect is similar to that described above, in single family residential neighborhoods. In addition to these challenges, the City faces issues related to difficulties in establishing programs for solid waste move-in, move-out trash services and "bulky waste cleanup" services for the high density apartment dwellers, as high density apartment ownership is very centralized, with a focus on reducing costs of all utilities, which has resulted in a lack of incentive for owners to pay for providing sufficient solid waste collection services.

Additional residential low-income housing shortage needs continue to evolve; placing increased pressure on the City of East Palo Alto's housing stock and infrastructure. For instance, at least one neighboring city has recently adopted an ordinance that makes it illegal for anyone to sleep in vehicles within the city boundaries. Following this action, the City of East Palo Alto observed a significantly increased incidence of vehicles parking on local streets, with people sleeping inside of cars, trucks, vans, and motor homes. With these increases, the City notes an increased potential for pollution potential, particularly with disposal of human waste and illegal dumping of septic waste into the City's stormwater collection system. This matter is relatively new and is expected to become a larger issue that will require resolution.

These considerations are of extreme importance when identifying and mapping trash generating residential areas and determining a course of action for resolving the issues that cause each source. As noted previously, a phased approach is necessary to address issues in a cohesive manner so that the source of the litter and trash is not shifted to another location in the City. The Trash Prioritization Map has been modified to reflect the trash load that is presently visible on City streets, but prior to source

reduction efforts and control measure implementation. As indicated, a phased approach of targeting specified areas with targeted efforts will be ongoing throughout the implementation phase of the Long Term Trash Load Reduction Plan, and is detailed further below.

Identifying and Mapping Trash Generating Areas: Business and Commercial

Retail areas have been identified by BASMAA as the highest generation potential for water-bound trash. The City has verified through on-land cleanups, creek cleanups, trash capture device maintenance, and pump station trash rack maintenance, that single-use packaging, including: fast food wrappers, convenience snacks, plastic bags, beverage containers, and cigarettes, contribute significantly to the water-bound trash burden. The City has a relatively small proportion of retail land use, most occurring in the Ravenswood/101 Gateway shopping center near E. Bayshore Road. However, due to the portability of single-use packaging, the City has noted the distribution of these products well beyond an identifiable radius from the retail areas. While initial plans had been made in the Short Term Trash Load Reduction Plan to implement product bans, the City has determined that the highest trash load contributing to water-bound trash continues to be convenience packaging, which the City alone can only play a minor role in reducing, as these products are so ubiquitous on most market and supermarket shelves in the Bay Area. As such, considering future product bans will be unlikely for East Palo Alto, unless implemented on a Countywide, Statewide or Federal level.

The City has, however, been successful in implementing the San Mateo County Reusable Bag Ordinance, which was adopted April 2013 and began implementation on October 2, 2013. To date, the City has seen a 100% rate of retailers complying with the requirements by not only ceasing distribution of single-use plastic bags, while also charging for paper and reusable bags as well. Some retailers are reporting a trend of reducing the number of both paper and plastic single-use bags by about 90% in the first couple of months of implementation. Retailers are also comforted by the fact that they no longer feel obligated to provide “free” bags to their customers, and can charge a fair market value for this product when the customer desires it. Furthermore, the opportunity to market stylish reusable bags as a “green alternative” has provided another source of product sales for some retailers.

While the plastic bag product ban has shown remarkable success, there is concern regarding polystyrene, which has continued to be present in the City’s water-bound trash. The San Mateo County polystyrene ban was implemented several years ago and the City of East Palo Alto did not participate in the Environmental Impact Report (EIR) process. Due to the high cost of an EIR, it is unlikely that the City will adopt additional product bans unless another agency takes the lead on developing the EIR, and the City can participate through subsequent adoption.

Trash Generation Categories and Designation of Areas

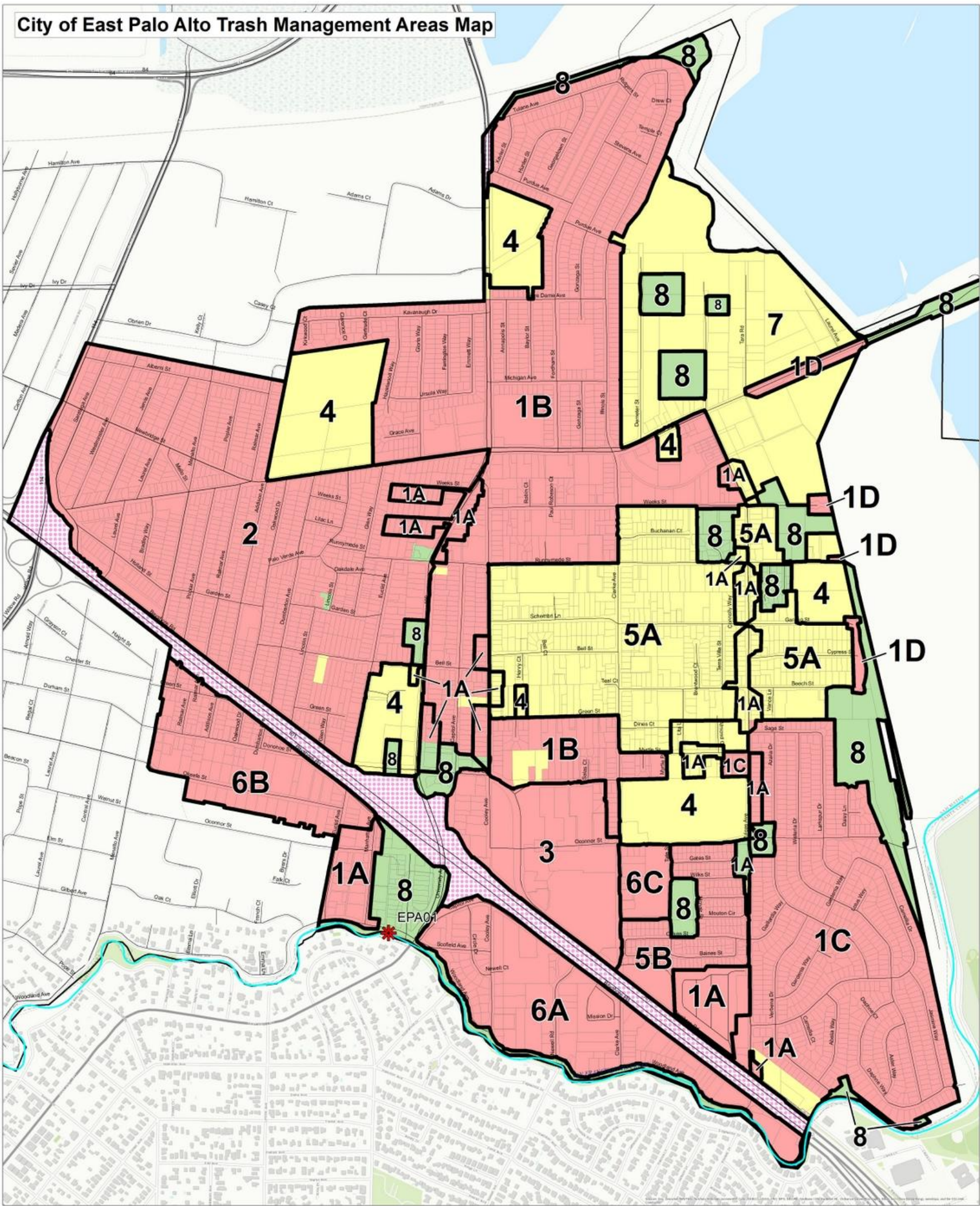
The City has worked with San Mateo County Water Pollution Prevention Program (SMCWPPP) to develop guidelines included in the “Pilot Trash Assessment Strategy” (Feb. 2014) which helps uniformly detail trash generation categories (very high, high, moderate, and low) to reflect the quantity of trash in a given area. The City has conducted the following actions to accurately reflect the trash load throughout the City:

- Improvements (as detailed in this section) to land use information and community data included in maps, including the Trash Management Areas Map;
- Review of trash load throughout the City including ground-trotting and refining modeled generation rate categories to accurately reflect what is seen in the field prior to trash capture controls being implemented;
- Developed Final Trash Generation Maps to accurately reflect the amount of trash seen throughout the City;
- Detailed and prioritized Trash Management Areas by trash load significance; and
- Developed a Draft Schedule for Implementation of Long Term Trash Load Reduction Plan.

Summary of Trash Generating Areas and Sources

The following Map of the City of East Palo Alto Trash Management Area provides a visualization of the City, trash generation densities, and prioritization of the City's Trash Management Areas. The table that follows, Priority Areas Pre-MRP Trash Control Measures Table, details the prioritization of specified areas, and a matrix of the designated Trash Management Areas, the trash generation category for each area, and the control measures that were implemented prior to the MRP being adopted. These control measures were implemented early to reduce the pollution potential of trash throughout the specified area. The control measures were selected based on infrastructure deficits, and specific sources for each management area, as detailed in the Scope of the Trash Problem. Source identification efforts conducted to date include business inspections, field review of existing conditions, interviews with staff in the field, and review of a recently conducted Stormdrain Assessment which indicates existing conditions of the City stormdrain system and outfalls.

City of East Palo Alto Trash Management Areas Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

- Creek/Shoreline Hotspot
- Trash Management Area
- Non-Jurisdictional (Dot color = Generation Category)

- Streets
- Agency Boundary
- Creeks
- Parcel Boundary

Data Sources:
Roads: San Mateo County
City Boundaries: San Mateo County
Background: ESRI World Topographic Map

Map Created By:
EOA, Inc.

Date:
January 16th, 2014

CHART 1

City of East Palo Alto Priority Area Pre-MRP Conditions and Control Measures														
Priority Area	Priority Sub-Area	Trash Generation Category	Description of Priority Area	Infrastructure Improvements			Control Measures				Enforcement Enhancements			
				Full Trash Capture (where feasible)	Signs	Cameras	Enhanced Storm Drain Maintenance	On Land Cleanup	Outreach	Inspections (where potential is identified)	Parking	Business BMPs	Trash Bin Mgmt.	Illegal Dumping
1	A	Varied: High and Moderate	Areas with Full Trash Capture Devices Installed											
	B	High	University Village Neighborhood											
	C	High	Gardens (south) Neighborhood											
	D	High	Isolated Areas (end of Bay Road courts, and alleyways)											
2		High	Palo Alto Park Mutual and Midtown Neighborhoods											
3		High	Gateway/ Ravenswood 101 Shopping Center		X						X			
4		Moderate	Schools											
5	A	Moderate	Gardens (north) Neighborhood											
	B	Moderate	University Square Neighborhood		X						X			
6	A	High	Southwest side of Highway 101											
	B	High	Northwest side of Highway 101											
	C	High	University Square Apartments		X						X			
7		Moderate	Ravenswood Business District											
8		Low	University Circle, Four Seasons, Parks and Open Space											

3. Trash Management Areas and Control Measures Planned Trash Source Reduction

The following table, Priority Areas Planned Trash Control Measures Table, details the prioritization of specified areas, provides a matrix of the designated Trash Management Areas, the trash generation category for each area, and the control measures that are planned for implementation during the Long Term Trash Load Reduction Plan. Control Measures were selected based on sources identified for a given area through an assortment of methods, including in field assessments, stormdrain maintenance observations, staff observations, and illegal dumping mapping, business inspections, and review of a recently conducted Stormdrain Assessment which indicates existing conditions of the City stormdrain system and outfalls.

Citywide Efforts

Starting February 2012, the City initiated a Partnership in Pride Campaign, with the sole purpose of encouraging the residents and business owners of the community to improve the level of pride throughout the City, whether through graffiti abatement, providing tips regarding illegal dumping, engaging residents in public tree planting, or simply encouraging residents and businesses to support and participate in on-land or creek cleanup efforts. Through this public information and participation campaign, the City is educating the public on watershed protection, including encouraging retailers to increase on-site trash and recycling bins and to provide increased on land cleanup as a means of improving the atmosphere for would-be customers. The City participates in public events, schedules community cleanup efforts and provides all participants with outreach materials regarding appropriate disposal of waste products, distributes reusable products such as cups and shopping bags, and discourages the use of single-use packaging. Often, businesses are involved in the outreach effort in this campaign in an effort to encourage residents to recycle fluorescent bulbs, purchase less toxic pest control products, or inform them of the availability of native plants.

Businesses are also engaged in the Partnership in Pride Campaign through the business inspection program, where businesses are educated on best management practices, including site housekeeping practices such as sweeping rather than hosing off the shop front areas, and ensuring adequate trash container management. As a back-up, the City has also updated the enforcement fee schedule, which can be used as a tool to ensure residents and businesses reduce the potential for trash and other pollution to enter waterways. To address the potential of water-bound single-use packaging and other trash from reaching local waterways, the City has implemented increased penalties for illicit discharges and illegal dumping, including littering, to a \$1,000 fee, per incident, per day. With increased enforcement and public engagement, the City hopes to enable residents and businesses to report litterbugs and provide camera footage of offenders for prosecution. To further the cause of reduced trash in the waterways, the City Council adopted the San Mateo Countywide Reusable Bag Ordinance for implementation in October 2013. Retailers embraced the phase-out of the single-use plastic bags as they are no longer beholden to provide free products to customers. Now that the phase-out has occurred, residents are now more actively discussing issues pertaining to litter and recognizing the blight created by plastics in the community and that enter the waterway.

Through the City's MRP compliance management program, the Clean City, Clean Bay Program, a strong collaborative effort has started to succeed in bringing negligent businesses into compliance with the

MRP since October 2011. Due to the lack of code enforcement staff resources, the City has created an inter-departmental team dedicated to elimination of code enforcement issues specific to nuisance abatement. Starting before the City's incorporation, a number of businesses have used sites throughout East Palo Alto as junk yards for their residential waste, and construction, painting, automotive or otherwise hazardous debris storage. Through this Code Enforcement joint collaborative, businesses that have been identified as having potentially significant pollution potential, are being provided with "Order to Return To Compliance" letters including City ordinances, codes, or policies that the business practices are not in compliance with, including stormwater compliance requirements, and provided with an opportunity to return to compliance - MRP compliance issues are at the forefront for immediate remedy. Time and again it is revealed through this process that the businesses do not have basic trash service, a business license, or use permits to conduct business in the City. In addition, the most egregious offenders do not conduct any type of business in the City of East Palo Alto, but simply bring their debris to the City to store on the property they have either purchased or leased—or illegally dump the debris throughout the City. City ordinances established early in the City's history prohibit junk yards within the City boundaries without explicit approval by the Planning Commission. Although large amounts of staff effort are required to obtain remedy, in most cases the business owners are opting to discontinue these practices in East Palo Alto rather than obtaining proper permits and trash services. With reference to these particular businesses, the City has noted a marked reduction in illegal dumping within a quarter-mile radius of these sites once the business has left the City. Once the blighted properties are improved, surrounding areas also now have a reduced incidence of litter and debris.

Through the Clean City, Clean Bay Program, the City anticipates increasing the levels of trash collection service for small local businesses, through joint effort with our solid-waste service provider and the County of San Mateo's Environmental Health Division Hazardous Waste team, with a goal of 100% participation in contracting with the waste hauler. The City has an ordinance that requires all businesses and residents to have adequate solid waste service, but it has been implemented on an honor system, which requires business owners to actively seek setting up the service. Due to the high number of businesses which have been identified as not having solid waste service,

- The City will actively engage all businesses with an address in East Palo Alto, to provide evidence of having service with the solid waste hauler and appropriate hazardous waste collection services; and
- The City will follow-up with appropriate enforcement to ensure that businesses are operating with appropriate solid waste service collection;
- The City will increase enforcement for uncovered loads (e.g., self-haulers, recyclers, scavengers, and junk collectors); and
- The City will initiate installation of cameras in areas subject to repeated illegal dumping.

While the Partnership in Pride Campaign and Clean City, Clean Bay Program are excellent tools to reeducate and partner with the community on addressing blight such as illegal dumping and littering, future Citywide trash abatement efforts must include full trash capture devices as a final, last-resort mechanism for ensuring the stormwater pollutant potential of trash is eliminated. While the City has

taken full advantage of available grants and funding for installation of trash capture devices, significant infrastructure needs remain unmet. City plans now include the following:

- Through the SMCWPPP, develop a map that includes high priority drainage areas in the City where full trash capture could be most beneficial;
- By July 1, 2015, the City will develop a plan for targeted full trash capture device installation in key areas, to ensure litter does not mobilize from City streets into our local waterways; funding for installation of these devices remains uncertain, but the City recognizes that infrastructure improvements must be taken to ensure protection of the waterways;
- The City will work either individually or through the SMCWPPP to develop a collaborative approach with SamTrans and Caltrans to address litter around the bus shelters and Caltrans routes, providing annual updates as to the progress of these efforts; and
- The City will continue to host Coastal Cleanup Day, National River Cleanup Day and additional on-land cleanup events to engage volunteers (business members and residents) in both the educational component of public information and participation for the protection of the waterways, and to continue to assess the types of litter and trash on land and making its way to local waterways.

Residential Efforts

As noted previously, the issues pertaining to residential trash management are complex and will require multiple strategies and multiple years to remedy. Prior to the MRP being issued, no documented effort has been conducted to comprehensively address trash in residential areas. In a significant majority of residential neighborhoods, no street sweeping has taken place prior to the MRP adoption. In the Schedule of Implementation, the City has detailed the phasing of the following actions to comply with the Trash Load Reduction requirements of the MRP. The City has identified the following areas of focus to eliminate litter and trash from residential areas:

- Expanded street sweeping signage with enhanced code enforcement and expanded street sweeping service;
- Increased enforcement for uncovered loads (e.g., self-haulers, recyclers, scavengers, and junk collectors);
- Increased stormwater inspections for high density complexes and home based businesses to ensure proper permitting, proper business management practices, appropriate good site housekeeping, and adequate refuse service (e.g., contractors, carpet cleaners, painters, janitors, etc.);
- Enhanced enforcement for adequate trash bin management;
- Increased installation of full trash capture devices, where appropriate; and
- Installation of surveillance cameras in areas subject to repeated illegal dumping.

Citywide Trash Abatement Efforts

Full Trash Capture Devices

Prior to the MRP, no full trash capture devices have been implemented. The City has fully participated in the ABAG Full Trash Capture Grant Project, which included the initial installation of 39 full trash

capture baskets in the City stormdrain systems, completed in November 2011. The initial phase included the installation of devices in portions of Priority Areas 1B, 1C, 2, and 5A. The second phase of the Grant funding was utilized to secure six additional units, serving area 6B. Combined, the total land area being served by full trash capture meets the MRP-required 30% of retail zoned land area.

While the technical MRP requirements for full trash capture have so far been met, the City has determined that there are likely additional areas that would benefit from full trash capture device installation. As such, development of a Full Trash Capture Plan is being considered for key areas where such devices would be beneficial in meeting MRP requirements for full trash abatement prior to July 1, 2022. Additionally, the City is in the process of developing a stormdrain master plan for maintenance, wherein it is anticipated that suitable locations for full trash capture will be identified.

The City maintains the full trash capture devices twice a year, once at the end of the rainy season (May to June), and once prior to the rainy season (September to October), and records the amount of trash accumulated through these devices. The City will work with SMCWPPP and BASMAA to create standard operation procedures and maintenance protocols for these devices during FY 13/14, and begin immediate implementation.

Street Sweeping Efforts

Prior to the MRP adoption, the City focused street sweeping efforts primarily on arterials and in the major shopping center, Gateway/Ravenswood 101. Since the adoption of the MRP, progress has been made in installing additional street sweeping signs, expanding the Street Sweeping contract services to include signed areas, and enforcement in specified areas, including Priority Area 1B and portions of priority area 1C. To meet future MRP requirement, these efforts will require significant expansion including the installation of curb and gutter in a number of locations, the installation of more street sweeping signage, and expansion of the Street Sweeping contract to include the new prioritized areas. The Implementation Schedule (page 26) details the timeframe for street sweeping enhancements in specified management areas.

On-Land Trash Cleanups

Prior to the MRP adoption, no organized on-land cleanup efforts have been documented by the City of East Palo Alto. On-land trash cleanups are considered an ongoing activity throughout the City. There are several key areas where on-land cleanups have already been deemed a highly successful control measure for reducing trash load throughout the City, such as trash management areas #3 and #6 (a, b, and c). These actions are both volunteer led, and linked to business leaders in the area who have determined that reduction of litter is a good management strategy around their businesses and in high density residential areas. This type of control measure does not tend to comprehensively cover an entire management area, or sub-management areas, but rather is useful on a site-by-site basis. Due to the volunteer basis of this effort, determining a load reduction will require on ground truthing visual assessments; the quantities of trash removed will be quantified, when this information is made available to the City. Results will be included in the Trash Load Reduction documentation through the Annual Reporting process.

Partial Capture Treatment Devices

Prior to the adoption of the MRP, minimal partial trash capture was provided at the City's O'Connor

Pump Station, which has a trash rack in the form of slanted diagonal bars with approximately one inch separation, where stormwater flows through, leaving a significant amount of trash behind, although the quantity of trash removed during maintenance activities was not documented prior to the MRP. Since the adoption of the MRP, the City has installed a number of stormdrain grates or vertical bars blocking approximately 25% of City stormdrain inlets, in an attempt to provide early compliance with trash load requirements. These metal bars have a separation gap of approximately 2-3 inches, similar to that of the City's main Pump Station forebay at the O'Connor Pump Station. While these devices clearly prevent a significant quantity of debris from entering both the stormdrain system and San Francisquito Creek, the Water Board has indicated that the devices are not considered to be partial trash capture devices. The City removes debris from the O'Connor Pump Station twice each year and more frequently when necessary to ensure functionality of the station. The City will quantify the amount of litter and trash removed due to these inlet devices, through street sweeping efforts and pump station maintenance. The amount of litter removed will be included in the Trash Load Reduction documentation through the Annual Reporting process.

Enhanced Storm Drain Inlet Maintenance

The City has preformed sporadic stormdrain inlet maintenance since taking responsibility for City stormdrain system from San Mateo County in 2005. The focus on stormdrain maintenance has been on remedying flood hazards, as they are identified through a complaint based protocol. To comply with the MRP, the City has initiated proactive efforts to determine the present status of the stormdrain system, with a Stormdrain Conditions Assessment performed from 2012-2014. This Assessment was used to detail existing conditions of the stormdrain system, and to develop a Stormdrain Master Plan to serve as a planning, operations, and maintenance document for future maintenance activities. It is anticipated that the Stormdrain Master Plan will be adopted in March 2014, and an enhanced stormdrain inlet maintenance schedule can be detailed and implemented starting with the next budget cycle in fiscal year 2014/2015 as part of the Capital Improvements Plan. The volume of debris removed through the Enhanced Stormdrain Inlet Maintenance activities will be included in the Trash Load Reduction efforts, as provided through the Annual Reporting process, documenting the City's trash load reduction efforts.

Activities to Reduce Trash from Uncovered Loads

No activities were implemented prior to the MRP effective date to reduce trash from uncovered loads. Planned enhancements to reduce trash from uncovered loads include adoption of a citywide ordinance to restrict uncovered loads, and increased enforcement efforts to ensure the ordinance is properly implemented. It is expected that this ordinance will be brought to City Council with the entirety of the updated NPDES Ordinance, presently being internally reviewed for update in the near future. This effort will provide a Citywide control of trash.

Anti-Littering and Illegal Dumping Enforcement Activities

While the City of East Palo Alto had NPDES Ordinance provisions that prohibit littering and illegal dumping prior to the MRP, enforcement activities were rarely conducted. Since 2011, the City has initiated an Illegal Dumping Task Force, a multi-departmental and inter-agency group brought together quarterly to address and reduce the pollutant potential associated with illegal dumping and littering. Through this Task Force, a number of controls have been identified as potential controls for this source of debris. The City intends on enhanced actions, including more comprehensive outreach

about existing trash service options, installation of cameras in isolated areas where illegal dumping frequently occurs, and significantly increased enforcement to deter this activity from occurring. These actions will be phased in through the Schedule of Implementation (page 26), determined by the Trash Load Reduction Plan.

Improved Trash Bins/Container Management

Prior to the adoption of the MRP, the City had a minor trash bin container management program. Public-right-of-way trash bins were primarily located at bus stops and around major retailers. Since the adoption of the MRP, trash bin container management has become a more comprehensive service, with consistent coordination between the solid waste service provider and the City. Trash bins have been removed from isolated areas where there tended to be associated illegal dumping, and relocated to areas where local retail stores and public transportation shelters tend to have a higher incidence of single-use packaging and convenience food litter. The trash bin management program will continue to be improved, particularly around retail areas, to enhance use of litter receptacles and recycling containers - making it easier for customers to properly dispose of their unwanted trash. This improved service will be promoted through the business inspection program and will be monitored according to the trash assessment protocols, and annually reported in the City's MRP report.

Single Use Carryout Bag Policies

Prior to the adoption of the MRP, no single use bag restrictions were in place. The City adopted the San Mateo Countywide Reusable Bag Ordinance in April 2013, with adoption phased-in on October 2, 2013. The Ordinance can be located at the following address:

<http://www.ci.east-palo-alto.ca.us/AgendaCenter/ViewFile/Agenda/01072014-889>

The Ordinance is consistent with that provided by the County - requiring a fee of \$0.10 per reusable bag or paper bag each customer requests, and increasing the fee up to \$0.25 per reusable bag or paper bag by January 2015. This policy does not apply to restaurants, and there are some other minor exceptions, but since the adoption of the bag ban, the City has seen significant reductions in the number of single-use plastic bags showing up in local waterways. Of those bags found during the Coastal Cleanup Day on September 21, 2013, a significant majority of plastic bags that were removed from the creek still had restaurant packaging inside. Recent casual inspections of retail store compliance have indicated 100% compliance with the reusable bag ordinance, and retailers have indicated support for the ordinance and also noted a reduction in the amount of plastic bag litter surrounding their sites.

Polystyrene Foam Food Service Ware Policies

Prior to the MPR adoption, no polystyrene policies were adopted by the City. Presently, there are no plans to implement a polystyrene foam food service policy due to the high cost associated with preparing an Environmental Impact Report (EIR). The City will consider a polystyrene foam food service ware policy as a future action if there is an avenue for adoption of such a policy with another agency taking the lead on the development of the EIR, or at such a time as the City finds another avenue for ensuring CEQA compliance for this action.

Public Information and Outreach Programs

Prior to the adoption of the MRP, the City of East Palo Alto relied heavily on outside jurisdictions to provide public information and outreach pertaining to trash load reduction. Since October 2011, when

the City established the Clean City, Clean Bay Program and the Partnership in Pride Campaign, the City has taken a significantly enhanced role in providing outreach to the community regarding trash load abatement and other pollution prevention information. Through this public information and participation campaign, the City is educating the public on watershed protection, including encouraging retailers to increase on-site trash and recycling bins and to provide increased on land cleanup as a means of improving the atmosphere for customers. The City participates in public events, schedules community cleanup efforts and provides all participants with outreach materials regarding appropriate disposal of waste products, distributes reusable products such as cups and shopping bags, and discourages the use of single-use packaging. Often, businesses are involved in the outreach effort for this campaign in order to encourage residents to recycle fluorescent bulbs, purchase less toxic pest control products, or inform them of the benefits and availability of native plants. The City intends to expand community outreach efforts through the implementation of the Long Term Trash Load Reduction Plan, including a phased approach of engaging residents in cleaning up the City, with targeted outreach to particular priority areas. It is possible that the City will utilize technology and media to enhance the public participation, and may look to adopt a strategy that places more emphasis on community policing and responsibility. These matters will be detailed through a community integrated process that should be formalized by July 1, 2014, or as soon as feasible, to address specific issues related to trash management area #1.

Creek/Channel/Shoreline Cleanups

Prior to the adoption of the MRP, the City of East Palo Alto relied heavily on outside organizations and jurisdictions to provide creek and shoreline cleanup activities for trash load reduction, and did not take initiative to reduce litter in San Francisquito Creek or local waterways. Since October 2011, when the City established the Clean City, Clean Bay Program and the Partnership in Pride Campaign, the City has taken a significantly enhanced role at engaging the community regarding trash load abatement and providing opportunities for volunteers to come out and remove litter directly from local waterways and on land. The City now annually hosts National Rivers Cleanup Day (in May), and Coastal Cleanup Day (in September), as well as specially requested cleanups for particular events and team building activities - including the City Anniversary Parade Cleanup, and local high school cleanup events. The City intends to continue and expand on-land and creek cleanup efforts through actively recruiting local churches, schools, and non-profits to showcase taking pride in the community. In addition, local political and community leaders are engaging with residents on a very grass-roots level to encourage participation in local cleanup events. It is expected that this effort will continue to grow.

Inspections

The City has not had the staffing ability to provide comprehensive inspections to address litter and blight prior to the MRP being adopted. The City anticipates expanding inspections and enforcement relating to waterbound litter associated with all types of land uses, from single family residential, to multifamily residential, to businesses and industry, with an emphasis on ensuring adequate trash service is provided to each service customer, and that property owners are providing adequate site housekeeping strategies to ensure trash does not become waterbound. These efforts will include increased enforcement for overflowing trash bins, litter on private property, and may result in fines for repeat offenses. The schedule for implementing this effort is detailed in both the City's Business Inspection Plan (annually updated) as well as through the Schedule of Implementation (page 26). There will also be a concerted effort to ensure that the City's partners, such as Recology of San Mateo,

and San Mateo County Environmental Health, assist the City with identifying sites where there is inadequate or non-existent solid waste service, so the City can ensure adequate trash service is made available to each property within the City of East Palo Alto's boundaries.

Cameras

The City has not utilized cameras or surveillance as an enforcement mechanism to reduce illegal dumping and illicit discharge prior to the MRP adoption. During Fiscal Year 2013, the City worked with San Mateo County Environmental Health to procure and install a surveillance camera in an effort to reduce illegal dumping of hazardous waste and other materials. While initial efforts were unsuccessful, the City finds the option of camera use compelling. The City will include some element of surveillance, whether residential/volunteer based through a cell-phone application program, or through the installation of cameras in areas that are considered a high probability for illegal dumping. In all likelihood, the City will utilize a variety of camera and surveillance strategies throughout the City to identify illegal dumpers and illicit dischargers, and prosecute them, with the potential of setting up a reward system for information provided by the public. Areas have been identified where this approach has been deemed necessary, as shown in the Schedule of Implementation (page 26). This control effort will require further planning to determine specific strategies for particular trash management areas. A fully detailed surveillance plan will be created prior to the date of implementation for each trash management area, where this control measure is prescribed.

Summary of Control Measures

The City will implement specific control measures for each priority area designated in the Priority Areas Map, according to the following chart, which identifies the Priority Areas and sub-areas, a description of the sub-priority area, the trash generation category of the indicated sub-priority area, and the specific control measures anticipated to be implemented for each.

The community will be called upon to consider a variety of ordinance updates and control measures, and each specific control measure will be refined for each trash management area, carefully detailing how much public support will be requested, how much City enforcement will be required, and how much additional budget will be required for implementation of this Long Term Plan, for each trash management area. This effort will require review from the Public Works and Transportation Commission. The City Council will also be informed of each Trash Management Area Extended Plan, prior to implementation.

CHART 2

City of East Palo Alto Priority Area Planned Trash Control Measures														
Priority Area	Priority Sub-Area	Trash Generation Category	Description of Priority Area	Infrastructure Improvements			Control Measures				Enforcement Enhancements			
				Full Trash Capture (where feasible)	Signs	Cameras	Enhanced Storm Drain Maintenance	On Land Cleanup	Outreach	Inspections (where potential is identified)	Parking	Business BMPs	Trash Bin Mgmt.	Illegal Dumping
1	A	Varied: High and Moderate	Areas with Full Trash Capture Devices Installed	X	X		X		X	X	X	X	X	
	B	High	University Village Neighborhood	X	X	X	X	X	X	X	X	X	X	X
	C	High	Gardens (south) Neighborhood	X	X		X	X	X	X	X	X	X	
	D	High	Isolated Areas (end of Bay Road courts, and alleyways)	X	X	X	X	X	X	X	X			X
2		High	Palo Alto Park Mutual and Midtown Neighborhoods	X	X		X	X	X	X	X	X	X	
3		High	Gateway/ Ravenswood 101 Shopping Center	X	X			X	X	X	X	X	X	
4		Moderate	Schools	X	X		X	X	X	X	X	X	X	
5	A	Moderate	Gardens (north) Neighborhood	X	X		X	X	X	X	X	X	X	
	B	Moderate	University Square Neighborhood	X	X		X	X	X	X	X	X	X	
6	A	High	Southwest side of Highway 101	X	X	X	X	X	X	X	X	X	X	X
	B	High	Northwest side of Highway 101	X	X	X	X	X	X	X	X	X	X	X
	C	High	University Square Apartments	X	X	X	X	X	X	X	X	X	X	X
7		Moderate	Ravenswood Business District	X	X		X	X	X	X	X	X	X	
8		Low	University Circle, Four Seasons, Parks and Open Space	X	X		X	X	X	X	X	X	X	

4. Progress Assessment Strategy

The City, through the San Mateo Countywide Water Pollution Prevention Program, has developed protocols for assessment of trash control effectiveness. This is being provided as a separate document and will be submitted by the County on behalf of the Co-Permittees in San Mateo County. The objective of the assessment strategy is to account for trash load reduction actions and demonstrate progress towards trash reduction levels from the City's stormdrain system, in compliance with MRP deliverables, including:

- The July 1, 2014, requirement to demonstrate compliance with 40% trash load reduction,
- The July 1, 2017, requirement to demonstrate compliance with 70% trash load reduction, and
- The July 1, 2022, requirement to demonstrate compliance with 100% trash load reduction.

The core management questions the assessment approach is attempting to address include:

- Are the MS4 trash load reduction targets (i.e., 40%, 70%, and No Adverse Impacts) being achieved?
- Are there trash problems in receiving waters (e.g., creeks and rivers)?
- If trash problems in receiving waters exist, what are the important sources and transport pathways?

The indicators that will be used to demonstrate progress and success in reaching reduction goals includes environmental indicators selected by SMCWPPP Permittees to answer these core management questions:

1. Level of trash observed on-land and available to MS4s (primary indicator);
2. Areas effectively treated by full capture devices (primary indicator);
3. Extent and magnitude of trash control measures implementation (secondary indicator); and
4. Levels of trash in receiving waters (secondary indicator).

The assessment methods that will be used by the City of East Palo Alto to implement the indicators include the following:

- **SMCWPPP Pilot On-land Visual Assessments** (February 2014) throughout the City, provided on an annual basis in June, for the priority area of focus in a given year (for instance, Priority Area 1 will be assessed in June 2015 for efforts conducted in FY 14/15) in the City's MRP Annual Report;
- **O&M Verification and Business and Commercial Inspections** at designated sites according to O&M Verification process and the Annual Business Inspection Plan will be reported on annually in the City's MRP Annual Report;
- **Creek/Shoreline Cleanups and Assessments** at the San Francisquito Creek Manhattan/Woodland cleanup site for Coastal Cleanup Day in September of each year and reported on in the City's MRP Annual Report;
- **O'Connor Pump Station Maintenance** cleanout of the pump station twice a year, volume of trash removed twice a year from the forebay will be estimated and reported, annually in the City's MRP Annual Report;
- **Stormdrain Inlet Cleanout Maintenance** based in the updated Stormdrain Master Plan, the stormdrain inlet cleanout will begin to provide quantities of trash removed from the stormdrain system and will be reported annually in the City's MRP Annual Report;
- **Full Trash Capture Device Maintenance** based on the full trash capture devices maintenance schedule, twice a year volumes of trash removed from these devices will be reported annually in the City's MRP Annual Report;

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- **Street Sweeping Maintenance** based on volumes of trash removed through the street sweeping program, volumes of trash collected will be estimated and reported annually in the City's MRP Annual Report; and
 - **Extended Plans** for each Trash Management Area will be provided through the Annual Report process, for the given year of adoption (for instance, Trash Management Area #1 Extended Plan will be provided in the FY 13/14 Annual Report).

5. Schedule of Implementation

Following matrix is the City's Schedule of Implementation for the Long Term Trash Load Reduction Plan. The dates identified in the schedule matrix include the anticipated effective dates for each control measure implementation for a given priority management area, or the dates when control measures were employed. In many cases, particular control measures will have phased implemented on a site-by-site basis or a block-by-block basis prior to the anticipated completion date for control measure implementation. For instance, in area 6A and 6B, on-land cleanups have already significantly altered the pollution potential of trash on the local waterway, though the areas as a whole are not anticipated to have fully implemented these control measures for several more years.

The City will use the Schedule of Implementation for the Long Term Trash Load Reduction Plan to further specify explicit control measures to address particular issues in each Trash Management Area. For instance, the control measure labeled "cameras" may include installation of infrastructure for cameras that will be used for surveillance, or there may be a public participation element such as the "See-it, Click-it, Fix-it" application for smart phones, where the public will be encouraged to take photos of illicit activities for investigation by the City. Another example of further detailing the control measures is the area of street sweeping signage, or "signs" as a control measure. While the City presently uses street sweeping signage to specify when vehicles must be moved for street sweeping activities, in some areas it may be more feasible to eliminate parking altogether in particular areas of the City, or create one-way streets to accommodate solutions to multiple issues associated with parking constraints. Some areas remain purposefully open-ended while the community is determining a preferred explicit control measure. The City will further detail each Trash Management Area by June 30 of the year of implementation, with Trash Management Area #1 implementation beginning in 2014, Trash Management Area #2 implementation beginning in 2015, and so forth.

While the Schedule of implementation indicates the estimated start date for the individual Trash Management Areas, it is anticipated that some areas, predominantly businesses or multi-family dwelling areas, will likely have control measures implemented as part of the business management plan (for compliance with C.4) or other circumstances that overlap with multiple MRP compliance requirement aside from trash load reduction. All efforts will be reported to the Water Board through the City's Annual Report process.

Each Trash Management Area will have an Extensive Plan prepared and provided to the Public Works and Transportation Commission for input and approval, prior to the date of implementation detailed in the following chart. In each Extensive Plan, further details will be specified regarding particular control measures such as cameras, City-sponsored "apps", full trash capture, and surveillance infrastructure. These Extensive Plans will be provided to the Water Board, via the Annual Report Process, upon adoption.

CHART 3

City of East Palo Alto Priority Area Implementation Schedule														
Priority Area	Priority Sub-Area	Trash Generation Category	Description of Priority Area	Infrastructure Improvements			Control Measures				Enforcement Enhancements			
				Full Trash Capture (where feasible)	Signs	Cameras	Enhanced Storm Drain Maintenance	On Land Cleanup	Outreach	Inspections (where potential is identified)	Parking	Business BMPs	Trash Bin Mgmt.	Illegal Dumping
1	A	Varied: High and Moderate	Areas with Full Trash Capture Devices Installed	Nov. 2011	Nov. 2011	N/A	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	N/A
	B	High	University Village Neighborhood	June 2015	Nov. 2011	June 2015	June 2015	June 2015	June 2015	June 2015	Nov. 2011	June 2015	June 2015	June 2015
	C	High	Gardens (south) Neighborhood	June 2015	June 2015	June 2015	June 2015	June 2015	June 2015	June 2015	June 2015	June 2015	June 2015	N/A
	D	High	Isolated Areas (end of Bay Road courts, and alleyways)	June 2015	June 2015	June 2015	June 2015	Nov. 2011	Nov. 2011	June 2015	June 2015	N/A	N/A	Nov. 2011
2		High	Palo Alto Park Mutual and Midtown Neighborhoods	June 2016	Nov. 2011	N/A	Nov. 2011	June 2016	Nov. 2011	June 2016	Nov. 2011	June 2016	June 2016	N/A
3		High	Gateway/ Ravenswood 101 Shopping Center	June 2017	Nov. 2011	N/A	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	N/A
4		Moderate	Schools	June 2018	June 2018	N/A	June 2018	June 2018	June 2018	June 2018	June 2018	June 2018	June 2018	N/A
5	A	Moderate	Gardens (north) Neighborhood	June 2019	June 2019	N/A	June 2019	June 2019	Nov. 2011	Nov. 2011	June 2019	Nov. 2011	June 2019	N/A
	B	Moderate	University Square Neighborhood	June 2019	Nov. 2011	N/A	June 2019	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	N/A
6	A	High	Southwest side of Highway 101	June 2020	June 2020	June 2020	June 2020	Nov. 2012	June 2020	June 2020	June 2020	June 2020	June 2020	June 2020
	B	High	Northwest side of Highway 101	Nov. 2011	Nov. 2011	June 2020	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	June 2020
	C	High	University Square Apartments	June 2020	Nov. 2011	June 2020	June 2020	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	June 2020
7		Moderate	Ravenswood Business District	June 2021	June 2021	N/A	June 2021	Nov. 2011	Nov. 2011	Nov. 2011	June 2021	Nov. 2011	Nov. 2011	Nov. 2011
8		Low	University Circle, Four Seasons, Parks and Open Space	June 2022	June 2022	N/A	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	Nov. 2011	N/A