



CITY OF
HAYWARD
HEART OF THE BAY

**COUNCIL SUSTAINABILITY
COMMITTEE**

MARCH 23, 2015

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CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING
Monday, March 23, 2015
Conference Room 2A
4:30 PM

CALL TO ORDER

ROLL CALL

PUBLIC COMMENTS: (The Public Comment section provides an opportunity to address the Council Sustainability Committee on items not listed on the agenda as well as items on the agenda. The Committee welcomes your comments and requests that speakers present their remarks in a respectful manner, within established time limits, and focus on issues which directly affect the City or are within the jurisdiction of the City. As the Committee is prohibited by State law from discussing items not listed on the agenda, any comments on items not on the agenda will be taken under consideration without Committee discussion and may be referred to staff.)

1. Meeting Minutes

[Meeting Minutes](#)

2. Hydrogen Fuel Cell Cars & Fueling Stations

[Staff Report](#)

[Attachment I - Brochure About Fuel Cell Electric Vehicles and Hydrogen Fuel Stations](#)

[Attachment II - Hydrogen Fuel Station Profiles](#)

3. Overview of Rainwater Catchment and Graywater Recycling

[Staff Report](#)

[Attachment I - Responses from Some BAWSCA Member Agencies](#)

[Attachment II - 2013 CA Plumbing Code RE Non Potable Rainwater Catchment](#)

[Attachment III - 2013 CA Plumbing Code RE Graywater Systems](#)

[Attachment IV - Rain Barrel Rebate Terms](#)

4. Additional State Emergency Water Conservation Regulations

[Staff Report](#)

[Attachment I - City of Hayward's Water Shortage Contingency Plan](#)

5. Update on Community Choice Aggregation

[Staff Report](#)
[Attachment I - Memo to the Board of Supervisors, Transportation & Planning Committee dated 3/12/15](#)

6. USEPA Region IX (Storm) Water Quality Improvement Grant

[Staff Report](#)
[Attachment I - Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project Proposal](#)

7. City Hall Containers for Garbage, Recyclables, and Organics

[Staff Report](#)
[Attachment I - List of Proposed Containers and Locations](#)

8. Earth Day Events

[Staff Report](#)

9. Update on Waste Management Franchise Implementation

[Staff Report](#)

10. Suggested Sustainability Committee Quarterly Meeting Topics for 2015

[Staff Report](#)

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS

11. Update on Green Hayward PAYS Program

ADJOURNMENT

NEXT MEETING – JUNE 18, 2015; 4:30-6:30 PM



Materials related to an item on the agenda submitted to the Council Sustainability Committee after distribution of the agenda packet are available for public inspection in the City Clerk's Office, City Hall, 777 B Street, 4th Floor, Hayward, during normal business hours. An online version of this agenda and staff reports are available on the City's website.

Assistance will be provided to those requiring accommodations for disabilities in compliance with the Americans Disabilities Act of 1990. Interested persons must request the accommodation at least 48 hours in advance of the meeting by contacting the Assistant City Manager at (510) 583-4300 or TDD (510) 247-3340.

CITY HALL, 777 B STREET, HAYWARD, CA 94541
[HTTP://WWW.HAYWARD-CA.GOV](http://www.hayward-ca.gov)



CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING
Hayward City Hall – Conference Room 2A
777 B Street, Hayward, CA 94541-5007

January 12, 2015
4:30 p.m. – 6:30 p.m.

MEETING MINUTES

CALL TO ORDER: Meeting called to order at 4:31 p.m. by Chair Al Mendall, Council Member.

ROLL CALL:

Members:

- Al Mendall, City Council Member /CSC Chair
- Greg Jones, City Council Member
- Francisco Zermeño, City Council Member
- Laura Oliva, Keep Hayward Clean and Green Task Force/CSC Vice Chair

- Vishal Trivedi, Planning Commissioner - absent
- Dianne McDermott, Planning Commissioner - absent

Staff:

- Kelly McAdoo, Assistant City Manager
- Alex Ameri, Director of Utilities & Environmental Services
- David Rizk, Development Services Director
- Erik Pearson, Environmental Services Manager
- Corinne Ferreyra, Administrative Analyst II
- Elisa Wilfong, WPSC Administrator
- Jennifer Yee, Sustainability Technician
- Carol Lee, Administrative Secretary (Recorder)

Others:

- Ernest Pacheco, Communications Workers of America (CWA)
- Jerry Lahr, Association of Bay Area Governments (ABAG)
- Rusty Klassen, Bay Area Regional Energy Network (BayREN)
- Lauren Casey, Bay Area Regional Energy Network (BayREN)
- Rebecca Brown, Bevilacqua-Knight, Inc. (BKl)

PUBLIC COMMENTS:

Jerry Lahr, Energy Programs Manager at Association of Bay Area Governments (ABAG), introduced himself and noted that ABAG is the lead program administrator for the Bay Area Regional Energy Network (BayREN). He explained that BayREN was formed a couple years ago to implement energy efficiency programs in the Bay Area. Among various programs, BayREN offers financing-type programs, one of which is the PAYS program. He explained that PAYS is intended to assist municipal utilities with implementation of on-bill financing-type programs for customers to install water and energy efficiency projects. Mr. Lahr noted that Hayward was one of the first public

entities, following the City of Windsor, that showed desire to take advantage of that program. He noted that BayREN desires to work with the City to overcome the financing obstacle and encourages the City to continue to discuss an internal financing option.

1. Review of Minutes of September 11, 2014 - Minutes approved with minor revisions by Council Member Mendall.

2. Briefing on 2014 California Youth Energy Services Program

Corinne Ferreyra, Administrative Analyst II, provided an overview on Rising Sun Energy Center's (Rising Sun) young adult employment program called California Youth Energy Services (CYES). Ms. Ferreyra highlighted Hayward's partnership with Rising Sun, noting that the City of Hayward has hosted CYES in 2010, 2011, 2013 and 2014. She announced that unfortunately Hayward was not chosen to participate in CYES in 2015 due to the limited number of cities that they could administer the program to and an increased interest among other qualified cities. She stated that staff will continue to pursue participation in 2016.

Council Member Zermeño inquired about the cost of the program. Ms. Ferreyra replied that the City contributed \$20,000 but clarified that Rising Sun estimates that it costs about \$120,000 to run the program per site. Council Member Zermeño expressed that the program was very valuable to the City, creating jobs for young people and was in line with the Climate Action Plan. He encouraged staff to prepare a plan for City Council's consideration to see if the City could budget for a program like CYES.

Alex Ameri, Director of Utilities & Environmental Services, agreed to have staff look into the possibility of Hayward creating a similar program, but cautioned that given the staffing needs, costs, and logistics of managing such a program, Hayward may not have the resources at this time. Kelly McAdoo, Assistant City Manager, added that the \$120,000 estimate reflects a shared administrative cost for a program director and training among all participating agencies, and suggested that the cost to run such a program may be more than Rising Sun's estimated cost.

Council Member Jones requested additional information as to why Hayward was not chosen among the cities that applied. Ms. Ferreyra explained that Contra Costa cities have not shown much participation in the past and there was a push for their participation; as a result six of the nine cities chosen for the 2015 program were from Contra Costa County and only three were from Alameda County. Ms. Ferreyra further explained that Hayward has been chosen to participate in the program for the last four years and staff is hopeful that Hayward will be considered in 2016. Council Member Jones suggested perhaps partnering with other cities to expand the program in order to increase Hayward's chances of participation.

Council Member Mendall closed by stating that such alternatives may be a good option if Hayward continues to be overlooked to participate in the CYES program.

3. Pollution Prevention and Stormwater Management

Director Ameri introduced Elisa Wilfong, Water Pollution Source Control (WPSC) Administrator. Ms. Wilfong presented a report on water quality regulations, highlighting recent legislation that further established requirements for stormwater regulation.

As part of her presentation, Ms. Wilfong mentioned some common mobile food establishment practices that were not in compliance with stormwater regulations, which included leaking grease and oil onto the street and wash water practices that were infiltrating the storm drains.

Council Member Jones stressed the importance of educating businesses on best management practices. Ms. Wilfong stated that there is mass education on many different levels and there is often more education provided on a case by case basis.

Ms. Wilfong also discussed the City's efforts in trash reduction. She shared that trash reduction programs such as the Keep Hayward Green and Clean Task Force, installation of trash capture devices, and the street sweeping program all aid in the reduction of trash in the City. CSC Member Laura Oliva commented that there are streets in the City that have street sweeping but do not have any signage for restricted parking and asked if there were plans to increase parking restrictions and enforcement for such areas. Ms. Wilfong responded that there are plans to increase enforcement on parking restrictions especially in areas that are deemed necessary for cars to be off the street to properly sweep and that signage is typically in response to complaints by residents that want the signage posted. Council Member Mendall expressed his support for posting signage in areas that required it, but not every street needed signage and cautioned against posting signage in a manner that would visually clutter City streets. Ms. Oliva concurred.

Council Member Mendall requested that the data collected from the trash reduction programs be shared with the Keep Hayward Green and Clean Task Force so they can identify trends in order to better serve the City and to track improvement over time. He also noted that it's nice to share positive feedback with volunteers so they know their efforts make a positive difference. Erik Pearson, Environmental Services Manager, shared that staff will be presenting to the Task Force next month. Ms. Oliva requested that staff also share on how Adopt-a-Block areas compare to other areas around the City.

Council Member Mendall inquired as to how often individual storm drains are cleaned. He commented that a neighbor complained that his storm drain had not been cleaned for several years and was causing odor. Ms. Wilfong responded that individual storm drains are cleaned at least once a year and the smaller capture devices are cleaned approximately three to four times annually. She added that the large capture devices are on track to be cleaned twice annually.

4. Energy Report Update – 2013 Energy Use and Efficiency

Erik Pearson, Environmental Services Manager, presented an update on 2013 energy use and efficiency. He shared that the City's Climate Action Plan (CAP) has a policy to reduce greenhouse gas (GHG) by 20% below the 2005 GHG emissions inventory baseline levels by 2020, 60% by 2040 and 82.5% by 2050, which is consistent with the State's goals.

Council Member Mendall referenced the reported 6% reduction of total emissions between 2005 and 2013, and commented that the reduction only reflected emissions of natural gas and electricity

and did not include other sources such as transportation; therefore it is not an accurate representation of the City's progress toward reaching the CAP's goal.

Council Member Jones commented that the City's reduction is not at the level required by the CAP. Mr. Jones emphasized the need to accelerate the City's efforts to meet the 20% reduction goal by 2020, to which Council Member Zermeño and Council Member Mendall concurred. Mr. Pearson noted that General Plan does identify several programs that will aid the reduction of emissions, including Community Choice Aggregation (CCA), which the County is pursuing and an energy disclosure ordinance to address indoor energy use; furthermore, municipal properties will continue to install more renewables.

Council Member Mendall requested an updated chart on the City's progress to share with policy makers.

5. Overview of Car Sharing Programs

Director Ameri introduced Jennifer Yee, Sustainability Technician, who presented an overview on car sharing and provided an update on the car sharing grant from the Metropolitan Transportation Commission (MTC).

Council Member Zermeño expressed support for the project and suggested two industrial areas, Cal State University Easy Bay (CSUEB), South Hayward, Southland Mall and the airport as additional possible car sharing locations. Ms. Yee responded that CSUEB does currently have Zipcar for students, faculty and staff, so this project would potentially expand their services. Mr. Zermeño asked staff if a consultant would be hired to oversee the project. Erik Pearson responded that a consultant would be hired to prepare an RFP that would generate interest among various car sharing companies. He shared that \$20,000 to \$30,000 has been allocated for the consultant from the \$40,000 project management costs.

Council Member Jones requested that staff obtain usage data from CSUEB and suggested to leverage the current agreement CSUEB has with Zipcar to expand the program, which could expedite the process and potentially be more cost effective.

Council Member Mendall supported the round-trip model for Hayward, identifying Downtown, CSUEB and South Hayward BART as potential locations to supply enough volume of users for this program to be practical.

6. Update on Green Hayward PAYS[®] (Pay-As-You-Save)

Erik Pearson presented an update on Green Hayward PAYS[®].

Council Members Jones and Zermeño expressed support for self-funding the program with an internal loan from the City's Wastewater Fund to expedite the implementation of this program.

Director Ameri explained that the City just completed Master Plans for the Water Pollution Control Facility and the Wastewater Collection System. The City is looking at a cost of between \$50M to \$100M in expenditures to improve the capability and capacity of the wastewater system, with an

initial \$50M expected to be incurred in the next five years starting FY16. Director Ameri cautioned that lending \$1M from this fund will result in higher wastewater rate increases when a budget is brought to Council in a few months. He informed the Committee that the San Francisco Public Utilities Commission, the City's water supplier, has estimated a rate increase of between 17.7% and 31% beginning July 1. He explained that that increase alone will result in a 12% to 20% increase for Hayward customers. He agreed that the PAYS[®] program is valuable, but a majority of the expenditures will be concentrated on water conservation, and Hayward has some of the lowest residential per capita water consumption within the Bay Area and the state. He explained that the margin of water use reduction is very limited given Hayward customers' current low water use. He closed by stating that if outside funding is secured, staff would fully support the project.

Council Member Mendall agreed to self-fund the program but advised that long term funding be sought from the private sector. He recommended that the issue be brought to the full City Council. Council Members Mendall and Jones suggested that under the current drought conditions, rate increases seemed reasonable.

The Committee directed staff to prepare a report to bring their request before City Council.

7. Sustainability Committee Agenda Topics for 2015

Erik Pearson mentioned that since the publishing of the report, there were a few additional topics added for consideration. The topics included: an introduction to the State's Hydrogen Fueling Initiative; expedited solar permitting; and Build it Green, a Bay Area nonprofit that promotes green building standards, is interested in presenting to the Committee.

Council Member Zermeño requested that additional information be made available on rain barrels. Staff responded that rain barrel information would be posted along with information for Hayward's rain barrel rebate on the City's website. Council Member Zermeño suggested the topic of an educational shuttle between Cal State East Bay, Downtown, Chabot College and Life Chiropractic College in order to reduce traffic and greenhouse gas emissions.

Council Member Mendall expressed a preference for topics that address policy issues, and suggested that informational reports take a secondary priority.

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS: None.

ADJOURNMENT: 6:13 p.m.

Attendance	<u>MEETINGS</u>				
	Present 1/6/14 Meeting	Present 12.11.14 Meeting	Present to Date This Fiscal Year	Excused to Date This Fiscal Year	Absent to Date This Fiscal Year
Greg Jones	✓	X	2	1	0
Dianne McDermott	O	O	0	0	4
Al Mendall*	✓	O	3	0	1
Laura Oliva**	✓	✓	4	0	0
Vishal Trivedi	O	O	1	0	3
Francisco Zermeño	✓	✓	3	1	0

✓ = Present O = absent X = excused

* Chair

** Vice Chair

DATE: March 23, 2015
TO: City Council Sustainability Committee
FROM: Director of Utilities and Environmental Services
SUBJECT: Hydrogen Fuel Cell Cars & Fueling Stations

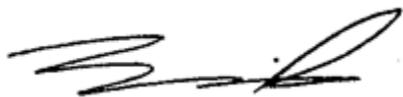
California Fuel Cell Partnership is a collaboration of organizations, including auto manufacturers, energy providers, government agencies and fuel cell technology companies, that work together to promote the commercialization of hydrogen fuel cell vehicles. The Partnership is currently working with the California Energy Commission to establish hydrogen fueling stations throughout California, including one on A Street in Hayward.

A representative from the California Fuel Cell Partnership will make a presentation to the Committee to provide an overview and answer questions about the development of hydrogen fueling stations and hydrogen fuel cell cars.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I	Brochure About Fuel Cell Electric Vehicles and Hydrogen Fuel Stations
Attachment II	Hydrogen Fuel Station Profiles

What Do You Need to Know About Hydrogen and Fuel Cell Electric Vehicles?

August 2013

Hundreds of zero-emission fuel cell electric vehicles are on the road today in California and tens of thousands of FCEVs are coming beginning in 2015. With a network of about 100 hydrogen stations statewide, customers will have sufficient access to hydrogen fuel to replace a conventional vehicle with an FCEV.



Two automakers lease FCEVs to customers in the Los Angeles, Orange County and San Francisco Bay areas. Customers pay between \$600 and \$800 a month for the vehicle lease, which includes insurance, maintenance and fuel. Several automakers have announced plans to introduce commercial vehicles beginning in 2015. Vehicle price is expected to be competitive with hybrids of the same model and FCEVs are eligible for state and federal clean vehicle rebates.

Why buy an FCEV?

FCEVs have range, quick refill time and vehicle size similar to that of conventional vehicles. Because FCEVs are electric vehicles, they are very efficient, extremely quick and have the performance of electric drive. FCEVs are zero-emission vehicles that qualify for HOV stickers for carpool lane access and do not need smog checks, oil changes or mechanical tune-ups.

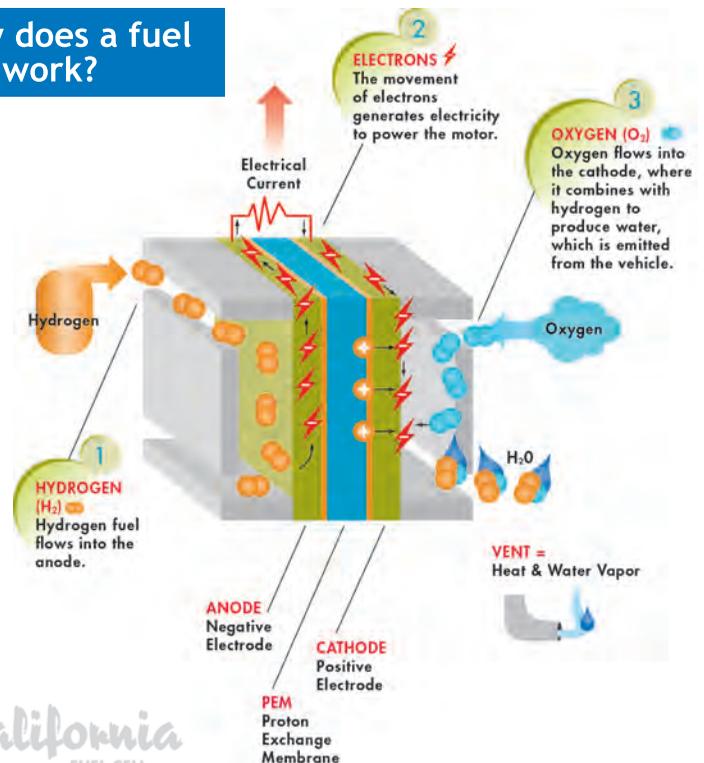
Who are typical FCEV customers?

Early adopters of other new technology vehicles are generally men in their 50s, well educated, technically savvy and environmentally minded. Each automaker, however, has its own marketing plan and target customers.

What is the vehicle roll out plan? How many customers can I expect?

California's Zero Emission Vehicle regulation requires that 15% of new car sales by large and intermediate-volume automakers be ZEVs by 2025. To meet that number, auto dealers must be selling tens of thousands of ZEVs by 2017. Initially, we expect to see about 50,000 FCEVs in California communities by 2017 and need the fueling infrastructure in place to provide fuel throughout the state.

How does a fuel cell work?



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What Do You Need to Know About Hydrogen and Fuel Cell Electric Vehicles?

August 2013

Where do you refuel?

Nine public hydrogen stations are open in California, mostly in the Los Angeles and Orange County areas. An additional 19 hydrogen stations are under construction or in the planning process. Each year, the California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program provides co-funding for hydrogen stations until about 100 are operational statewide.

How much does hydrogen cost?

When it is for sale, we expect hydrogen to be comparable to the cost of gasoline.

How many miles to the gallon do FCEVs get?

The cars and SUVs get about 50-70 miles to a kilogram of hydrogen. (A kilogram of hydrogen has the same energy as a gallon of gas.)

How much hydrogen does it hold?

Vehicles carry 4-6 kilograms of gaseous hydrogen, which is the energy equivalent of 4-6 gallons of gas. Because a fuel cell is so efficient, you do not need to carry as much fuel in an FCEV as you do in a gasoline vehicle.

How far does the vehicle go on a full tank?

FCEVs have a range similar to convention vehicles—300-450 miles, depending upon the vehicle.

What is the pressure of the fuel/tank?

Most FCEVs carry fuel at 10,000 psi (70 mPA). Some passenger vehicles, all transits buses and other vehicles, such as mobile light towers and lift trucks, carry fuel at 5,000 psi (35 mPA).

Can you fuel at home?

Home fueling is not being pursued right now. The goal is to integrate hydrogen fueling equipment into existing or new fueling stations.

Which automakers have FCEVs?

Toyota, Honda, Mercedes, Hyundai, GM and Nissan have FCEVs on the road in California and in other areas of the world. Chrysler and VW are also working on FCEVs, but haven't announced their launch dates yet. Ford, BMW and other automakers also have fuel cell programs.

How much does an FCEV cost?

The companies that have announced vehicles expect them to be priced comparably to hybrids of the same style. FCEVs qualify for electric car tax rebates and incentives.

Will they go into fleets first?

Automakers have stated that these vehicles are geared for individual owners. They are not being targeted as fleet vehicles.



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What Do You Need to Know About Hydrogen Stations? | August 2013

A “hydrogen station” includes, at minimum, above-ground fuel storage tank(s), a compressor and a dispenser typically integrated into an existing gasoline or CNG station. As with natural gas, all the equipment is above ground and may likely have a significant footprint. Unlike CNG, equipment can be distributed on the property to maximize space. In addition, hydrogen stations have multiple designs that include the option of making hydrogen on site.



Most hydrogen is made by steam-reforming natural gas at a central production plant—often at or near an oil refinery. At atmospheric temperature, hydrogen is a gas and can be distributed by a pipeline or in pressurized tubes. Some plants can also liquefy hydrogen by cooling it to a cryogenic temperature (-423°F/-253°C). Stations can also make hydrogen on site by reforming natural gas or electrolyzing water. Compressed gaseous hydrogen is stored above ground in ASME-standard steel pressure vessels. (Composite pressure vessels require individual approval by OSHA.)

Hydrogen is a gaseous fuel that can be dispensed at two different pressures: H35, which is approximately 5,000 psi, and H70, which is 10,000 psi. A hydrogen dispenser looks similar to a retail fuel dispenser and usually has two different hoses and nozzles, one for each pressure. Customers cannot attach the high-pressure nozzle to a lower pressure receptacle, similar to a diesel nozzle not fitting into a gasoline port.

When a customer activates the dispenser, hydrogen flows from the storage tanks to the dispenser and through the nozzle into the vehicle in a closed-loop system. If filling with H70, the hydrogen passes through a booster compressor and chiller before entering the dispenser. If the nozzle is not correctly attached to the vehicle, fuel will not flow. When the tank is full, dispensing stops.

Filling with hydrogen is fast, easy and safe. A full tank of hydrogen—4-6 kilograms—provides range similar to a conventional vehicle on about one-third the amount of energy as gasoline.

Hydrogen is a low-carbon, non-toxic fuel that is domestically produced from local resources. Most hydrogen is made from natural gas, but increasingly it is made from water, biogas and biomass. For more than 75 years, hydrogen has been safely handled, distributed and dispensed. Building codes and technical standards are created around hydrogen’s unique properties: small molecule, lighter-than-air, quick diffusion and gaseous state.



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What Do You Need to Know About Hydrogen Stations? | August 2013

Delivery Method	Equipment at Station	Advantages	Disadvantages
Liquid Delivery	Liquid storage tank Heat exchanger Compressor Gaseous storage Booster compressor (optional) Chiller Dispenser	<ul style="list-style-type: none"> • Can store more fuel (greater capacity) 	<ul style="list-style-type: none"> • Much larger footprint • Potential for fuel boil off • Expense of two types of storage tanks
Gaseous Delivery	Gaseous storage Compressor Chiller Dispenser	<ul style="list-style-type: none"> • Smaller footprint than liquid • Equipment can be in various locations 	<ul style="list-style-type: none"> • Least amount of storage capacity without multiple trailers/ storage tubes
On-site Electrolysis	PV system Water purifier Electrolyzer Compressor Gaseous storage Booster compressor Chiller Dispenser	<ul style="list-style-type: none"> • Make fuel on site • Potential to sell carbon credits 	<ul style="list-style-type: none"> • More equipment • Larger footprint • Can be more expensive
H2 from pipeline	Scrubber Gaseous storage Booster compressor (optional) Chiller Dispenser	<ul style="list-style-type: none"> • Larger capacity • Can require less storage 	<ul style="list-style-type: none"> • Station must be near pipeline • More equipment • Larger footprint

Where does hydrogen come from?

There is not a “right” way to make hydrogen, but ways that are right for every region of the world. Most hydrogen comes from natural gas, but you can also make hydrogen from solar or wind energy and water. A station in Orange County makes hydrogen, electricity and heat from wastewater. Universities and research labs are experimenting with making hydrogen from other forms of biomass, such as almond shells, rice straw, and algae.

Is hydrogen dangerous?

Hydrogen is as safe as other fuels; just different. It is a lighter-than-air gas that diffuses quickly. It is difficult to concentrate hydrogen enough to make it catch fire, let alone explode. The vehicles and tanks pass all safety tests.



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What Do You Need To Know About Hydrogen Fueling Operations?

August 2013

Each of the companies involved in hydrogen station development uses different equipment and technology and, therefore, will have different specifics. Below is a list of questions station owners and operators frequently ask, and the answers that are common across hydrogen technology platforms. Also listed are questions for you to ask the equipment provider directly.



What training is needed to operate a dispenser?

Hydrogen dispensers are designed for unattended operation. Customers receive fueling training at the dealership when they pick up their vehicles. They know how to fill with a gaseous fuel. Your station developer will provide your employees with training and the California Fuel Cell Partnership has additional resources available.

How is fuel distributed?

If you are having fuel delivered (as opposed to making it on site), you will have one hydrogen provider that negotiates an annual contract and arranges a delivery schedule. The cost of hydrogen is quite stable and doesn't have the same fluctuations as gasoline and diesel.

Gaseous hydrogen is delivered by swapping storage trailers. Storage tubes are permanently mounted on the trailer. The driver opens the gate around the storage area, backs in a full trailer and connects it to the dispensing system. The driver then disconnects the empty tube trailer, hooks it to the tractor and drives away. Swapping trailers can take between 10 and 30 minutes.

Liquid hydrogen is delivered by a tanker truck that looks quite similar to a gasoline tanker. The driver connects the hose from the truck to a valve on the storage tank and offloads liquid hydrogen. Because liquid hydrogen is at a cryogenic temperature, a vapor cloud often forms around the transfer point. Filling the storage tank typically takes around 30 minutes, depending on the size of the tank.

Questions to ask the station provider:

- Who performs station maintenance?
- If something breaks, how quickly does the service tech arrive?
- How does it impact my insurance?



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What Do You Need To Know About The Equipment?

August 2013

Can the hydrogen storage tanks be placed underground?

Current hydrogen fueling equipment technology allows for above ground fuel storage only. Codes and standards organizations are looking at below-ground storage, but that will be some time in the future.

How are the dispensers the same or different from gasoline dispensers?

Like a gasoline dispenser, a hydrogen dispenser typically has two sides, each with a similar interface. The dispensers are designed to accept credit cards and display sales information in accordance with state Weights and Measures requirements. Volume is displayed in kilograms (kg).

A dispenser has two hoses: one for H35 (5,000 psi) and one for H70 (10,000 psi). The nozzles on each hose are different and an H70 nozzle will not fit on to the receptacle of an H35 car; neither nozzle will fit a CNG vehicle. The nozzle locks onto the car's receptacle, the same way that natural gas vehicles fuel or you fill propane tank. Once the seal is tight and the customer has activated the dispenser, fuel flows into the car's tank. When the tank is full the dispenser turns off. Because hydrogen fueling is a gaseous, closed-loop system, nothing drips or spills.

What companies supply hydrogen fueling equipment? Are they the companies we already do business with? How many suppliers are out there?

Most of the companies providing equipment for hydrogen stations have a background in the industrial use of hydrogen rather than in retail sales. Many components are sourced from suppliers who are in the conventional fuel business. Components and equipment are, however, designed specifically for hydrogen.

What are the safety systems?

A hydrogen station has several different safety systems that work together. If flame detectors or gas sensors detect a fire or leak, safety measures turn on automatically, such as sealing the storage tanks, stopping hydrogen flow or—in the case of an extreme fire—safely venting the hydrogen. Strategically placed emergency stops will manually shut down hydrogen equipment. Retaining walls, equipment setbacks and bolsters are designed into the site plan to maximize safety.

Can the equipment go under the canopy?

It can physically go under the canopy, but ability to put it under the canopy is up to guidelines of the station brand. Some of the existing stations have hydrogen dispensers on the same island as other dispensers. At other stations the hydrogen dispenser is on its own island either under the canopy, just outside of canopy or on a separate section of property.

Questions to ask the station provider:

- What piece of equipment limits capacity? How can I later increase capacity without replacing the most expensive pieces or tearing up the concrete again?
- What are the maintenance issues? Which piece is most likely to fail or need servicing? What drives maintenance costs up or down?
- Is it better to have more storage or swap out the tanks more frequently?
- What are the expected technology advances?



www.CaFCP.org

What Do You Need To Know About Hydrogen Station Economics?

August 2013

Hydrogen fuel presents an opportunity for station owners to expand station product offerings, differentiate themselves from competitors, and increase profits and station utilization. Although hydrogen stations have higher capital costs and have greater operating and maintenance expenses than stations for existing fuels, the long-term opportunity is greater than with other alternative fuels.



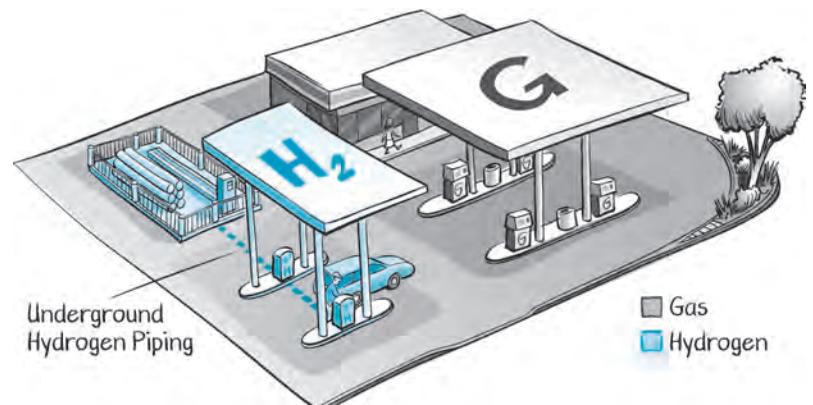
Ultimately potentially high margins on every kilogram of hydrogen sold (compared to gasoline margins) will generate positive, consistent cash flow. Until then, the State of California provides funding for hydrogen stations.

The California Energy Commission administers about \$100 million in annual grant funding for alternative fuels and vehicles through a program commonly called AB 118. Every year, CEC dispenses co-funding for stations through a competitive grant program. We anticipate that at least \$20 million a year for the next five years will be designated for hydrogen stations.

How does funding work?

In past awards, CEC provided up to 70% of the cost to buy and install hydrogen equipment at a station. CEC is considering an alternate funding model in which investors finance hydrogen station development in full, but receive an incentive payment when the station begins operating to cover cash flow shortfall (e.g. due to operating expenses as well as financing payments). Payments continue until cash flow is positive and the net retail margin can cover these costs. For many stations, cash-flow support is expected to continue for 3-5 years as more vehicles enter the market.

In other words, the intention is to ensure station operators are made whole in the early years of vehicle numbers are too low to provide profit from fuel sales.



Contact: Joe Gagliano
Infrastructure Business Development Specialist
JGagliano@cafcp.org | 714-393-2520

What Do You Need To Know About Hydrogen Station Economics?

August 2013

Questions to ask the station provider:

- How much does hydrogen cost?
- What are the taxes and who pays them?

What is the forecast for hydrogen statewide and nationwide?

Several states have hydrogen programs, but California's program and its emphasis on passenger vehicles are unique. Automakers expect to introduce FCEVs worldwide, but the initial commercial market will begin in California.

Is hydrogen competitive with other fuels?

Currently hydrogen is sold either by the fill or the cost is included in the vehicle lease contract, and not by the kilogram. The regulations to sell fuel by unit weight are still in development. When the regulations are finished, hydrogen is expected to be priced competitively with other fuels.

What is the timeline to sell hydrogen by the unit?

The technical challenge right now has to do with the fuel meter. The meters used in natural gas dispensers are not sensitive enough for hydrogen's small molecules. A number of companies are working on meter technology and as soon as a reliable meter is developed the regulations for selling hydrogen by the unit should move very quickly.

What is the unit of sale?

Hydrogen is a gaseous fuel that will be sold by the kilogram, represented as "kg."

If I put in a hydrogen station what keeps my competitor adding hydrogen right across the street during the early years?

Although nothing prohibits it, the government would be unlikely to fund two stations that are close together in these early years. The reason behind government funding is to provide a transition path for new technology and funding two stations very close together would not meet this need. A private investor who is not using government funding can certainly build a station wherever he or she would like.

How do I apply for the grant?

Each grant has slightly different criteria. Contact Joe Gagliano at 714-393-2520 or JGagliano@cafcp.org for information about the upcoming grant opportunity and how to apply.



www.CaFCP.org

What Do You Need To Know About the Local Government?

August 2013

Local government

municipalities are learning about hydrogen stations and fuel cell electric vehicles as stations come into their jurisdictions. So far, each station is the first in each city and, therefore, the permitting process for a hydrogen station may take more time simply because it is a first-of-a-kind project.



What zoning issues do I need to know about?

In most cases, adding hydrogen to an existing station is a “by-right” process that doesn’t require zoning changes or going before the planning commission. Some stations may require a conditional use permit, particularly if the station equipment will reduce the number of parking spots. In California, the local authority having jurisdiction has final say.

Who are the stakeholders in developing a site?

Generally, hydrogen project partners include:

- A funding entity that provides cost share
- An existing land or station owner who provides a site
- A station owner or operator who operates the station on a day to day basis
- The station provider that leases or sells equipment to the station/land owner and likely also carries the maintenance contract
- The hydrogen supplier (for delivered hydrogen), that will likely be the same company as the station provider
- The engineering and construction company that will likely be identified by the station provider

Who are the authorities having jurisdiction and how do they interact?

AHJs are generally the city’s building and planning departments as well as the fire department (in California this is either the city or county fire marshal). The local fire department or hazardous materials division will be looked to for their expertise with hazardous materials and gaseous fuels



Contact: Joe Gagliano
Infrastructure Business Development Specialist
JGagliano@cafcp.org | 714-393-2520

What Do You Need To Know About the Local Government?

August 2013

What are the relevant state and local government regulations?

In general, California state fire, building, and electrical codes apply in addition to any local requirements. Individual cities could have local ordinances that may need to be accommodated, such as landscaping and signage. It is a good practice to identify these early on in the project and incorporate them into your building plans. As with other motor fuels, the California Department of Food and Agriculture Division of Measurement Standards (Weights and Measures) is the responsible entity for certifying hydrogen dispensers.

What are the applicable codes and standards?

The California Fire Code, NFPA 55 (Gaseous and Liquid Hydrogen Storage) and NFPA 52 (Vehicle Fuel Dispensing) are used for permitting hydrogen stations. NFPA 2 is available as a reference prior to publication in 2015. It is a comprehensive hydrogen standard that addresses hydrogen safety including the installation and operation of hydrogen fueling stations and the associated hydrogen storage and repair facilities.

Who provides support for getting through permitting and regulatory compliance? Who can we refer to when an AHJ has questions?

The best reference is the ZEV Guidebook published by Governor Brown's Office of Planning and Research. The ZEV Guidebook covers hydrogen and battery charging, and is current on all reference materials. Contact Joe Gagliano at 714-393-2520 or JGagliano@cafcf.org for assistance.

What type of education needs to be done in the community and who does it?

CaFCP, along with the station stakeholders, conduct community outreach. Once a project has the green light, we participate in community events and business meetings to answer questions about stations and vehicles. We also conduct education and training with fire crews, police officers and other emergency responders. We disseminate information via web tools, social media and in-person meetings. We also help develop local supporters who can act as liaisons to their own communities.



www.CaFCP.org



CaFCP is an industry-government collaboration. Our members—automakers, energy companies, technology companies and government agencies—jointly identify projects that need to happen in concert to bring fuel cell electric vehicles and hydrogen fuel to the commercial market, including community readiness, developing and supporting safety codes and standards, vehicle-station deployment planning and identifying funding mechanisms.

CaFCP Full Members



DAIMLER



HONDA



CaFCP Associate Members



CaFCP Affiliate Members



Station Information

Address: 145 W Verdugo Avenue
Burbank, CA 91510

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: Yes

Fuel Pressures: 5,000/10,000 psi

Supply Capacity: 100 kg/day

Fuels: Up to 25 cars/day

Fuel Price: Contract

Operations Contact: Hydrogen Frontier
403 Gardena Blvd, Suite B
Gardena, CA 90248

Market: Connector

Open to Public: March 2006 (2nd gen.)

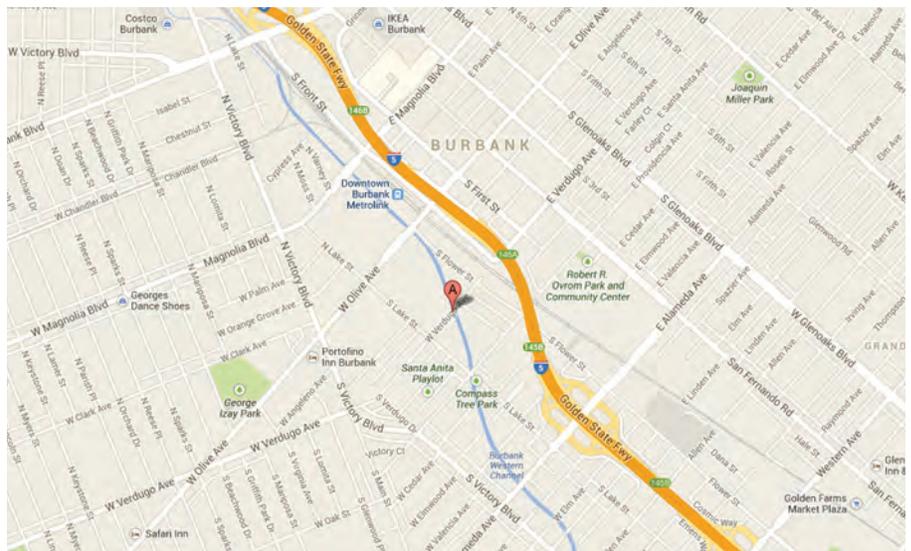


Hydrogen Supply/Equipment

- Hydrogen Source/Storage:
Natural gas steam methane reformer:
H2Gen (100 kg/day)
Storage: 227 kg @6300 psi @20C in 12 storage tubes
- Dispenser: Air Products
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: BP/Air Products
- Constructed by: BP/Air Products
- Maintained by: Hydrogen Frontier



Station Contact

Daniel Poppe
Hydrogen Frontier
403 Gardena Blvd, Suite B
Gardena, California 90248
951-741-3631
dpoppe@h2frontier.com

Funding/Financing

Total: \$4.1 million approximately

- Govt: DOE - \$2.0 million (2006) for 2nd generation equipment
- DOE - \$360,000 for operation & maintenance (2011)
- CARB - \$300,000 for operations & maintenance (2011)
- SCAQMD - \$777,066 for prorated share of five cities station (2005 - 2011); \$475,000 for operations & maintenance (2011)

- Awarded \$1,339,000 by SCAQMD in March 2014 to upgrade station
- Awarded \$300,000 grant by the CEC in May 2014 to cover operation & maintenance costs through May 2017



Other Station Details

- Land Owner: City of Burbank
- Fueling agreement required
- 24-hour auto-dialing “help phone” at the fueling dispenser area
- One of the original SCAQMD Five Cities program locations

Station Information

Address: 21865 E. Copley Drive
Diamond Bar, CA 91765

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: No

Fuel Pressures: 5,000/10,000 psi (H35/H70)

Supply Capacity: 180 kg/day

Fuels: Up to 45 cars/day

Fuel Price: TBD

Operations Contact: *Engineering, Procurement & Construction, LLC*
3609 S. Wadsworth Blvd., Ste. 135
Lakewood, CO 80235

Market: Connector - Southern California

Open to Public: August 2014

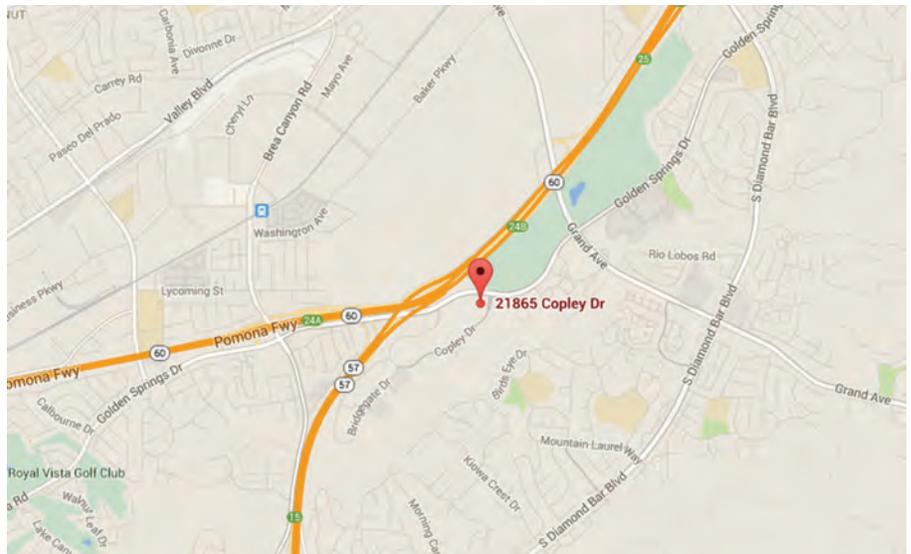


Hydrogen Supply/Equipment

- Hydrogen Source/Storage: Gaseous high-pressure hydrogen (33.3% renewable) tube trailer delivery from APCI Carson/Wilmington facility
- Dispenser: APCI
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: APCI
- Constructed by: *Engineering, Procurement & Construction, LLC*
- Maintained by: *Engineering, Procurement & Construction, LLC*



Station Contact

John Cornish
President
Engineering, Procurement & Construction, LLC
3609 S. Wadsworth Blvd., Ste. 135
Lakewood, CO 80235
720-974-1709
Jcornish@epc4h2.com

Funding/Financing

Total: \$1,070,482 (10/21/10 CEC NOPA)
Govt: 65% cost share
Private cost share: 35% cost share (APCI)

Other Station Details

- Located at the South Coast Air Quality Management District (SCAQMD) office lower parking lot



Station Information

Address: 1172 45th St.
Emeryville, CA 94608

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: Yes

Fuel Pressures: 5,000/10,000 psi

Supply Capacity: 65 kg/day (electrolyzer)

Fuels: Up to 20 cars/day

Fuel Price: Contract

Operations Contact: AC Transit
1600 Franklin Street, Oakland, CA 94612

Market: Cluster - Berkeley

Open to Public: April 2012

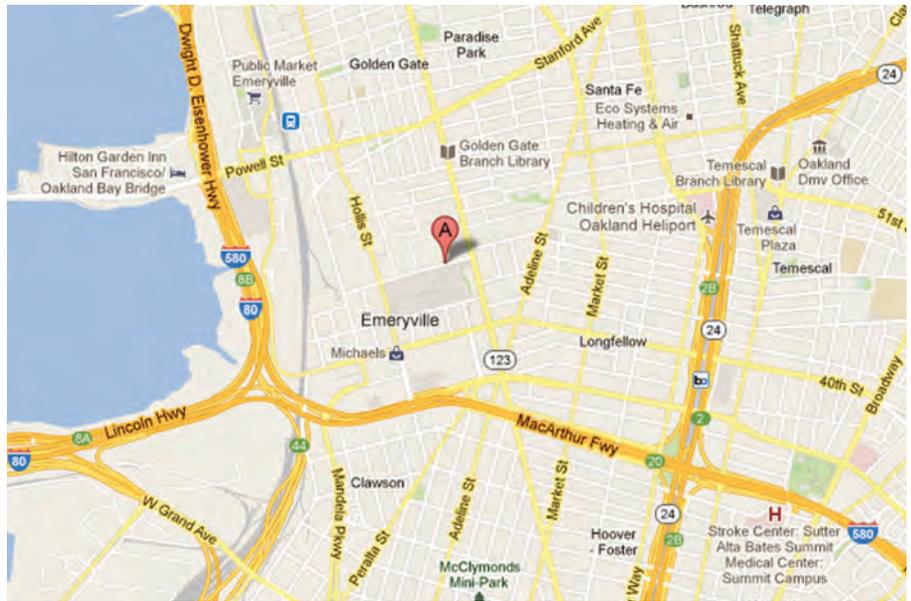


Hydrogen Supply/Equipment

- Hydrogen Source/Storage: Proton OnSite electrolyzer using 100% renewable solar-powered electricity produces 65 kg/day of hydrogen for passenger vehicles
- Liquid hydrogen storage is provided as a backup to the electrolyzer
- Dispenser: Linde
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: Linde North America, Jacobs and EPC
- Constructed by: W.L. Butler Construction
- Installed by: 510 kW DC solar photovoltaic system installed by engineering and construction firm Cupertino Electric, Inc.
- Maintained by: Linde



Station Contact

Douglas Byrne
Project Manager, ZEB Demonstration Program
AC Transit
10626 International Blvd.
Oakland, CA 94603
510-628-8253
dbyrne@actransit.org

Funding/Financing

Total: \$9.2 million for transit and public fueling

Govt: Total grants: \$6.7 million (7/12 Staff Report - ARB and FTA)
ARB - \$2.7 million grant (public FCEV fueling)

Public funding period: Three years

Other Station Details

- Land Owner: AC Transit
- Gate over dispenser opens with the swipe of a fueling card
- PIN is required after swiping fueling card at the dispenser to authorize fueling
- Fueling agreement with AC Transit required

Station Information

Address: 10844 Ellis Ave
Fountain Valley, CA 92708

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: Yes

Fuel Pressures: 5,000/10,000 psi

Supply Capacity: 100 kg/day

Fuels: 25-30 cars/day

Fuel Price: Contract

Operations Contact: National Fuel Cell
Research Center
University of California, Irvine
Irvine, CA 92697

Market: Cluster - Coastal/Southern Orange
County

Open to Public: August 2011

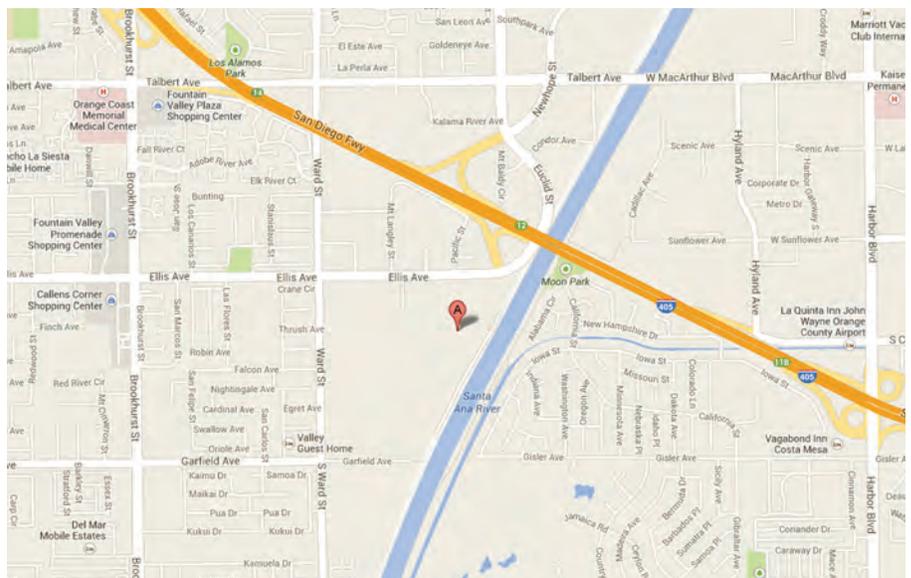


Hydrogen Supply/Equipment

- Hydrogen Source/Storage: Renewable hydrogen produced on site from methane gas generated from wastewater at OCSD treatment plant
- Dispenser: Air Products
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: FuelCell Energy, Inc. (power plant) and Air Products
- Constructed by: Air Products
- Maintained by: Air Products



Station Contact

Jean Grigg
Manager of Operations, Sustainable
Transportation, Sustainable Energy
National Fuel Cell Research Center
University of California, Irvine
Irvine, CA 92697
949-824-7302 x11340
Jmg@apep.uci.edu

Funding/Financing

Demonstration: Tri-Generation of Bio-Hydrogen from Wastewater Biogas using
Stationary Fuel Cell
Total: \$8.7 million
Govt: ARB - \$2.7 million (2006 CARB Solicitation 06-618)
SCAQMD - \$750,000
US DOE - \$2,077,283 (CHIP program)
Cost share: APCI, FuelCell Energy, National Fuel Cell Research Center, Southern
California Gas Company
Public funding period: Three years

Other Station Details

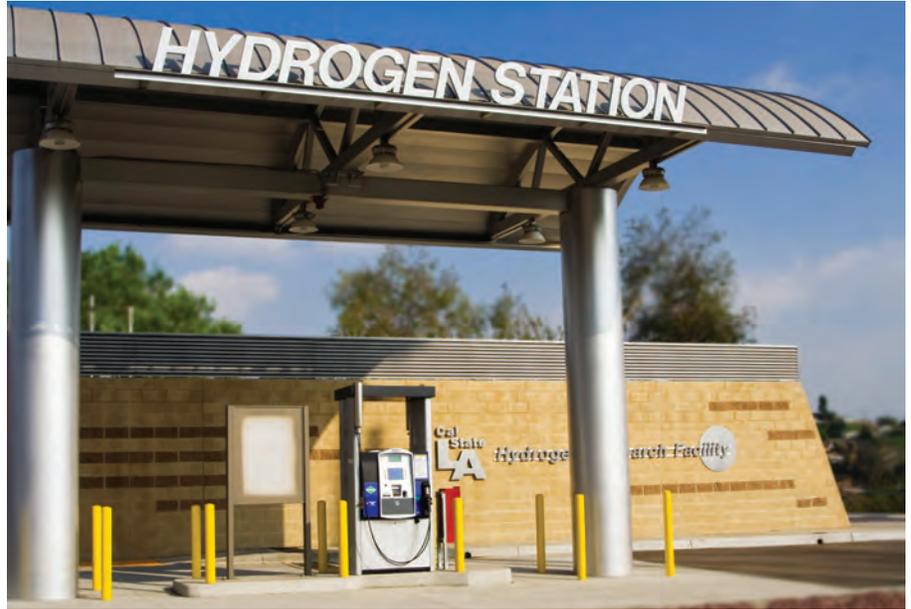
- Requires a fueling release from Air Products and a payment agreement with UC Irvine
- Four automakers executed access and payment agreements with UC Irvine
- Dispenser is SAE TIR-J2601 compliant
- Co-located with CNG fuel dispenser
- Continuing operation until 5/31/2014 under sponsorship of ARB & SCAQMD



Managed by BKi

Station Information

Address: 5151 State University Drive
 Los Angeles, CA 90032
 Station Status: Commissioning Phase
 Hours of Operation: 24/7
 PIN Required: Yes
 Fuel Pressures: 5,000/10,000 psi
 Supply Capacity: 60 kg/day
 Fuels: 10-15 vehicles/day
 Fuel Price: Contract
 Operations Contact: CSULA Hydrogen
 Fueling and Research Facility
 5151 State University Drive
 Los Angeles, CA 90032
 Market: Connector
 Open to Public: August 2014

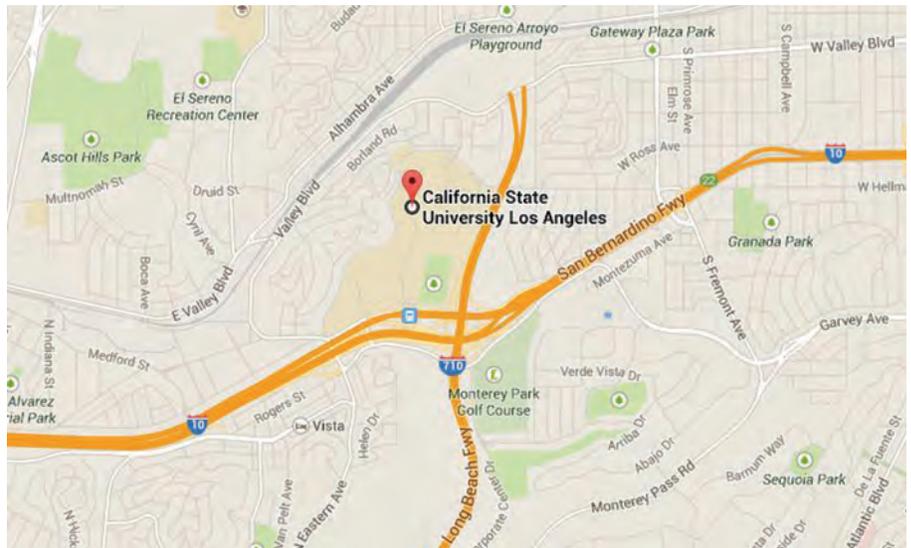


Hydrogen Supply/Equipment

- Hydrogen Source/Storage:
 Hydrogenics Electrolyzer: 60kg/day H2
 Production
 Storage: 60kg gaseous H2 storage
- Dispenser: Quantum
- Nozzle: WEH, 350 and 700 bar

**Design/Construction/O&M
 Service Contractors**

- Designed by: EPC
- Constructed by: Weaver Electric, Inc.



Station Contact

Michael G. Dray
*Hydrogen Station Manager of Operations
 and Marketing*
 CSULA Hydrogen Fueling & Research Facility
 5151 State University Drive
 Los Angeles, CA 90032
 614-260-5223
 Michael.dray@calstatela.edu

Funding/Financing

- CARB
- SCAQMD
- MSRC
- DOE
- NREL
- AAA
- Ahmanson Foundation



Other Station Details

- Visitor gallery facilitates guided public tours
- Full-time operations staff
- H2 metering and quality testing program in development

Station Information

Address: 25800 S. Western Ave.
 Harbor City, CA 90710
 Station Status: PUBLIC
 Hours of Operation: 24/7
 PIN Required: Yes
 Fuel Pressures: 5,000/10,000 psi
 Supply Capacity: 100 kg/day
 Fuels: Up to 25 cars/day
 Fuel Price: Contract
 Operations Contact: Mebtahi Station Services
 25800 S. Western Ave, Harbor City,
 CA 90710
 Market: Cluster - Torrance/Coastal Cities
 Open to Public: April 2013

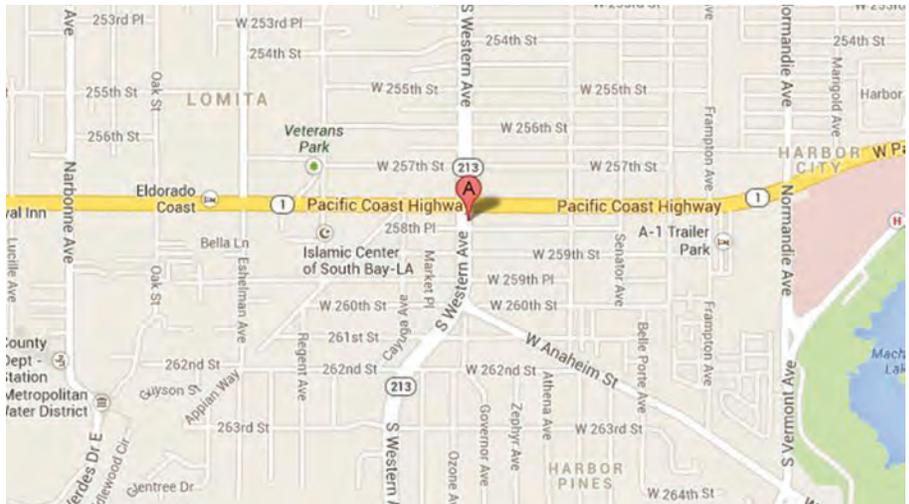


Hydrogen Supply/Equipment

- Hydrogen Source/Storage:
 - Gaseous high-pressure hydrogen delivered by truck
 - 64 kg H2 storage at 14,000 psi (permanent)
 - 230 kg H2 storage at 7,500 psi (trailer)
- Dispenser: Air Products
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: Air Products/GP Strategies
- Constructed by: Air Products/GP Strategies
- Installed by: Air Products/GP Strategies
- Maintained by: Air Products



Station Contact

David Shamtoub
 Mebtahi Station Services
 25800 Western Ave.
 Harbor City, CA 90710
 310-325-8245
 dshamtoub@verizon.net

Funding/Financing

Total: \$2.5 million
 Govt: ARB - \$1.7 million (4/6/09)
 Private/Cost share: Capitol Investments Group
 Public funding period: April 1, 2013-March 30, 2016

Other Station Details

- Land Owner: Babak Mebtahi
- Fueling agreement required



Station Information

Address: 1600 Jamboree Road
Newport Beach, CA 92660

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: Yes

Fuel Pressures: 5,000/10,000 psi

Supply Capacity: 100 kg/day

Fuels: 25-30 cars/day

Fuel Price: Contract

Operations Contact: Shell Oil Products, US
910 Louisiana Street OSP 4114 B
Houston, Texas 77002

Market: Cluster - Coastal/
Southern Orange County

Open to Public: July 2012

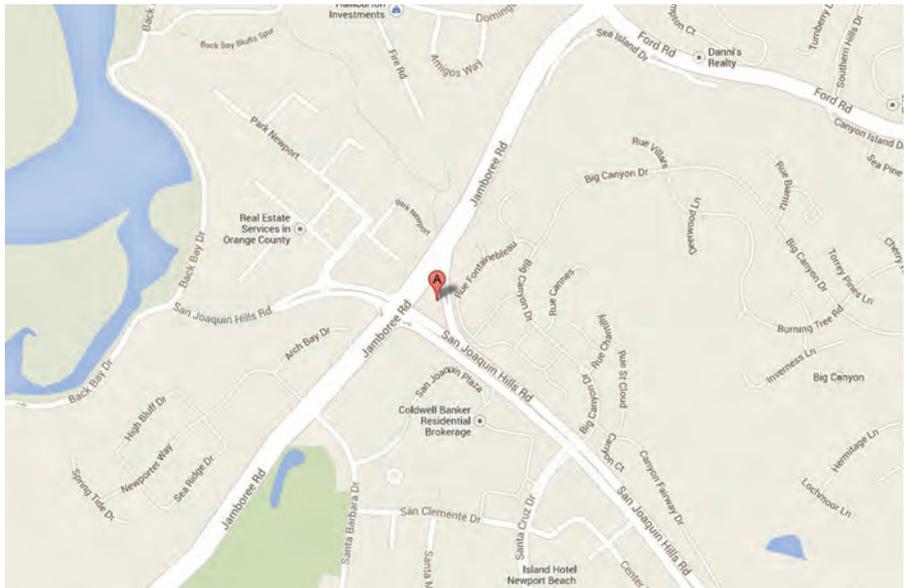


Hydrogen Supply/Equipment

- Hydrogen Source/Storage: Onsite steam methane reformer of natural gas from pipeline
- Dispenser: Gilbarco (PowerTech Labs)
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: Fiedler Group
- Constructed by: Fiedler Group/
PowerTech Labs
- Installed by: Fiedler Group/
PowerTech Labs
- Maintained by: Hydrogenics



Station Contact

Rick Scott
*Operations & Safety Coordinator,
Hydrogen Stations*
Shell Oil Products, US
910 Louisiana Street OSP 4114 B
Houston, Texas 77002
rick.scott@shell.com

Funding/Financing

Total: \$4.0 million (ARB estimate Feb. 2011)

Govt: DOE - \$2.0 million (2006) for 2nd generation equipment
ARB - \$1.7 million grant

Private/Cost share: Shell - \$2.3 M

Public funding period: Three years

Other Station Details

- No fueling agreement



DRIVING FOR THE FUTURE Managed by BKI

Station Information

Address: 32-505 Harry Oliver Trail
 Thousand Palms, CA 92276

Station Status: Open to public

Hours of Operation: Mon-Fri 8AM-5PM

PIN Required: Yes

Fuel Pressures: 5,000 psi only

Supply Capacity: 100 kg

Fuels: 25-30 cars/day

Fuel Price: \$50 fee per fill up

Operations Contact: SunLine Transit Agency
 32-505 Harry Oliver Trail
 Thousand Palms, CA 92276

Market: Connector (Palm Springs/
 Coachella Valley area)

Open to Public: November 2006

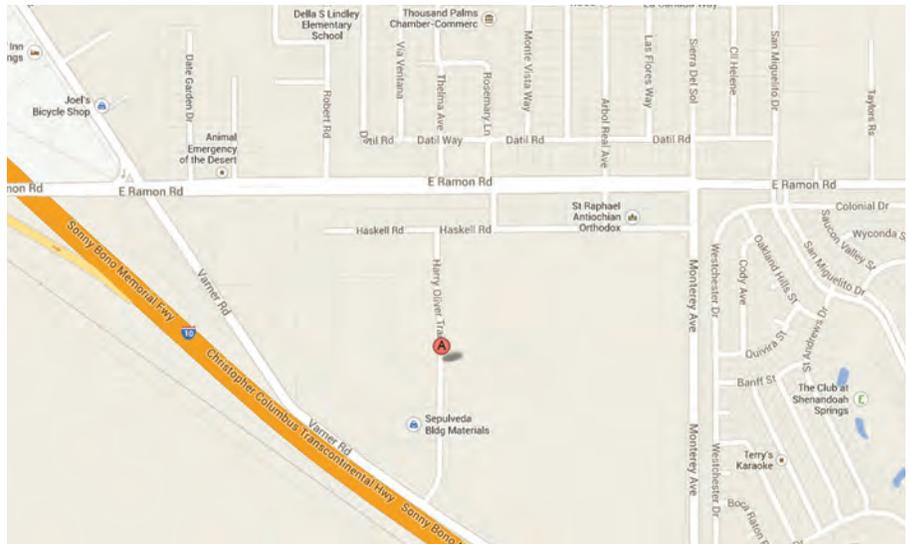


Hydrogen Supply/Equipment

- Hydrogen Source/Storage:
 - On site HyRadix natural gas reformer (Adeo model)
 - Total hydrogen stored: 240kg of which 160kg is usable
- Dispenser: FTI
- Nozzle: Sherex CW 5000

Design/Construction/O&M Service Contractors

- Designed by: HyRadix
- Constructed by: HyRadix
- Maintained by: HyRadix



Station Contact

Polo del Toro
Operations Director
 SunLine Transit
 32505 Harry Oliver Trail
 Thousand Palms, CA 92276
 760-343-3456 ext. 335
 atoro@sunline.org

Funding/Financing

Total: \$2.6 million

Govt: DOE - \$270,000 to relocate H2 station from Clean Air Now to Sunline (2000-02)
 \$125,000 autothermal reformer (2003-05)

SCAQMD - \$55,000 to relocate H2 station from Clean Air Now to Sunline (2000-02)
 \$350,000 autothermal reformer (2003-05)
 \$640,000 to expand reformer system & upgrade hydrogen station (2006-08)

SunLine Transit Agency - \$300,000 autothermal reformer (2003-05)
 \$560,000 to expand reformer system & upgrade hydrogen station (2006-08)

Other Station Details

- Self fueling - Instructional video provided for first-time users
- No fueling agreement required
- User has to pay \$50 service fee

Station Information

Address: 2051 W. 190th Street
Torrance, CA 90501

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: Yes

Fuel Pressures: 5,000/10,000 psi

Supply Capacity: 50 kg/day

Fuels: 10-12 cars/day

Fuel Price: Contract

Operations Contact: Shell Oil Products, US
910 Louisiana Street OSP 4114 B
Houston, Texas 77002

Market: Cluster - Torrance/Coastal Cities

Open to Public: May 2011

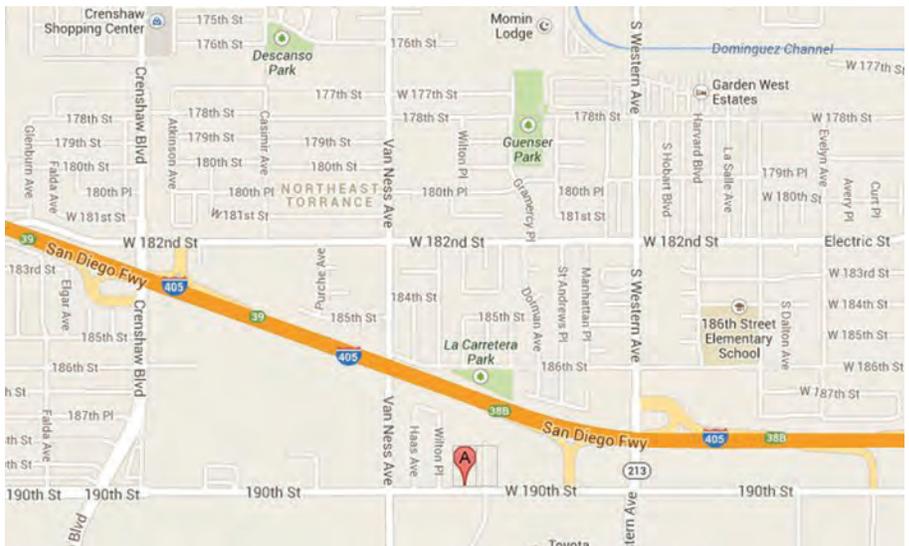


Hydrogen Supply/Equipment

- Hydrogen Source/Storage: Pipeline-fed hydrogen connected to Air Products' Wilmington and Carson hydrogen production facilities
- Dispenser: Air Products
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: Air Products
- Constructed by: Air Products
- Installed by: Air Products
- Maintained by: Air Products



Station Contact

Rick Scott
Operations & Safety Coordinator,
Hydrogen Stations
Shell Oil Products, US
910 Louisiana Street OSP 4114 B
Houston, Texas 77002
rick.scott@shell.com

Funding/Financing

Total: \$944,221

Govt: SCAQMD - \$489,000

Private/Cost share: Air Products
Toyota - land owner

Public funding period: Three years

- Awarded \$2,476,000 by SCAQMD in March 2014 to upgrade station



Other Station Details

- Fueling agreement required
- Location has a community learning center

Station Information

Address: 19172 Jamboree Road
Irvine, CA 92697

Station Status: Open to public

Hours of Operation: 24/7

PIN Required: Yes

Fuel Pressures: 5,000/10,000 psi

Supply Capacity: 25 kg/day
Actual demand ~ 50 kg/day

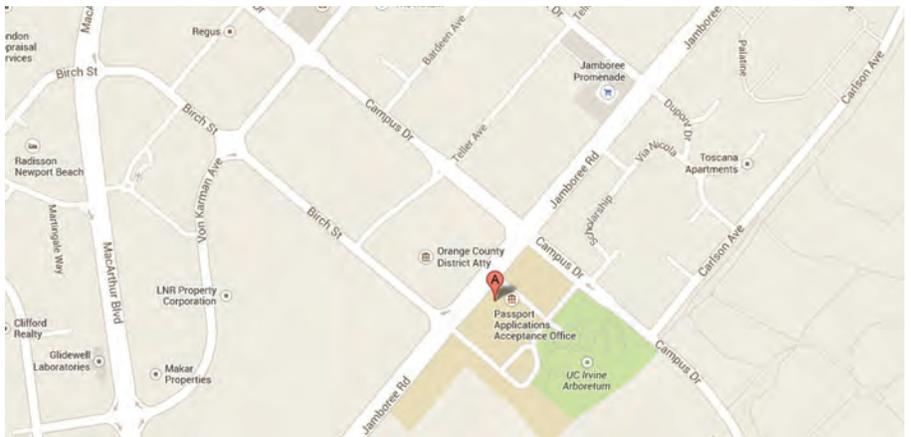
Fuels: 5-10 cars/day

Fuel Price: Contract

Operations Contact: National Fuel Cell
Research Center
University of California, Irvine
Irvine, CA 92697

Market: Cluster - Coastal/
Southern Orange County

Open to Public: February 2007
(3rd Generation)



Hydrogen Supply/Equipment

- Hydrogen Source/Storage:
 - Liquid hydrogen supply delivered by truck 3-4 times/month
 - 1,500 gallon horizontal liquid hydrogen tank
 - Storage for 50 kg of gaseous hydrogen
- Dispenser: Air Products
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: Air Products
- Constructed by: Air Products
- Installed by: Air Products
- Maintained by: Air Products

Station Contact

Jean Grigg
Manager of Operations, Sustainable
Transportation, Sustainable Energy
National Fuel Cell Research Center
University of California, Irvine
Irvine, CA 92697
949-824-7302 x11340
Jmg@apep.uci.edu



Funding/Financing

Total: \$1.5 million

- Original funding (2002) provided by Toyota

Update in 2007:

Govt: US DOE; SCAQMD (\$573,666)

Private cost share: APCI, Toyota, Honda, Nissan and BMW

Public funding period: Six years (DOE CHIP)

Note: Upgrade funding awarded to APCI by CEC in 2010 NOPA (11/16/10) (CEC PON-09-608) to upgrade to expand capacity to 100 kg/day

Other Station Details

- UC Irvine owns the station property, NFCRC manages the site and leases the equipment from Air Products
- Air Products owns, operates and maintains all on site mechanical equipment, including liquid H2 tank, compressed H2 tanks, dispensers, evaporators and compressors
- Fueling agreement required
- Open to authorized users trained in operation

Station Information

Address: 1515 South River Road,
West Sacramento, CA 95691
Station Status: Commissioning Phase
Hours of Operation: 24/7
PIN Required: No
Fuel Pressures: 5,000/10,000 psi
Supply Capacity: 350 kg/day
Fuels: Up to 70 vehicles per day
Fuel Price: TBD
Operations Contact: Nitin Natesan
Market: Connector
Open to Public: December 10, 2014

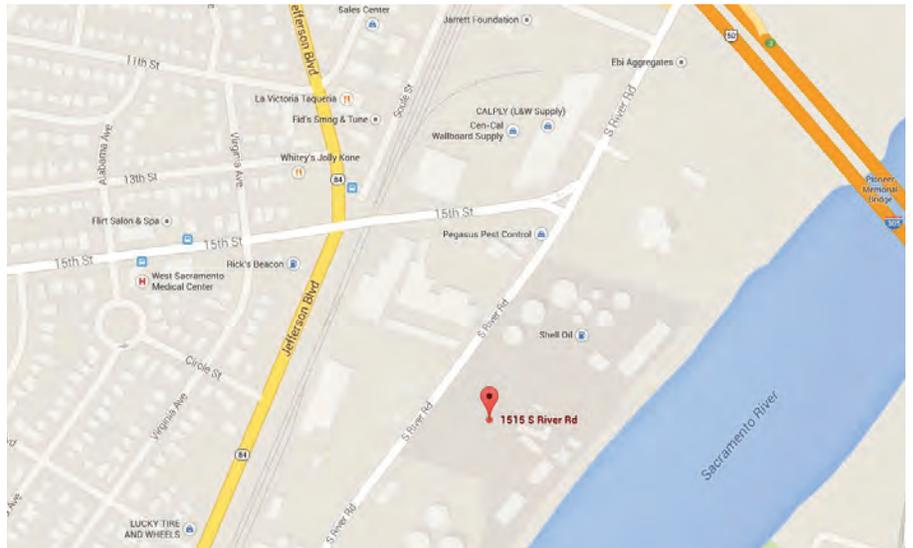


Hydrogen Supply/Equipment

- Hydrogen Source/Storage:
 - Ionic Fueling System 90 (IC90)
 - Liquid H2 storage delivered via tanker truck from H2 produced in CA
- Dispenser: Quantum
- Nozzle: WEH

Design/Construction/O&M Service Contractors

- Designed by: Linde
- Constructed by: Linde/EPC
- Maintained by: Linde



Station Contact

Nitin Natesan
H2 Fueling Business Development Manager
Linde
2389 Lincoln Ave
Hayward, CA 94545
(908) 720-4754
Nitin.Natesan@linde.com

Funding/Financing

Total: \$2,493,963
Govt: \$1,621,076 from CEC Alternative and Renewable Fuel and Vehicle Technology Program PON-09-608 (65% cost share)
Private/Cost share: \$872,887
Public funding period:

Other Station Details

- Meets J2601 fueling standard; Fueling approved by DMS test



DATE: March 23, 2015

TO: City Council Sustainability Committee

FROM: Director of Development Services
Director of Utilities and Environmental Services

SUBJECT: Overview of Rainwater Catchment and Graywater Recycling

RECOMMENDATION

That the Committee reviews and comments on this report.

SUMMARY

This purpose of this report is to give the Committee a general overview of current new regulations related to rainwater catchment/harvesting systems and graywater use systems, and suggestions for next steps related to implementing related General Plan policies.

BACKGROUND

As the drought continues to worsen and public awareness of water scarcity continues to grow, cities, water agencies and consumers are looking for new ways to conserve water and reduce water use. The Committee has expressed interest in receiving an overview of rainwater catchment and graywater recycling and in exploring how these tools might be promoted in the community.

General Plan Policies - Hayward's General Plan, adopted on July 1, 2014, includes the following policies and implementation programs related to graywater and rainwater use:

Natural Resources Element, Policy 6.10: Water Recycling - The City shall support efforts by the regional water provider to increase water recycling by residents, businesses, non-profits, industries, and developers, including identifying methods for water recycling and rainwater catchment for indoor and landscape uses in new development.

Natural Resources Element, Policy 6.12: Dual Plumbing Systems - The City shall encourage the installation and use of dual plumbing systems in new buildings to recycle graywater (modification of a policy that existed in the previous General Plan).

Natural Resources Element, Policy 6.13: Water Recycling Program Advocacy - The City shall coordinate with the East Bay Municipal Utility District and the Hayward Area

Recreation and Park District to advance water recycling programs, including using treated wastewater to irrigate parks, golf courses, and roadway landscaping and encouraging rainwater catchment system-wide and graywater usage techniques in new buildings.

Public Facilities and Services Element, Policy 5.9: Rainwater Harvesting - The City shall encourage the use of rainwater harvesting facilities, techniques, and improvements where appropriate, cost effective, safe, and environmentally sustainable.

Public Facilities and Services Element, Implementation Program 6: Rainwater Harvesting and Graywater Systems - The City shall study the feasibility of amending the City's building and development codes to encourage rainwater harvesting and graywater systems. Based on findings from the study, the City shall prepare and submit recommendations to the City Council to amend the building and development codes as necessary. (2017-2019 timeframe indicated, which staff supports, given that will be after the next code cycle)

These policies and program frame the context for this report and possible future City actions.

Summary of Trends and Other Agencies' Activities and Ordinances – City staff recently asked various jurisdictions if they have adopted any ordinances, rules, or policies regarding installation of graywater and/or rainwater catchment systems; and if they have implemented any programs that encourage the installation of graywater and/or rainwater catchment systems. Attachment I provides a summary of responses received from some of the Bay Area Water Supply and Conservation Agency (BAWSCA) member agencies, of which Hayward is a member. As indicated in that attachment, most agencies, like Hayward, do not have ordinances specifically related to rainwater and graywater use, other than what exists in the 2013 California Plumbing Code (Attachments II and III). In terms of rebate programs, some responses reference the Santa Clara Valley Water District's laundry to landscape rebate program, and others reference BAWSCA's rebate program for rain barrels (see later discussion and Attachment IV).

DISCUSSION

Overview of current code regulations –

Rainwater Catchment – Assuming 18 inches of rain per year, a 1,000-square-foot roof captures approximately 625 gallons of water for every one inch of rain that falls. A typical rain barrel connected to a residential roof downspout is 50 to 55 gallons. Therefore, even if a residential property has multiple rain barrels installed, they can quickly fill up during a typical winter storm. Rainwater that is captured during a winter storm can be used during the dry period that follows to irrigate landscaping and gardens. As an example, if a residence in Hayward has two rain barrels attached to roof downspouts, the property would have the capability to store approximately 100 gallons of water at a time. If there are eight rain events followed by dry periods in a given year, then the property would benefit from the use of approximately 800 gallons of captured rainwater.

The California Building Standards Commission has adopted new code language that is contained in the 2013 California Plumbing Code, addressing Non Potable Rainwater Catchment Systems (see Attachment II). The City has adopted the new Code, which has provisions for two basic systems that do not require a permit, which are systems used for spray irrigation with a maximum storage capacity less than 360 gallons, and non-spray systems with a maximum storage capacity of 5,000 gallons. (Note that the catchment containers sold at hardware stores are typically 50-55 gallons in size.) A third type of system would be any system not meeting the above criteria, which would require a permit. The new provisions will encourage the use of rainwater for various uses and, for systems not requiring a permit, help keep installation costs down.

The average Hayward household uses approximately 100 CCF (hundred cubic feet) or 75,000 gallons per year, and, on average, approximately 25%, or 18,750 gallons, of water is used for landscaping. Therefore, in the above example, two rain barrels would produce 800 gallons of water, which would offset 4% of outdoor water use, resulting in savings of just over one CCF or approximately \$4 per year. If one considers only the financial return on investment, the use of rain barrels cannot be justified. However, the intangible benefits may be significant and should not be ignored, including a greater awareness of household water use, which may lead to additional water conservation efforts. Finally, as mentioned below, the investment in the system can be partially offset with the \$100 rebate currently available (for two barrels).

Graywater Use – The 2013 California Plumbing Code contains language that addresses Graywater Systems (see Attachment III). The revised code has provisions for three basic types of systems. The “Clothes Washer System” is the most basic and easiest to install and does not require a permit. Such system is typically appropriate for single-family residential homes. The “Simple System,” which requires a permit, is limited to 250 gallons per day, and is more typically used for collection of wastewater from bathtubs, showers, bathroom washbasins, and clothes washing machines. According to the East Bay Municipal Water District (<https://www.ebmud.com/water-and-wastewater/water-conservation/graywater-rebates>), a laundry to landscape system can save approximately 3,600 gallons a year with a water-efficient clotheswasher, and up to 11,200 gallons a year with a top-loading washer. Applying current Hayward water rates, such a system could save a household \$22.85 to \$71.08 per year. With the cost of water rising much faster than inflation, the monetary benefits can increase significantly over the next few years.

The “Complex System,” defined as a system with a discharge capacity that exceeds 250 gallons per day, requires plans prepared by a qualified professional (typically an architect or engineer) and a permit and was added to the 2013 California Plumbing Code. Given that the average Hayward household uses approximately 200 gallons of water per day and only a fraction of that can be used as graywater, a complex system is not likely to be proposed for a single-family home. Due to the higher discharge capacity, there are other factors needing consideration prior to approval of a complex graywater system, such as filtration, soil type, and soil absorption capacity.

Rebates for Homeowners – The City participates in a rain barrel rebate program initiated by BAWSCA. Water customers in Hayward are eligible to receive a rebate of \$50 per qualifying

rain barrel. There is a limit of two rebates (\$100) per single-family residential account and four rebates (\$400) per multi-family or commercial account (see Attachment IV for more details). Only one rebate application has been received from a Hayward customer since the program started in October of 2014. Details about the rebate program are available at <http://bawsca.org/conservation/rain-barrel-rebate-program/>. One of the resources on the BAWSCA website is a four-page brochure with instructions and design guidelines for installation of a rain barrel system.

New Library and Library Plaza – A large-scale utilization of rainwater would be the proposed underground system that is planned in the basement of the existing library. When the existing library is deconstructed, its basement (annual storage capacity of 500,000 gallons) will be utilized to store water collected from the roof of the new library, and from the new plaza surface. This water will be filtered and treated and then pumped for use at the new library's restroom water closets and urinals, and at the plaza site for landscape irrigation.

ECONOMIC IMPACT

The new code regulations related to graywater use have had minimal economic impact on the development community, since most residential and non-residential plumbing system installations have been in line with traditional installations. However, the new graywater use regulations afford more flexibility for homeowners and business/property owners to install primary or auxiliary plumbing systems that help conserve the use of water from the City's domestic water supply than have traditionally existed. Rainwater catchment containers are available from most traditional home improvement stores. Storage barrels vary in capacity from 50 to 200 gallons and typically cost between \$80 and \$200 dollars. Diverter kits, which may be used to direct laundry wastewater to a landscape area, are fairly inexpensive and average \$35.

FISCAL IMPACT

There are no impacts to the City's General Fund related to these requirements, since any permits required will entail fees that will cover the costs of application/plan reviews and system inspections. The rebates discussed in this report are funded through the Water Enterprise Fund.

NEXT STEPS

Staff is developing handouts/brochures for the Permit Center that will also be posted on the City's website to provide information regarding current Code requirements/allowances, and rebate and other information associated with use of rainwater and graywater systems. For example, for rain barrels, the information at this link will be provided: <http://www.bawsca.org/docs/BASMAARainBarrelGuidance.pdf> . For graywater use, information similar to that provided by [San Francisco](#) or [Santa Clara Valley Water District](#) will be developed and distributed. Staff will also provide an insert in an upcoming water bill cycle that provides information.

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Fran David, City Manager

Attachments:

- | | |
|----------------|--|
| Attachment I | Responses from Some Bay Area Water Supply and Conservation Agency Member Agencies |
| Attachment II | 2013 California Plumbing Code Language Regarding Non Potable Rainwater Catchment Systems |
| Attachment III | 2013 California Plumbing Code Language Regarding Graywater Systems |
| Attachment IV | Rain Barrel Rebate Terms |

Question

The City of Hayward would like to know if your jurisdiction/district has adopted any ordinances, rules, or policies regarding installation of greywater and/or rainwater catchment systems. Also, is your jurisdiction/district implementing any programs that encourage the installation of greywater and/or rainwater catchment systems (other than the BAWSCA rain barrel rebate)? Thank you.

Responses

Agency	Response
American Water Enterprises	Not to my knowledge.
City of Foster City	The City of Foster City has not adopted any ordinances for the installation of greywater and rainwater catchment systems, except for adopting the 2013 California Plumbing Code. I do know that San Francisco and Oakland have local ordinances. (Hayward staff subsequently found information on laundry to landscape and rainwater harvesting at http://sfwater.org/index.aspx?page=97 and rain barrel information at http://www2.oaklandnet.com/Government/o/PWA/o/FE/s/ID/OAK025822)
City of Santa Clara	No. City of Santa Clara has not adopted grey water or rain catchment programs or ordinances.
City of Daly City	Nothing adopted and nothing being considered at this time by the City of Daly City. I hope this helps.
City of Menlo Park	The City of Menlo Park does not currently have any special greywater/rainwater catchment systems programs. Other than the BAWSCA rain barrel program and the State code that allows grey water from residential clothes washers to flow on to landscapes. We are planning a water master plan that might address this, so please let me know if you find some interesting models.
Santa Clara Valley Water District	We have a graywater laundry to landscape rebate program; you can get more info here: http://www.valleywater.org/GraywaterRebate.aspx . Would you be willing to share a summary of what you receive from others?
City of San Jose	The City of San Jose doesn't have any additional rules or policies for graywater or rainwater catchment systems (besides the State Code). Also we are not currently implementing any graywater or rainwater incentive programs, but Santa Clara Valley Water District implements a graywater rebate in all of Santa Clara County, including our service area in San Jose, and we are planning to participate in BAWSCA's rainbarrel rebate program starting next FY.
City of Palo Alto	Palo Alto has the following programs: Graywater: http://www.cityofpaloalto.org/gov/depts/uti/residents/resrebate/resiwater/default.asp# Laundry to Landscape Graywater Rebate Program Rain Barrels: http://www.cityofpaloalto.org/gov/depts/pwd/stormwater/rebates/rainbarrel.asp?BlobID=14858 Cisterns: http://www.cityofpaloalto.org/gov/depts/pwd/stormwater/rebates/cisterns.asp?BlobID=14858 Permeable Pavement: http://www.cityofpaloalto.org/gov/depts/pwd/stormwater/rebates/pavement.asp?BlobID=14858 We do not have anything in an ordinance that addresses these systems.
City of Mountain View	Mtn. View adopted the State greywater code (Chapter 16 of the 2013 Plumbing Code) and the Valley Water District offers at \$200 rebate for laundry to landscape systems throughout Santa Clara County (including in Mtn. View)

<p>Cal Water</p>	<p>Cal Water is a private water utility and therefore do not have power of ordinance. We do not have any rules or polices regarding grey water/rainwater catchment systems nor do we have programs regarding these measures. You may refer to our Conservation Master Plans per District at https://www.calwater.com/conservation/uwmp/ to see in detail how we came up with our five year plan and the evaluations we conducted on current conservation program measures, including greywater/rainwater catchment, to determine what fits best within our capabilities.</p>
<p>Town of Hillsborough</p>	<p>We do not have any policies/ordinances or rules regarding grey or rain water catchment systems.</p>
<p>City of Sunnyvale</p>	<p>At the moment, Sunnyvale is working with the Santa Clara Valley Water District on the Graywater Laundry to Landscape Rebate Program for graywater use. I have done water conservation outreach that consists of distributing water conservation give ways, such as buckets for graywater use. For rainwater catchment, Sunnyvale is working with BAWSCA on the Rain Barrel Rebate Program.</p> <p>The City of Sunnyvale is only encouraging these rebate programs. We have not adopted any ordinances, rules, or policies regarding installation of rainwater, or graywater catchment systems.</p>

CHAPTER 17

NONPOTABLE RAINWATER CATCHMENT SYSTEMS

1701.0 General.

1701.1 Applicability. The provisions of this chapter shall apply to the installation, construction, alteration, and repair of nonpotable rainwater catchment systems. *In addition, applicable provisions in Chapter 16, Sections 1601.0 through 1601.9 for "Alternate Water Sources for Nonpotable Applications" shall apply to rainwater catchment systems.*

1702.0 Nonpotable Rainwater Catchment Systems.

1702.1 General. The installation, construction, alteration, and repair of rainwater catchments systems intended to supply uses such as water closets, urinals, trap primers for floor drains and floor sinks, irrigation, industrial processes, water features, cooling tower makeup and other uses shall be approved by the Authority Having Jurisdiction.

1702.2 Plumbing Plan Submission. No permit for a rainwater catchment system shall be issued until complete plumbing plans, with data satisfactory to the Authority Having Jurisdiction, have been submitted and approved.

1702.2.1 Permit. *It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered, a nonpotable rainwater catchment system in a building or on a premise without first obtaining a permit to do such work from the Authority Having Jurisdiction.*

Exceptions:

- (1) *A permit is not required for exterior rainwater catchment systems used for outdoor non-spray irrigation with a maximum storage capacity of 5000 gallons (18 927 L) where the tank is supported directly upon grade and the ratio of height to diameter or width does not exceed 2 to 1 and it does not require electrical power or a makeup water supply connection.*
- (2) *[HCD 1 & HCD 2] A permit is not required for exterior rainwater catchment systems used for spray irrigation with a maximum storage capacity of 360 gallons (1363 L).*

1702.3 System Changes. No changes or connections shall be made to either the rainwater catchment system or the potable water system within a site containing a rainwater catchment system requiring a permit without approval by the Authority Having Jurisdiction.

1702.4 Connections to Potable or Reclaimed (Recycled) Water Systems. Rainwater catchment systems shall have no unprotected connection to a potable water supply or alternate water source system. Potable or reclaimed (recycled) water is permitted to be used as makeup water for a rainwater catchment system provided the potable or reclaimed (recycled) water supply connection is protected by an air gap or reduced-pressure principle backflow preventer in accordance with this code.

1702.5 Initial Cross-Connection Test. Where a portion of a rainwater catchment system is installed within a building, a cross-connection test is required in accordance with Section

1702.11.2. Before the building is occupied or the system is activated, the installer shall perform the initial cross-connection test in the presence of the Authority Having Jurisdiction and other Authorities Having Jurisdiction. The test shall be ruled successful by the Authority Having Jurisdiction before final approval is granted.

1702.6 Sizing. Rainwater catchment system distribution piping for indoor applications shall be sized as outlined in this code for sizing potable water piping. The design and size of rainwater drains, gutters, conductors, and leaders shall comply with Chapter 11 of this code.

1702.7 Rainwater Catchment System Materials. Rainwater catchment system materials shall comply with Section 1702.7.1 through Section 1702.7.3.

1702.7.1 Water Supply and Distribution Materials. Rainwater catchment water supply and distribution materials shall comply with the requirements of this code for potable water supply and distribution systems, unless otherwise provided for in this section.

1702.7.2 Rainwater Catchment System Drainage Materials. Materials used in rainwater catchment drainage systems, including gutters, downspouts, conductors, and leaders shall be in accordance with the requirements of this code for storm drainage.

1702.7.3 Storage Tanks. Rainwater storage tanks shall comply with Section 1702.9.5.

1702.8 Rainwater Catchment System Color and Marking Information. Rainwater catchment systems shall have a colored background in accordance with Section 601.2. Rainwater catchment systems shall be marked, in lettering in accordance with Section 601.2, with the words: "CAUTION: NONPOTABLE RAINWATER WATER, DO NOT DRINK."

1702.9 Design and Installation.

1702.9.1 Outside Hose Bibbs. Outside hose bibbs shall be allowed on rainwater piping systems. Hose bibbs supplying rainwater shall be marked with the words: "CAUTION: NONPOTABLE WATER, DO NOT DRINK" and Figure 1702.9.



FIGURE 1702.9

CHAPTER 16

ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS

Intent

The provisions of this chapter are intended to:

1. Conserve water by facilitating greater reuse of laundry, shower, lavatory and similar sources of discharge for irrigation and/or indoor use.
2. Reduce the number of non-compliant gray water systems by making legal compliance easily achievable.
3. Provide guidance for avoiding potentially unhealthful conditions.
4. Provide an alternative way to relieve stress on a private sewage disposal system by diverting the graywater.

1601.0 General.

1601.1 Applicability. [HCD 1] Except as otherwise provided for in this chapter, the provisions of this code shall be applicable to alternate water source system installation. [BSC & HCD 1] The provisions of this chapter shall apply to the construction, alteration, discharge, use and repair of alternate water source systems for nonpotable applications.

1601.1.1 Allowable Use of Alternate Water. Where approved or required by the Authority Having Jurisdiction, alternate water sources [reclaimed (recycled) water, rainwater, gray water and on-site treated nonpotable gray water] shall be permitted to be used in lieu of potable water for the applications identified in this chapter.

1601.2 System Design. Alternate water source systems complying with this chapter shall be designed by a person who demonstrates competency to design the alternate water source system as required by the Enforcing Agency. The Enforcing Agency may also require plans and specifications to be prepared by a licensed design professional for Complex Systems. Components, piping, and fittings used in any alternate water source system shall be listed.

1601.3 Permit. It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered an alternate water source system in a building or on a premise without first obtaining a permit to do such work. Prior to commencing the issuance of permits for indoor gray water systems pursuant to state requirements relating to gray water, a city, county, city and county or other local agency shall seek consultation with the local public health department to ensure that local public health concerns are addressed in local standards or ordinances, or in issuing permits. See California Water Code Section 14877.3.

Exception: [HCD 1] A construction permit shall not be required for a clothes washer system meeting the requirements of Section 1602.1.1.

1601.4 Component Identification. System components shall be properly identified as to the manufacturer.

1601.5 Maintenance and Inspection. Alternate water source systems and components shall be inspected and maintained in accordance with the manufacturer's recommendations and/or as required by the Enforcing Agency. [BSC] Where no manufacturers recommendations exist, additional recommendations are listed in Table 1601.5.

1601.5.1 Maintenance Responsibility. The required maintenance and inspection of alternate water source systems shall be the responsibility of the property owner, unless otherwise required by the Authority Having Jurisdiction.

1601.6 Operation and Maintenance Manual. An operation and maintenance manual for gray water, rainwater, and on-site treated water systems required to have a permit in accordance with Section 1601.3 shall be supplied to the building owner by the system designer or installer. The operating and maintenance manual shall include the following:

- (1) Diagram(s) of the entire system and the location of system components.
- (2) Instructions on operating and maintaining the system.
- (3) Instructions on maintaining the required water quality for on-site treated nonpotable water systems.
- (4) Details on startup, shutdown, and deactivating the system for maintenance, repair, or other purposes.
- (5) Applicable testing, inspection, and maintenance frequencies in accordance with Section 1601.5.
- (6) A method of contacting the installer and/or manufacturer(s).
- (7) Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.

1601.7 Minimum Water Quality Requirements.

1601.7.1 [BSC] The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. In the absence of water quality requirements for on-site nonpotable treated gray water systems, the requirements of NSF 350 shall apply.

Exception: Water treatment is not required for gray water used for subsurface/subsoil irrigation or a disposal field.

1601.7.2 [HCD 1] The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the public health Authority Having Jurisdiction. In the absence of water quality requirements for on-site treated nonpotable gray water systems, the following water quality requirements shall apply:

**TABLE 1601.5 [BSC]
RECOMMENDED MINIMUM ALTERNATE WATER SOURCE TESTING, INSPECTION, AND MAINTENANCE FREQUENCY**

DESCRIPTION	MINIMUM FREQUENCY
Inspect and clean filters and screens, and replace (where necessary).	<i>In accordance with manufacturer's instructions, and/or the Authority Having Jurisdiction, or every 3 months.</i>
Inspect and verify that disinfection, filters and water quality treatment devices and systems are operational and maintaining minimum water quality requirements as determined by the Authority Having Jurisdiction.	<i>In accordance with manufacturer's instructions, and the Authority Having Jurisdiction.</i>
Inspect pumps and verify operation.	<i>In accordance with manufacturer's instructions, and/or the Authority Having Jurisdiction, or after installation and every 12 months thereafter.</i>
Inspect valves and verify operation.	<i>In accordance with manufacturer's instructions, and/or Authority Having Jurisdiction, or after installation and every 12 months thereafter.</i>
Inspect pressure tanks and verify operation.	<i>In accordance with manufacturer's instructions, and/or the Authority Having Jurisdiction, or after installation and every 12 months thereafter.</i>
Clear debris from and inspect storage tanks, locking devices, and verify operation.	<i>In accordance with manufacturer's instructions, and/or the Authority Having Jurisdiction, or after installation and every 12 months thereafter.</i>
Inspect caution labels and marking.	<i>In accordance with manufacturer's instructions, and/or the Authority Having Jurisdiction, or after installation and every 12 months thereafter.</i>
Inspect and maintain mulch basins for gray water irrigation systems.	<i>As needed to maintain mulch depth and prevent ponding and runoff.</i>
Cross-connection inspection and test*	<i>In accordance with this chapter, and/or the Authority Having Jurisdiction, or after installation and every 12 months thereafter.</i>

* The cross-connection test shall be performed in the presence of the Authority Having Jurisdiction in accordance with the requirements of this chapter, unless site conditions do not require it. Alternate testing requirements shall be permitted by the Authority Having Jurisdiction.

- 1) *For owner occupied single family dwellings NSF/ANSI 350.*
- 2) *For R-1 and R-2 occupancies, the California Department of Public Health statewide uniform criteria for disinfected tertiary recycled water as provided in California Code of Regulations, Title 22, Section 60301.230.*

Exception: Water treatment is not required for gray water used in a disposal field or for subsurface or subsoil irrigation.

1601.8 Material Compatibility. Alternate water source systems shall be constructed of materials that are compatible with the type of pipe and fitting materials, water treatment, and water conditions in the system.

1601.9 System Controls. Controls for pumps, valves, and other devices that contain mercury that come in contact with alternate water source water supply shall not be permitted.

1602.0 Gray Water Systems.

1602.1 General. The provisions of this section shall apply to the construction, alteration, and repair of gray water systems. A city, county, or city and county or other local government may adopt, after a public hearing and enactment of an ordinance or resolution, building standards that are more restrictive than the gray water building standards adopted in this code. For additional information, see Health and Safety Code Section 18941.7.

(A) *All gray water systems shall be designed with a diverter valve to allow the user to direct the flow to the building sewer and either the irrigation field or disposal field,*

whichever is used. The means of changing the direction flow of the gray water shall be clearly labeled and readily accessible to the user.

- (B) *Water used to wash diapers or similarly soiled or infectious garments or other prohibited contents shall be diverted by the user to the building sewer.*
- (C) *Gray water shall not be used in spray irrigation, allowed to pond or runoff and shall not be discharged directly into or reach any storm sewer system or any surface body of water.*
- (D) *Human contact with gray water or the soil irrigated by gray water shall be minimized and avoided, except as required to maintain the gray water system. The discharge point of any gray water subsoil irrigation or subsurface irrigation field shall be covered by at least (2) inches (51 mm) of mulch, rock, or soil, or a solid shield to minimize the possibility of human contact.*
- (E) *Gray water may be released above the ground surface provided at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield covers the release point. Other methods which provide equivalent separation are also acceptable.*
- (F) *Gray water shall not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions.*
 - (1) *[HCD 1] The prohibition in Subsection (F) includes, but is not limited to, home photo labs or other similar hobbyist or home occupational activities.*
 - (2) *[BSC] photo labs or similar activities.*

- (G) Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any gray water system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the Enforcing Agency.
- (H) An operation and maintenance manual shall be provided to the owner. Directions shall indicate that the manual is to remain with the building throughout the life of the system and upon change of ownership or occupancy.
- (I) A gray water system shall not be connected to any potable water system without an air gap, reduced-pressure principle backflow preventer, or other physical device which prevents backflow and shall not cause ponding or runoff of gray water.

1602.1.1 [HCD 1] Clothes Washer System. A clothes washer system in compliance with all of the following is exempt from the construction permit specified in Section 1.8.4.1 and may be installed or altered without a construction permit:

- (1) If required, notification has been provided to the enforcing agency regarding the proposed location and installation of a gray water irrigation or disposal system.
- (2) The design shall allow the user to direct the flow to the irrigation or disposal field or the building sewer. The direction control of the gray water shall be clearly labeled and readily accessible to the user.
- (3) The installation, change, alteration, or repair of the system does not include a potable water connection or a pump and does not affect other building, plumbing, electrical, or mechanical components including structural features, egress, fire-life safety, sanitation, potable water supply piping, or accessibility.
Note: The pump in a clothes washer shall not be considered part of the gray water system.
- (4) The gray water shall be contained on the site where it is generated.
- (5) Gray water shall be directed to and contained within an irrigation or disposal field.
- (6) Ponding or runoff is prohibited and shall be considered a nuisance.
- (7) Gray water may be released above the ground surface provided at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield covers the release point. Other methods which provide equivalent separation are also acceptable.
- (8) Gray water systems shall be designed to minimize contact with humans and domestic pets.
- (9) Water used to wash diapers or similarly soiled or infectious garments shall not be used and shall be diverted to the building sewer.
- (10) Gray water shall not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste

solutions from home photo labs or similar hobbyist or home occupational activities.

- (11) Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any gray water system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the enforcing agency.
- (12) An operation and maintenance manual shall be provided to the owner. Directions shall indicate that the manual is to remain with the building throughout the life of the system and upon change of ownership or occupancy.

1602.1.2 Simple System. Simple systems exceed a clothes washer system and shall comply with the following:

- (1) The discharge capacity of a gray water system shall be determined by Section 1602.8. Simple systems have a discharge capacity of 250 gallons (947 L) per day or less.
- (2) Simple systems shall require a construction permit, unless exempted from a construction permit by the Enforcing Agency. The Enforcing Agency shall consult with the water purveyor for any public water system (as defined in Health and Safety Code Section 116275) providing drinking water to the dwelling or non-residential structure before allowing an exemption from a construction permit.
- (3) The design of simple systems shall meet generally accepted gray water system design criteria.

1602.1.3 Complex System. Any gray water system that is not a clothes washer system or simple system shall comply with the following:

- (1) The discharge capacity of a gray water system shall be determined by Section 1602.8. Complex systems have a discharge capacity over 250 gallons (947 L) per day.
- (2) Complex systems shall require a construction permit, unless exempted from a construction permit by the Enforcing Agency. The Enforcing Agency shall consult with the water purveyor for any public water system (as defined in Health and Safety Code, Section 116275) providing drinking water to the dwelling or non-residential structure before allowing an exemption from a construction permit.

1602.2 System Requirements.

1602.2.1 Discharge. Gray water shall be permitted to be diverted away from a sewer or private sewage disposal system, and discharge to a subsurface irrigation or subsoil irrigation system, or disposal field. The gray water shall be permitted to discharge to a mulch basin for residential occupancies. Gray water shall not be used to irrigate root crops or food crops intended for human consumption that come in contact with soil.

1602.2.2 Surge Capacity. Gray water systems shall be designed to have the capacity to accommodate peak

**Rain Barrel Rebate Program Requirements
Effective October 1, 2014**

1. Rebates are up to \$100 per 50 gallons of storage capacity or up to the total cost of the rain barrel, not including sales tax, whichever is less.
2. For self-made rain barrel systems, the rebate amount may be applied to the costs (before sales tax) associated with the purchase of accompanying accessories/hardware necessary for installing a rain barrel or modifying a downspout to connect a barrel (does not apply to new or replaced gutters or downspouts).
3. Qualifying rain barrels must be newly purchased, a minimum size of 50 gallons, and designed for the intended purpose of rain capture.
4. Rain barrel must have a secure lid for child safety and rust-proof fine mesh screening (e.g., like that on a window screen) or sealed designs for vector control (mosquito, rodent) and debris control.
5. The rain barrel must be connected to a rain gutter downspout, rain chain, or other effective means of capturing concentrated flow from roofs or other impervious surfaces.
6. Rain barrel must not be connected to the (potable water) irrigation system and collected rainwater must be utilized via a hose or bucket only.
7. Rain barrel must be placed on a solid and level foundation, such as concrete pad, pavers, or bricks for appropriate stability.
8. Rain barrel must not block or restrict access to walkways or pathways, which may become a safety/emergency access issue.
9. Rain barrel must be algae and UV-resistant or specially constructed sun barriers must be used.
10. Copper materials (including downspouts) are not allowed due to potential leaching concerns.
11. Overflow pipe from rain barrels must be directed away from buildings and/or adjacent properties and may flow to landscape (preferred).
12. Manufacturer's installation and maintenance instructions must be followed.
13. The rain barrel rebate application must be postmarked within 90 days of rain barrel purchase date.
14. The original rain barrel purchase receipt must be included with the application.
15. Pre-installation and post-installation photos must be included with the application. At least two clear photos of each barrel must be submitted, showing downspout connections, secured lid and overflow valve, and an 8 1/2 x 11 sheet showing the date and water account number (include photos taken from at least two directions).
16. All sites are subject to post-installation inspection at the discretion of the Participating Agency or the local mosquito and vector control agency, where applicable. The Participating Agency that serves the site in question will contact the customer and, at the agency's discretion, perform the

post-installation inspection.

17. The rain barrels must be purchased between September 1, 2014 and June 30, 2015.
18. A separate application must be submitted for each metered address.
19. Rain barrels must be installed within the County of San Mateo to be eligible for a rebate from San Mateo Countywide Water Pollution Prevention Program.
20. All rebates are subject to availability of funds.
21. Rebates may take up to eight (8) weeks to process.
22. If customer needs their original receipt(s) returned, they must enclose a self-addressed, stamped envelope with their application.
23. Applicant certifies that necessary permissions have been obtained from the property owner, if applicant is not the owner.
24. Limit of two rebates per single-family residential account or four rebates per commercial account. Applications for more than four rebates for a commercial account will be considered on a case by case basis. If more than four rebates are requested for a commercial account, pre-approval is required but not necessarily guaranteed.
25. Rain barrel must be maintained for a minimum of three years upon receipt of rebate, including ongoing maintenance to ensure that the barrel does not become a breeding site for mosquitos and thereby a public health threat.
26. Rebates may be issued as checks or as credits to the customer's water service account, at the discretion of the participating BAWSCA agency.
27. Participants must allow BAWSCA and the San Mateo Countywide Water Pollution Prevention Program to reference the project and use photos submitted with the application in outreach materials and must respond to minimal requests for information about the project for purposes of Program reporting.

Installation Recommendations

The Program will include the following installation recommendations:

- Refer to the Bay Area Stormwater Management Agencies Association's Rain Barrels and Cisterns: Stormwater Control for Small Projects for installation guidance.
- Locate the rain barrel on a raised foundation to accommodate a watering can and increase gravity flow.
- Placement of the outlet pipe/faucet a maximum of 6 inches from the bottom of rain barrel.
- Consider strapping rain barrel similar to earthquake straps for hot water heaters, or per manufacturer recommendations.
- Consider limiting height:width ratio of the rain barrel to 2:1 to prevent instability.

DATE: March 23, 2015
TO: City Council Sustainability Committee
FROM: Director of Utilities & Environmental Services
SUBJECT: Additional State Emergency Water Conservation Regulations

RECOMMENDATION

That the Committee reviews and comments on this report.

SUMMARY

This report provides information about the revisions to the existing Emergency Regulations for Statewide Urban Water Conservation (initially adopted by the State Water Resources Control Board in July 2014, and modified on March 17, 2015), which require water agencies to expand the prohibition of certain water uses, enforce those prohibitions, and report consumption and enforcement activities back to the State Water Board.

BACKGROUND

The Urban Water Management Planning Act requires water agencies to prepare a Water Shortage Contingency Plan (WSCP) to identify specific actions that would be taken in the event of a drought or catastrophic event. The City's WSCP (Attachment I), contained in the City's Urban Water Management Plan, includes four water shortage stages, each of which specifies increasingly stringent actions and water use prohibitions. Each stage reflects the severity of the drought conditions and the limitations imposed on the City by its wholesale supplier.

On July 15, 2014, the State Water Board adopted Emergency Regulations for Statewide Urban Water Conservation, prohibiting wasteful outdoor water uses such as overwatering landscapes, washing outdoor surfaces and using hoses without shut-off nozzles. Urban water purveyors, including Hayward, were required to comply with the Emergency Regulation through implementation of the agency's WSCP. At the September 23, 2014 City Council meeting, staff recommended, and the Council approved, that the City's WSCP be amended and incorporate the State's mandatory prohibitions into the Stage I actions and that a Stage I water shortage be declared.

On March 17, the State Water Board approved an extension of the Emergency Regulations for Statewide Urban Water Conservation, which was scheduled to expire on April 27, 2015. The extension was in response to the continued warm and relatively dry weather conditions that have

reduced the amount of snowpack in the Sierras, as well as the continued need to ensure that urban water suppliers are taking sufficient actions to conserve water and preserve the State's water supply.

DISCUSSION

In addition to approving an extension of the current Emergency Regulations for Statewide Urban Water Conservation, the State Water Board also included additional requirements for urban water suppliers, including:

- A prohibition on irrigation of turf or ornamental landscapes during and 48 hours following measurable precipitation.
- Hospitality sector restrictions requiring that water only be served on request in restaurants and bars, and requiring that the operators of hotels and motels offer patrons the option of not having their towels and linens washed daily.
- A requirement for urban water suppliers that do not already have a limit on the number of days that outdoor irrigation of ornamental landscapes or turf with potable water is allowed, to limit such irrigation to no more than two days per week.
- A requirement that urban water suppliers promptly notify their customers when they are aware of leaks within the customer's control.
- Additional reporting requirements for urban water suppliers on compliance and enforcement efforts being undertaken within their service areas.

Although the City's WSCP presently contains an irrigation limit of two days per week, and staff is already promptly notifying customers when made aware of leaks, the other prohibition items listed above are not explicitly stated in the Stage I voluntary conservation actions and mandatory prohibitions. Therefore, the City's WSCP will need to be further amended to include the new requirements to ensure compliance with the regulations. This item will be considered for adoption by the City Council at its April 7 meeting.

Consumer Education

A strategic communications plan was developed by the City's Community & Media Relations Officer to raise awareness of the drought conditions, acknowledge the water savings that Hayward customers have achieved so far, and promote water conservation and best practices. Staff continues to work with regional partners, using a variety of communication tools, including billboard messages, social media, direct mail, email newsletters, and updated website information, to inform and encourage customers to take the drought seriously and cut back where possible in order to delay more draconian mandatory reductions if the drought continues.

A "Drought Watch" website has been developed to provide updated and relevant information about drought conditions locally and throughout the State and can be accessed at <http://www.hayward-ca.gov/droughtwatch/>. Additional communication will be delivered as necessary through the spring and summer to maintain awareness of the drought and achieve water use reduction targets.

Specific outreach targeted at the hospitality sector will be implemented to ensure that those businesses are aware of the new regulations. Staff will also provide those businesses, such as restaurants and hotels, with materials needed to inform their customers of the new water restrictions, if requested.

It is noteworthy that Hayward residents continue to be among California and the Bay Area residents with one of the lowest per capita water consumptions.

Enforcement Activities

Staff has developed an enforcement program to ensure compliance with the Emergency Regulations. A dedicated telephone line and email address has been established and publicized to receive reports of water waste. Reports of water waste are also being listed as an option in the Access Hayward system. Furthermore, all City staff, particularly those out in the field, have been instructed to report instances of wasteful water use that they may observe.

Staff relies initially on written communications to address reported violations by issuing letters to responsible property owners. In many cases, formal notification from the City is sufficient to achieve compliance. If violations continue and no contact has been made with the customer, staff follows up on the report by placing a door hanger on the property, advising the customer of the violation and the potential for further enforcement. For particularly egregious and ongoing violations, staff is prepared to accelerate enforcement action up to and including administrative citations. Authority for issuing citations is contained in the Nonessential Water Use Prohibition Ordinance. The Ordinance also enables staff to terminate or restrict water service if necessary to bring the customer into compliance.

To date, seventy-seven reports of water waste have been received and letters have been issued to the responsible property owners. Staff has not yet had the need to issue administrative citations.

ECONOMIC IMPACT

Although not yet significant, the costs of implementing actions to meet the State Water Board's directive and achieve water use reductions will be included in the expense side when new water rates are set.

FISCAL IMPACT

Water conservation program management staffing is provided by the Utilities & Environmental Services Department and is funded entirely in the Water Operating Fund. There are no General Fund impacts. Staff is generally using readily available and low cost methods for outreach. Some staff time is needed to develop the strategic communications plan and to follow up on reports of excessive use.

PUBLIC CONTACT

Public and business outreach will be conducted throughout the year following adoption of the expanded regulations.

NEXT STEPS

Staff will continue to monitor the water supply situation and provide periodic updates. The amended WSCP will be considered by the City Council on April 7 and additional outreach and enforcement will be implemented as needed.

Prepared by: Alicia Sargiotto, Senior Utility Service Representative

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I City of Hayward's Water Shortage
Contingency Plan

CITY OF HAYWARD
WATER SHORTAGE CONTINGENCY PLAN
 (Excerpted from 2010 Urban Water Management Plan and Revised)

In response to a water shortage due to climate conditions, emergency event or other causes, the City would implement a Water Shortage Contingency Plan.

Stages of Action

Hayward's past experience with water shortages, most notably in 1977 and from 1987-1992, has shaped its current plans for managing such an event in the future. The following stages have been developed to respond to increasingly severe drought conditions and are triggered by water supplies.

Table 5-12
Water Shortage Stages of Action

Stage	Water Supply Conditions	% Shortage
I	<ul style="list-style-type: none"> • Single or multiple dry year(s) • Supply is 90 to 99% of normal 	Up to 10%
II	<ul style="list-style-type: none"> • Critically dry year • Supply is 80 to 90% of normal 	10 – 20%
III	<ul style="list-style-type: none"> • Second dry year or critically dry year • Supply is 50 to 80% of normal • Loss of 20 to 50% of supply due to emergency 	20 – 50%
IV	<ul style="list-style-type: none"> • Supply is less than 50% of normal • Loss of 50% or more of supply due to emergency 	Over 50%

Source: City of Hayward

Hayward's most recent experience with severe water supply shortages was during the state-wide drought of the early 1990s, in which Hayward customers reduced water use by 27%. The rationing program implemented was modeled on the very successful effort launched in 1977, in which Hayward customers reduced water usage by about 32%. More recently, a Stage I rationing effort was implemented following SFPUC's requested voluntary reduction of 10% in 2007. Although no mandatory prohibitions were implemented, the voluntary actions taken by Hayward customers resulted in Hayward exceeding the reduction target.

However, given the programmatic water conservation measures which have been implemented in recent years and resulting decreases in water usage, it will be more difficult to achieve further savings during a drought through voluntary measures alone. The actions associated with a Stage I water supply condition contain a mix of mandatory prohibitions and voluntary actions.

Succeeding stages of action mandate additional restrictions. Because water supply conditions vary, even during periods of dry conditions, the Water Shortage Contingency Plan is flexible and may be adapted to fit current conditions.

Stage I - Voluntary Conservation Actions and Mandatory Prohibitions

The following list identifies specific voluntary and mandatory conservation actions that Hayward customers are asked to take during a Stage I rationing effort. Hayward would implement a public information campaign to specifically address the situation.

Voluntary Actions

- Limit irrigation to early morning and evening hours to reduce evaporation
- Limit irrigation to no more than two days per week
- Install water saving fixtures and appliances
- Ensure full loads in dishwashers and clothes washing machines

Mandatory Prohibitions

- Any use of water that results in significant runoff to streets, driveways or sidewalks
- Irrigation of lawns, landscaping or other vegetated areas in a manner that allows significant amounts of potable water to flow onto adjacent property, non-irrigated areas, private and public walkways, roadways, or parking lots
- Irrigation of lawns, landscaping or other vegetated areas during and 48 hours following measureable precipitation
- Serving water in restaurants and bars (unless specifically asked by customer)
- Washing towels and linens on a daily basis in hotels and motels (unless specifically asked by the customer)
- Use of potable water due to broken or defective plumbing or irrigation systems
- Use of potable water to wash sidewalks, driveways, parking lots, buildings, and other outdoor areas and structures
- Use of a hose for any purpose, including vehicle washing, unless the hose is equipped with a shut-off nozzle that causes it to cease dispensing water immediately when not in use
- Use of potable water in decorative water fountains or other ornamental water features unless water is recirculated

Stage II and III – Additional Mandatory Actions

Table 5-13 lists additional mandatory prohibitions and the rationing stage at which they would be implemented.

Table 5-13
Water Use Prohibitions

Prohibition	Stage When Prohibition Becomes Mandatory
<ul style="list-style-type: none"> • Water use in excess of allocation (implement rate structure appropriate to the shortage) • Filling or refilling swimming pools, spas or hot tubs • 	<p style="text-align: center;">Stage II (10% to 20% reduction)</p>
<ul style="list-style-type: none"> • Washing vehicles, except in commercial carwashes • Using potable water in construction activities unless no other water is available 	
<ul style="list-style-type: none"> • Continuation of all Stage II prohibitions • Using potable water for cooling purposes and commercial car washes, unless recycled • Using potable water for golf course irrigation • Use of potable water for street sweeping • Use of potable water to irrigate landscaping in new developments 	<p style="text-align: center;">Stage III (20 to 50% reduction)</p>

Source: City of Hayward draft ordinances and resolutions

Stage IV – Additional Reductions

In a Stage IV rationing effort, the City would intensify all of the prohibitions as listed in Table 6-13. Additional measures would be added to achieve savings. The majority of additional savings would come from further reduced customer allocations.

DATE: March 23, 2015

TO: City Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT: Update on Community Choice Aggregation

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

In June 2014, the Alameda County Board of Supervisors voted to study the feasibility of establishing a county-wide community choice aggregation (CCA) program. As noted on the County's website¹, "CCA is a program that enables local governments to aggregate electricity demand within their jurisdictions in order to procure electricity for its customers while maintaining the existing electricity provider, Pacific Gas & Electric Company, for customer billing, transmission, and distribution services." The County intends to hire a consultant to prepare a feasibility study and will form a steering committee to help guide the preparation of the study and possibly assist with formation of a CCA.

Staff provided information about the CCA to the Committee on January 29, 2014² and May 7, 2014³. On September 11, 2014⁴, staff provided an update to the Committee summarizing the progress made by the County during the months of June, July, and August. Since September, the Alameda County Board of Supervisors Transportation and Planning Committee met on October 6, 2014, December 8, 2014, February 2, 2015, and March 12, 2015. The purpose of these meetings has been to discuss goals and objectives for the program as well as the structure of the steering committee that will be formed to advise County staff and the County Board of Supervisors. At issue has been whether to form a separate technical committee and a citizens committee or one large committee.

¹ <http://www.acgov.org/cda/planning/cca/index.htm>

² See Item #5 at: <http://www.hayward-ca.gov/CITY-GOVERNMENT/COUNCIL-STANDING-COMMITTEES/COUNCIL-SUSTAINABILITY-COMMITTEE/2014/CSC-CCSC012914full.pdf>

³ See Item #2 at: <http://www.hayward-ca.gov/CITY-GOVERNMENT/COUNCIL-STANDING-COMMITTEES/COUNCIL-SUSTAINABILITY-COMMITTEE/2014/CSC-CCSC050714full.pdf>

⁴ See Item # 6 at <http://www.ci.hayward.ca.us/CITY-GOVERNMENT/COUNCIL-STANDING-COMMITTEES/COUNCIL-SUSTAINABILITY-COMMITTEE/2014/CSC-CCSC091114full.pdf>

DISCUSSION

As noted in the May 7, 2014, report to the Committee, a key consideration in the possible formation of a CCA will be whether or not the CCA can provide electricity with fewer greenhouse gas (GHG) emissions compared to that of PG&E. PG&E currently has a relatively high percentage of nuclear, hydroelectric, and renewable sources, and, in response to state legislation, PG&E is continuously adding more renewables. For this reason, it is possible that, in terms of GHG emissions, a CCA could provide only a small savings compared to PG&E's portfolio. Another consideration would be the level of financial risks involved with a CCA. There is potential for the CCA's pricing to not be competitive with PG&E's (as in recent years has been the case with municipalities that purchase natural gas and distribute it to retail customers in their jurisdictions). These issues will be addressed in the County's feasibility study and must be carefully considered and vetted before the City decides to join a CCA.

On March 12, the Transportation and Planning Committee of the Alameda County Board of Supervisors directed County staff to proceed with formation of a single steering committee. As described in a memorandum to the Committee (Attachment I), the steering committee will have twenty-six to thirty-three members, including two to three appointees selected by each of the five Supervisors as well as one representative from each of the County's fourteen cities. The report states that the city representatives "would be selected by city officials and may or may not be city staff or councilmembers. Whoever is designated will, by proxy, be participating on behalf of their jurisdiction and should have decision-making authority." Given the importance of CCA and its policy implications, staff believes that the City's representative should be an elected official, preferably a member of CSC. Staff would appreciate CSC's comments and direction on this issue so that staff can reflect the direction on its request to Council for designating a CCA representative following the County's invitation. If a Council member is chosen to represent Hayward on the steering committee, staff would attend the meetings as well to stay informed, provide support to the attending Council Member, and to provide input to the committee when appropriate.

One of the key roles for the steering committee will be to provide input on the scope of work for the feasibility study. During the March 12 meeting, it was pointed out that the memorandum states the County anticipates issuing a request for proposals (RFP) for the study on April 1, but the committee won't meet until the second half of May. County staff responded that they intend to issue the RFP with a preliminary scope on April 1 so that consultants can begin preparing responses, but that the scope of work will be finalized after the committee has a chance to provide input.

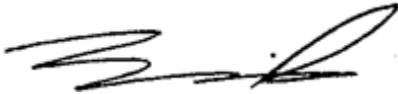
Staff expects to receive a letter from the County inviting steering committee participation soon. The first steering committee meeting will likely be in mid to late May and the committee will meet on a monthly or bi-monthly basis throughout the study of the possible CCA and if the County decides to establish a CCA, the committee would continue to meet during the formation process. Meetings are expected to last approximately two hours and will likely take place in the early evening hours.

Finally, the County's CCA website currently includes a survey to allow interested citizens to rank a set of six potential names, taglines, and logos, which will be used while the County is studying CCA and, if a CCA is formed, they would be used in marketing the program.. The survey is scheduled to continue through April 4, after which rankings will be tallied and announced.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I Memorandum to the Board of Supervisors, Transportation
& Planning Committee dated March 12, 2015



ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY

PLANNING DEPARTMENT

Chris Bazar
Agency Director

MEMORANDUM

To: Board of Supervisors, Transportation & Planning Committee

Albert Lopez
Planning Director

From: Chris Bazar, Director, Community Development Agency

224
West Winton Ave
Room 111

Re: Community Choice Aggregation: Proposed Steering Committee Composition and Public Participation Model

Hayward
California
94544

Date: March 12, 2015

phone
510.670.5400
fax
510.785.8793

The Board of Supervisors has directed the Community Development Agency (CDA) to determine if a Community Choice Aggregation (CCA) program is feasible for Alameda County. A CCA program would allow for competition in electricity generation services and accelerate investments in clean energy resources and local energy projects. Central to this initiative is the creation of a CCA Steering Committee that will advise the Board on key aspects of the program’s development and provide a forum through which key stakeholders and the public can express their views. This Memorandum outlines CDA recommendations on how to structure the committee and select its members. The memorandum also briefly discusses other items related to the CCA process.

www.acgov.org/cda

Steering Committee. At the last Transportation and Planning Committee (T&P) meeting on February 2, 2015, two separate committees were discussed – a technical committee and a citizen’s advisory committee, the latter providing a forum in which CCA advocates and other stakeholders could participate. Based on feedback from the T&P meeting, input from stakeholders, and CDA internal discussions, the general consensus is that a single steering committee with the composition outlined below would be the most productive, streamlined, and inclusive approach for all concerned.

The single CCA Steering Committee would consist of the following groups:

1. Two to three appointees from each of the five Supervisorial Districts. These appointees would represent both geographical diversity across the county and diversity in stakeholder interests and expertise (see more detail below).
2. One representative from each of the County’s 13 cities¹. These participants would be selected by city officials and may or may not be city staff or councilmembers. Whoever is designated will, by proxy, be participating on behalf of their jurisdiction and should have decision-making authority.
3. A small number of “at large” representatives (we would suggest three to five) that have either: (a) particular energy expertise (e.g., distributed generation/clean power technology); or (b) county-wide or regional interests, such as ABAG, BART, Lawrence Berkeley/Livermore Labs, UC Berkeley, etc. Staff recommends that these committee members be appointed by their respective organizations, and staff would report these appointments to the Board.

¹The City of Alameda would not be able to participate in a CCA program because it already has its own municipal utility. However, we recommend extending an invitation and giving them the option to participate on the Steering Committee.

Transportation and Planning Committee
 March 12, 2015
 Page 2

This composition would mean the Committee would have a minimum of 26 and maximum of 33 members, (we feel it would be difficult for the body to be effective if it is larger than this). For Categories 1 and 3 described above, we are proposing a simple application process to fairly solicit and qualify interested participants. Attached is a sample application form, which would be posted on the CDA website, distributed through the County's CCA list serve, and also be made available to a wide array of stakeholders through traditional means.

Per the timeline below, once the application is released, applicants will have three weeks to respond. CDA will work with BOS offices to review and score applicants based on District representation, stakeholder group representation and relevant qualifications. A final slate of recommendations will be presented to the Board for final approval. As mentioned above, it will be important to have a diverse set of interests represented, including end users, labor unions, environmental organizations, civic and business groups, community organizations, social justice groups, etc. Given size limitations intrinsic to any committee of this type, there may be some interested parties who are not formally appointed; however, all meetings will be open to the public, and sub-committees may be formed as appropriate. The Committee will be subject to the Brown Act and will meet on a monthly or bi-monthly basis throughout the CCA formation process.

CDA will prepare all materials for the Committee meetings and will serve as committee staff. One of the first tasks of the Committee will be to finalize the scope of the CCA technical study, which will be required to size the CCA program and determine its overall feasibility. Staff proposes a Technical Consultant contract process slightly different from the normal contractual process – CDA staff has prepared a draft RFP which, when finalized, would contain the necessary basic information about scope of work and program objectives to inform prospective consultants of the job to be done; in the meantime, the Committee would be able to examine the scope of work and program objectives, and make recommendations to Staff and the Board to ensure broad community input. These recommendations, as appropriate, would then be presented to the prospective technical consultants as the final scope of work, hiring would occur, and the CCA feasibility analysis would then commence.

Once the analysis is completed, the Committee will provide preliminary review and make recommendations to the Board regarding next steps in the CCA formation process. Our current timeline has a potential CCA launch in early-2017, so we are planning to have the technical study completed by this fall for a determination about whether to proceed into Phase II.

Proposed Timeline: With regard to the CCA Steering Committee, CDA proposes the following timeline for the Board's consideration:

- Application form posted and sent: March 12, 2015
- Application Deadline: March 31, 2015
- CDA review and preliminary recommendations completed: April 20, 2015
- Board of Supervisors Approval: Week of May 5, 2015
- Notification to Steering Committee Participants: Week of May 5, 2015
- First Meeting of Steering Committee: Week of May 18 or May 25, 2015

Other Items Related to CCA.

- a. Website – The Alameda County CCA website is online and available for viewing. It includes a program and process description, a list of public meetings related to CCA along with pertinent documentation, and a page for Frequently Asked Questions (FAQ) that should answer most basic questions about CCA formation and function. The website may be found at the web address <http://www.acgov.org/cda/planning/cca/index.htm>.

Transportation and Planning Committee
March 12, 2015
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- b. CCA Logo Survey – Also online is a CCA Logo Survey, to allow interested citizens to rank a set of six potential logos in order to help determine a favorite. The Survey is found at URL <http://www.acgov.org/cda/planning/cca/survey.htm>, and is also linked directly from the webpage. The Survey is tentatively set to continue through April 4, after which rankings will be tallied and announced.
- c. Request for Proposals (RFP) for Technical Consultant – the RFP for a technical consultant to prepare a feasibility study is nearly complete, and Staff intends to issue this RFP by April 1. Although the RFP is to be issued soon, the precise scope of work will be considered by the new Steering Committee, and its input reflected in the scope.
- d. Invitation Letter to Municipalities for Steering Committee Participation – Staff has drafted an Invitation Letter to the various municipalities in the County, requesting their participation in and appointment of members to the Steering Committee, which we are ready to distribute as soon as we receive direction from the T&P Committee to do so.

Attachment: Draft Steering Committee Application

cc: Susan Muranishi, CAO
Each Member, Board of Supervisors

DATE: March 23, 2015

TO: City Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT: USEPA Region IX (Storm) Water Quality Improvement Grant

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

Under the National Pollutant Discharge Elimination System (NPDES) permit program for non-point source discharges to the waters of the state, which was an amendment to the federal Clean Water Act (CWA) in 1987, the City is regulated by the Municipal Regional Stormwater Permit (MRP) for its stormwater discharge to the San Francisco Bay. The MRP consists of twenty-one (21) provisions, including fourteen (14) provisions prescribing best management practices (BMPs) the City must implement. Provision C.10 of the MRP, Trash Load Reductions, requires a number of trash reduction activities including a 70% reduction of trash by the year 2017 and a 100% reduction of trash by the year 2022.

To comply with provision C.10, the City currently reduces trash using one large underground trash capture device located under Tennyson Road that filters 150 acres of stormwater runoff and 79 small trash capture devices located in storm drain inlets throughout the City to filter stormwater runoff from various streets. The City also has an aggressive street sweeping program, including: parking restrictions to limit cars parked on the streets during street sweeping activities; maintenance crews removing trash found on the streets and in open spaces; and a trash can management program to improve the collection of trash from City containers and minimize overflowing trash. In addition, the City's adopt-a-block program, and clean up events by the Keep Hayward Clean and Green (KHCG) Task Force are annually reported as active control measures that reduce trash in Hayward.

The City's stormwater program is managed by the Water Pollution Source Control (WPSC) program within the Environmental Services Division. WPSC actively assesses trash in the streets and is mapping trash problems in an ongoing effort to report trash reduction and meet the MRP's C.10 requirements. WPSC has researched grant opportunities to fund additional trash control measures, primarily trash capture devices to reduce Hayward's trash impact to the Bay and comply with the 100% trash reduction schedule in the MRP. In 2014, WPSC wrote and submitted a proposal entitled a

“Youth-Based Trash Capture, Reduction, and Watershed Education Project” (Attachment I) to the San Francisco Bay Water Quality Improvement Fund. The following discussion is a result of that effort.

DISCUSSION

The EPA Region 9 has awarded the City \$800,000 from the San Francisco Bay Water Quality Improvement Fund for the Youth-Based Trash Capture, Reduction, and Watershed Education Project (Project) proposal. The City’s proposal was one of thirty-two received by the EPA Region 9, requesting over \$39 million to improve water quality throughout the Bay Area. Eight proposals were selected to be funded, totaling approximately \$14 million. Four proposals were selected to be funded in 2014. An additional four proposals were selected to be funded in 2015, including Hayward’s proposal.

The project is a four-year, \$1.6 million project, to include \$800,000 of USEPA grant funds and matching contributions of \$800,000 from the City and its partners as in-kind resources. The in-kind contributions would be in the form of staff time. It will begin in spring of 2015 and end in spring of 2019. The project is designed to reduce trash in the City by partnering with local school groups to install large trash capture devices (large underground stormwater filters) in the City’s storm sewer system, characterize and quantify trash collected from each device, assess trash sources, and implement trash reduction initiatives based on trash collected.

The City will partner with the Hayward Unified School District, private schools, and the Youth Commission, from which seventh through twelfth grade students will have an opportunity to assist the City’s stormwater pollution prevention program with trash capture design, trash collection and assessment. Subsequent trash reduction activities will include researching the sources of trash and designing anti-littering campaigns amongst their student peers and beyond, and helping to develop anti-littering activities such as posters and worksheets.

During the first year of the project, the trash devices (a minimum of two large devices) will be installed (scheduled for the fall of 2015) and the following three years will be assessed for effectiveness during their maintenance (how much and the type of trash the devices remove). Concurrently, the school children will begin a curriculum designed by the project beginning in September 2015 to learn about stormwater management and to actively participate in designing the locations and installation of the devices. In the months following installation, the school children will begin assessing trash collected from the devices as well as learning trash management through WPSC’s program of assessing trash on the streets, mapping trash, and designing outreach to the community. Additional partners include:

1. California State University East Bay (who will provide interns, staff resources, and project support);
2. Hayward Area Recreation and Park District (HARD) (who will provide staff resources, project support, and their nature facilities);
3. East Bay Regional Park District (who will provide staff resources, project support, and their nature facilities);

4. Hayward Promise Neighborhood through Chabot College (who will provide staff resources and project support);
5. Keep Hayward Clean & Green Task Force (who will provide staff resources and project support);
6. Alameda County-Wide Clean Water Program (who will provide staff resources, materials, and project support); and
7. Eden Area YMCA (who will provide staff resources and project support).

Implementation of this project will contribute toward compliance with C.10, support the City Council's adopted priorities of "Safe, Clean and Green", increase Hayward's sustainability as a community, protect the Bay Area waters including local creeks, beaches and San Francisco Bay, and educate students about trash-related pollution prevention.

ECONOMIC IMPACT

The project will provide economic benefits, not only by reducing pollution into our local waterways thus reducing the money spent on trash reduction by City staff, but also provide an increase in community involvement and education during its school outreach activities.

FISCAL IMPACT

The project will have minimal impact on the City's General Fund. In-kind staff resources will be provided by already-budgeted staff positions in the Environmental Services Division and the Maintenance Services Department staff that are funded in the Stormwater Fund. An interdisciplinary staff team will coordinate the installation of the trash devices and outreach activities with the school children. The grant monies will provide \$800,000 toward trash reduction activities. Had this grant not been secured, the City would have had to bear the entire cost of programs to reach 100% trash reduction by the year 2022, which is a MRP requirement.

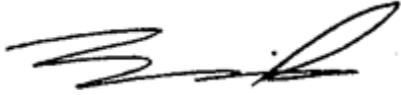
NEXT STEPS

Staff will be coordinating with the project partners (HUSD, the park districts, private schools, the Keep Hayward Clean and Green Task Force, YMCA, Youth Commission, and local colleges) in the next 3-4 months to organize the school curriculum as well as to plan the installation of the trash capture devices (purchasing and installation). Installation of the devices is tentatively scheduled for the fall of 2015 and the school curriculum will begin in September 2015, pending the school programs' availability. Scheduling for the project's four-year period will be finalized in the next two months.

Prepared by: Elisa Wilfong, Water Pollution Control Administrator

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I Hayward Youth-Based Trash Capture, Reduction,
and Watershed Education Project Proposal

San Francisco Bay Water Quality Improvement Fund
Full Proposal: Hayward Youth-Based Trash Capture, Reduction,
and Watershed Education Project

City of Hayward

July 16, 2014

I. PROJECT ABSTRACT

The City of Hayward's (City) Youth-Based Trash Capture, Reduction and Watershed Education Project (Project) will partner with local school groups to install two (2) large trash capture devices in the City's municipal storm sewer system, characterize and quantify trash collected from each device, assess trash sources and implement trash reduction initiatives based on trash collected. The City will partner with the Hayward Unified School District, private schools, and the Hayward Youth Commission (HYC), where 7th-12th grade students will have an opportunity to assist the City's stormwater pollution prevention program with trash capture design, trash collection and assessment, subsequent trash reduction activities, and help develop watershed activities and education and engage with 1st-6th grade students. In addition, the City will partner with the Hayward Area Recreation and Park District (HARD), the East Bay Regional Park District, and others to promote trash reduction activities with children and educate young people about Hayward's local ecology, connecting the message of littering and its impacts to wildlife and water bodies. The two large trash capture devices will treat approximately 693 acres and remove approximately 20,000 gallons of trash per year that would otherwise wash downstream, into the San Francisco Bay along the Hayward shoreline. This youth-based partnership will begin with the installation of the trash devices (learning about hydrology, engineering, and environmental science) and will include assessing the trash collected by the devices, designing trash reduction activities, cleaning Hayward's streets during school events and contests, and creating awareness of trash and the importance of keeping our watershed free of trash. Implementation of this Project will provide compliance with Provision C.10, Trash Load Reduction, of the Municipal Regional Stormwater NPDES Permit (MRP), which requires 100% trash reduction by 2022. The Project will also support the City Council adopted priorities of "Safe, Clean and Green", and increase Hayward's sustainability while becoming a litter-free community. A youth-based trash reduction project template for use by other watersheds will be also developed to assist other agencies in implementing a similar program.

II. PROJECT BACKGROUND

Trash is a severe pollution source for the San Francisco Bay Watershed, its creeks and shoreline, the Bay itself, and the Pacific Ocean. Trash impairs water quality, creates an aesthetic nuisance, degrades recreational water resources, and poses a health risk to freshwater ecosystems, estuaries, and the ocean. Some trash, such as plastic, does not biodegrade and threatens wildlife through ingestion, entrapment, and entanglement. Trash also leaches harmful chemicals into the environment and in some cases, contaminates a community's drinking water.

Hayward recognizes trash is a pollution source that also endangers the City's watershed. As its slogan suggests, Hayward is situated as the 'Heart of the Bay' and encompasses not only a dense, culturally diverse population in the central East Bay but also a rich ecological diverse landscape as well. The City's boundaries overlap two major watersheds: San Lorenzo Creek Watershed to the north and Alameda Creek Watershed to the south including a well-known subwatershed, Sulphur Creek Watershed (see Attachment 1: Hayward Watershed Map). The City has a

substantial urban environment sustaining a viable watershed system from the eastern hillside boundary to the western waters of the Bay. The City has a complex creek system that flows from the Hayward Hills beginning as natural creeks and riparian woodlands, through the downtown and southern residential areas, to the Bay via channelized creeks. Five major creeks flow through the City, two of which have main outfalls to the Bay and run along the border of the City (Sulphur Creek and Alameda Creek). Alameda Creek is included in the Regional Water Quality Control Board's (Water Board) 303(d) list as impaired with trash. The City also has a manmade flood control channel that collects stormwater from central Hayward and discharges to the Bay. Hayward is deeply concerned with protecting and preserving its creeks and ecological diversity from trash pollution. It is clear that even with the City's extensive current trash reduction activities (i.e., manual pick up of trash, street sweeping, storm drain inlet cleaning, volunteer street cleanups, products bans, trash ordinances, trash capture devices, local enforcement, etc.) more and innovative efforts need to be implemented to address the trash pollution problem. The City needs additional resources to meet this challenge and to comply with the MRP's trash reduction goals.

To comply with the MRP and meet the trash reduction requirement of 100% by 2022, the City created a Long-Term Trash Reduction Plan (Plan) to address trash problems in receiving waters by reducing the impacts associated with trash in discharges from Hayward's municipal separate storm sewer system (MS4). One of the control measures in the City's Plan for reducing trash is a goal to deploy infrastructure improvements, primarily large trash capture devices to screen trash from stormwater flow and prevent trash from discharging to the Bay. Trash diverted from stormwater and the Bay will be measured by removal of trash from the devices, quantifying the trash, and identifying sources of trash by visual characterization. Another control measure in the City's Plan for reducing trash is to conduct outreach to local schools and educate students regarding Hayward's trash problems, reduce trash sources from schools, and engage students to actively participate in trash reduction. The City recognizes that since people and their behaviors are the source of the trash, student involvement is crucial in promoting a sustainable anti-littering movement. The City understands that by partnering with local schools, we can build long-lasting relationships to create public awareness regarding trash concerns in the City and provide a community-based solution to littering. By combining infrastructure improvements with the involvement of local school children to participate in the trash device installation, trash collection and assessment, and trash reduction activities as a result of the trash collected, Hayward's Project will provide an innovative solution that not only improves the City's trash problem but creates partnerships that will sustain trash reduction for generations to come.

III. PROJECT PARTNERS

The strength of this Project is its partnerships between the City and local schools, youth groups, and local recreation and park districts. Each partner will bring their own expertise to support the overall Project, focused on the goal of trash reduction. Since the source of trash is Hayward's community, of which youth are a significant part, the City's Water Pollution Source Control (WPSC) Division as well as other City staff will extend its traditional scope of services to the community and partner with local schools and youth groups, and park districts to bring about social change to reduce trash pollution. The expertise offered by all partners working on this Project will be key to successful completion of this project.

Key Project partners will include:

- Hayward Unified School District (HUSD)

The HUSD will be a critical partner with City staff to select the students to participate in the Project as well as provide a leading role in developing and promoting the trash

reduction activities and contests for the participating students. HUSD consists of thirty (30) schools within the City's boundaries including twenty-one (21) elementary schools, five (5) middle schools, and four (4) high schools. Over the course of the four-year project, one of the most important goals will be to involve as many students as possible from as many schools as possible. Another important goal is to develop trash reduction curriculum for 1st-12th grade so every student body receives trash reduction educational opportunities. HUSD faculty's expertise will be instrumental in providing the knowledge, resources, and time to assist City staff to develop this curriculum. Though HUSD has collaborated with City departments in the past, namely the Hayward Youth Commission (HYC) and other shorter projects, this Project is the first of its type in scale and longevity to be proposed. HUSD will contribute in-kind resources of approximately \$200,000 towards the Project.

- East Bay Regional Park District (EBRPD)

The EBRPD manages, maintains and preserves more than 114,000 acres including 65 regional parks, 1,200 miles of trails, and 11 freshwater recreational water bodies, among other public areas within Alameda and Contra Costa Counties. Within Hayward, EBRPD maintains and manages the Hayward Regional Shoreline, an area consisting of 1,811 acres of salt, fresh, and brackish water marshes, seasonal wetlands and public trails. The City has two outfalls (the Alameda Flood Control Channel and Sulphur Creek) that discharge directly into the Hayward Regional Shoreline and impact the ecological preservation of the shoreline as well as valuable wetland restoration the District has completed since the 1980s. The District will support the Project with guided field trips for students to the Hayward Regional Shoreline and its upstream outfalls, illustrating the connection of how litter travels from the urban environment through the watershed, down to the Bay. This Project is the first long term collaboration between the City and EBRPD involving education for Hayward schools. In addition, EBRPD will promote trash reduction activities, education, and outreach to the students during the Project. EBRPD in-kind resources towards the Project will be approximately \$10,000.

- Hayward Area Recreation and Park District (HARD)

HARD is a special district that manages and provides park and recreation services within the City of Hayward as well as Castro Valley and San Lorenzo and parts of unincorporated areas of Alameda County. Within Hayward, HARD manages a number of parks and recreational facilities, most notably the Hayward Shoreline Interpretative Center and the Sulphur Creek Nature Center, both intimately connected with the Bay and with Hayward's Sulphur Creek subwatershed. HARD will provide educational events, field trips, and locations for meeting with the students (particularly providing programs for the 1-6th grade students to understand Hayward's watersheds) throughout the Project as well as staff resources to develop trash reduction activities, and promote trash cleanup events and contests. HARD has been a long-standing contributor and education advocate for school children in Hayward. The Project provides another opportunity for HARD to directly collaborate with the City and HUSD to benefit children. HARD's in-kind resources towards the Project will be approximately \$60,000.

- Hayward Youth Commission (HYC)

The HYC advises the Mayor and City Council, and the elected boards of HARD and HUSD about issues that affect young people in the Hayward community. Members work on a number of projects and activities throughout the year, e.g., identifying youth needs, organizing youth speakouts and conferences, etc. The HYC's members will be actively involved in organizing their peers within their schools as well as other schools

participating in the project and volunteer during trash clean up events, outreach events and help organize and promote the annual trash contest. Since its conception, HYC has been a collaboration between the City, HARD, and its schools. This Project provides the first large scale opportunity to outreach to a much larger group of youth, similar to and promoting the same educational goals of the HYC.

- **Keep Hayward Clean & Green (KHCG) Task Force**

The KHCG Task Force is volunteer-based community group dedicated to improving Hayward's neighborhoods by cleaning streets and open spaces of trash and graffiti as well as beautifying Hayward's landscaped areas. The KHCG Task Force activities and events will be aligned with the Project's trash reduction activities and volunteers from both ventures will be coordinated to address findings of trash collection from the large trash capture devices. This coordination supports the Project's objectives of prioritizing trash cleanup events with the results of the Project's trash assessments. This Project's collaboration with the KHCG is the first large scale expansion of cleaning Hayward's streets, meeting the KHCG's goals and mission.

- **California State University East Bay (CSUEB)**

CSUEB is the local state university dedicated to educating local Hayward students as well as students throughout the entire East Bay Community providing more than 100 career-focused fields of study including environmental sciences and sustainability. City staff have partnered with the Environmental Studies Department to provide student interns the opportunity to work with the City's WPSC staff and develop, participate, and implement trash reduction activities with Hayward's youth and assess the effectiveness of the Project's trash reduction activities with City staff. Under the direction of Dr. Michael Lee, CSUEB will provide coordination, support, and expertise in water quality improvement toward this project with an in-kind contribution through staff resources and student interns equating to \$64,000. This partnership between the City and CSUEB will be ground breaking as CSUEB and the City have never united to work together on such a Project to benefit 1-12th grade students in the field of environmental science.

IV. PROJECT DESCRIPTION AND SCHEDULE

The purpose of this project, through youth participation, is to capture trash and prevent it from impairing the local watershed, characterize and quantify the trash collected, and implement actions to engage the public to prevent littering. There are four phases of this four-year Project. Table 1 provides an overview of the Project work phases with the associated budget and outputs and outcomes. Table 2 provides a detailed budget for the Project. A description of each of the four phases is provided below.

A. Phase I

With the help of local participating high school students, Phase I of the Project will begin with confirming the proposed locations where the two large hydrodynamic separator trash capture devices will be installed. Preliminary work with the students and City staff will include an introduction to general watershed and stormwater management concepts, then specifically about the MRP trash provision C.10, trash reduction management, full trash capture design and a lecture on Hayward's trash problems and trash reduction history. Students will then engage in group brainstorm sessions with their peers about trash reduction measures both short and long term to solve Hayward's trash problems. City staff will visit each group of students at each school approximately three to four times during this preparation for students to assist with installation of the trash capture devices. Then the students will work side by side with the City's

engineers, environmental managers, Street Maintenance Division, and the WPSC Division using City storm drain maps, trash generation maps, among other resources and field reconnaissance to determine the hydrology and engineering specifications needed to verify the proposed locations (see Attachment 2: Proposed Locations for Trash Devices) for the trash capture device installations.

The students will consider engineering aspects of this project including City storm sewer locations, drainage calculations, excavation shoring and sizing, location of other utilities, existing infrastructure considerations, and traffic control (to install and service the devices). The students will work with City engineering and construction inspectors to ensure local ordinances are followed and permits are procured to complete device installations. The students will learn their local government process of requesting contractor bids, receiving bids, and working with City Council to approve the contractor and work plans for the device installations. City staff will procure the appropriate permits and contractors, prepare the selected locations, and acquire City Council approval to prepare the installation of the two devices within six months of the Project. City staff, along with in-kind support from CSUEB interns, will coordinate with high school students (from science, humanity, and environmental classes and clubs) representing the public and private schools within Hayward during Phase I to allow for many students to benefit from this engineering and scientific phase of the Project. Phase I will also include development of the annual trash cleanup contest using “Litterati” (<http://www.litterati.org/index.php>), the popular online trash cleanup movement on Instagram as well as 1-6th grade trash reduction curriculum with HARD and EBRPD.

Expected Outputs: Within six months, the proposed locations of the devices will be verified, contractor(s) will be selected and approved, and City staff will be prepared to break ground and install the devices. Students from high schools throughout Hayward will interact with the City’s Utilities and Environmental Services and Maintenance Services Departments to learn about stormwater regulation, trash reduction measures, and design the installation of the devices using maps, hydrology, engineering and trash assessments to verify the devices will treat the high generation areas noted on the City’s trash generation map. In addition, City staff and the Project partners will develop materials, field trips, and trash reduction activities for 1-6th grade students. City staff will provide the first two quarterly reports pursuant to the requirements of the grant during Phase 1.

B. Phase 2

Phase 2 of the Project will be 12 months long and will begin with breaking ground and installing the two large trash capture devices. If displaced small inlet trash capture devices located in the same location as the large device installation will be relocated to an appropriate high trash generating area determined by City staff during Phase 2. The participating high school students will witness the installation of the devices, learn about engineering modifications needed in the field, and understand the maintenance each device will. Based on current experience with the one existing large trash capture device, the City anticipates that each future device will be serviced (trash loads captured will be pumped out via a vacuum truck, aka a vactor truck) on average twice each year. City staff and the assisting CSUEB interns will outreach to middle schools during Phase 2 of the Project and provide as many field trip opportunities as possible for the students to witness the installation process.

Preliminary work with the middle school students will be one to two visits to their classes to introduce stormwater regulation, trash reduction measures, simplified engineering and science concepts of hydrology and construction to prepare the students to understand what it takes to install a trash capture device. Once the devices are installed, the high school students will

witness the cleaning of the devices for the first time and will assist City staff with assessment of the volume and type of trash collected in the devices. The high school students will complete trash assessment field forms and begin the analysis to determine the sources of the trash collected. Phase 2 will extend approximately six months to one year with the goal of completing both installations in six months and completing the first cleanout of the devices and assessments within six months of installation. During the first six months of Phase 2 the first annual Litterati contest will be completed and the students will be asked to start thinking about trash reduction activities to promote amongst their peers at their schools. During the second half of Phase 2 the first series of introductory visits and field trips will begin for the 1-6th grade students for as many elementary schools in Hayward as possible. With a collaborative effort between HARD and EBRPD, the Project will utilize the local Sulphur Creek Nature Center and the Hayward Shoreline Interpretative Center as much as possible for the younger grade students, making the connection between litter on the streets and how it impacts Hayward's watershed.

Expected Outputs: Within the first half of Phase 2 (within six months to one year) both large trash capture devices will be installed. High school and middle school students will witness the installation, learn about installation engineering and maintenance of the devices. During the second half of Phase 2 (within an additional six months) high school students will assist City staff with assessment of the volume and type of trash collected, and begin designing trash reduction activities with their peers. The first Litterati contest will be completed and the first series of class visits and field trips will be facilitated for students in 1-6th grade. Follow up reporting for trash reduction, enforcement actions, and outreach to the public will be ongoing as required by the MRP and included in quarterly progress reports pursuant to the grant requirements as well as a final report delivered at the end of the four year period of the project.

C. Phase 3

Phase 3 of the Project will last 24 months and will include routine assessments of the large trash capture device cleanout events (including the existing device Hayward installed prior to this Project) in tandem with a new group of participating high school students and middle school students to witness the event and assist City staff to assess the trash collected. The students will be instrumental in analyzing the trash and identify trends and possible sources of the trash collected. This data will be analyzed by City staff, along with the students' theories and input, and used to develop trash reduction activities like outreach to the community, enhanced street sweeping, enhanced trash container management, and other measures. Trash reduction activities will be implemented based on the students' findings, particularly a series of trash cleanup events around the participated students' schools. Phase 3 will also include utilizing the Project's partners such as HYC, KHCG, and the YMCA to organize trash cleanup events throughout Hayward. Two annual Litterati contests will be completed during Phase 3 as well a continuation of the class visits and field trips for the 1-6th grade students.

Expected Outputs: Over the course of two years, Phase 3 will complete a series of trash capture devices cleaning events where high school and middle school students will witness the cleanouts and assess the volume and type of trash collected. Trends and sources of the trash will be analyzed and trash reduction activities will be selected from this data to implement by City staff. The students will have an active role in the trash data collection and analysis, and the decisions of their City's trash reduction plan and implementation. Completion of Phase 3 will also include two annual Litterati contests and a series of class visits emphasizing the impacts of trash on Hayward's watershed and field trips for the 1-6th grade students.

D. Phase 4

Phase 4 is the final phase of the Project and will last six months. Phase 4 will include the final trash device cleanout events with student participation. The accumulation of trash assessment data collected by the high school and middle school students will be compiled by the students and presented to their peers and to younger students at each participating school to spread the message of how litter is managed in Hayward and how it impacts Hayward's watershed. The older students will become 'mentors' to the younger students and teach a strong anti-littering message by illustrating the message with real trash data they collected themselves. Phase 4 will also include the final annual Litterati contest and the final field trips and classes for the 1-6th grade students. The total contest accumulation of trash (how much was collected and where it was collected) will be summarized by City staff and given to the students to add to their presentation to their peers. All trash collection data, trash assessment, student outreach (the number students reached and which grade level and school they represent) conducted, as well as feedback provided by teachers, City staff, and other Project partners will be reported in quarterly reports to the grant committee. City staff will conclude its partnerships with all of the Project partners during Phase 4, including the ongoing interns provided by CSUEB. All maintenance, clean outs, and trash assessments of the trash capture devices will continue by the City staff in perpetuity. All relationships formed during this Project with the students and the students' interest to learn more about trash reduction and stormwater protection in Hayward will be encouraged by City staff also in perpetuity.

Expected Outputs: Phase 4 will include the final student participation with device clean outs and trash assessments, final data compilation, student presentations, final Litterati contest, final 1-6th grade field trips and classes, and conclusion of partnerships. Phase 4 will also include final Project report submittal and quarterly reports required by the grant.

Table 1: Project Phases, Budget, and Associated Outputs and Outcomes

Project Phase	Timeframe	Responsible Partners	Grant Funding	Local Match	Total	Outputs/Outcomes
Phase 1: Engage students, complete preliminary trash capture device installation work, and develop 1-6 th grade trash curriculum	1 st and 2 nd quarter of year 1	City staff, CSUEB, HUSD, Private schools	\$350,000	\$217,500	\$567,500	<ul style="list-style-type: none"> ●Project permitting and design for trash capture devices ●Full assessment of ~693 acres of City land treated by trash capture devices ●Youth-based curriculum for trash reduction ●Student participation with trash reduction activities ●Progress reports
Phase 2: Trash device installation, student participation, trash assessments from device clean outs, 1-6 th grade curriculum implementation and first Litterati contest.	3 rd and 4 th quarter of year 1, 1 st and 2 nd quarter of year 2	City staff, CSUEB, HUSD, Private schools, HARD, EBRPD	\$350,000	\$204,375	\$554,375	<ul style="list-style-type: none"> ●Install two (2) large trash capture devices ●Treat ~693 acres of City land for trash, resulting in the prevention of over 20,000 gallons of trash from entering the San Francisco Bay Watershed per year ●Social media trash contests ●Progress reports
Phase 3: Continual student trash assessment participation, trash data	3 rd and 4 th quarter of year 2, year 3,	City staff, CSUEB, HUSD, Private	\$50,000	\$204,375	\$254,375	<ul style="list-style-type: none"> ●Characterization of collected trash loads, quantifying and identifying trash sources

analysis, trash reduction activities selected, two Litterati contests, and continue 1-6 th grade curriculum implementation.	and 1 st and 2 nd quarter of year 4	schools, HARD, EBRPD				<ul style="list-style-type: none"> ●Providing monitoring data for all Bay Area municipalities to use for current and future trash collection activities and assessment ●Social media trash contest ●Student participation and education with trash reduction activities ●Progress reports
Phase 4: Final trash assessment participation, trash analysis, presentations, final Litterati contest and 1-6 th grade curriculum.	3 rd and 4 th quarter of year 4	City staff, CSUEB, HUSD, Private schools, HARD, EBRPD	\$50,000	\$173,750	\$223,750	<ul style="list-style-type: none"> ●Provide a tested template for youth-based trash reduction curriculum ●Maintaining and servicing all devices in perpetuity ●Social media trash contest ●Community participation with local schools in direct trash reduction and anti-littering stewardship ●Final report
Totals:			\$800,000	\$800,000	\$1,600,000	

Table 2: Project Phases, Budget, and Associated Outputs and Outcomes

Project Phase	Grant Funding	Local Match	Partner Match
Phase 1			
Coordination with schools		\$20,000	\$10,000
Introductory sessions with students		\$10,000	\$10,000
Student field trips and sessions during preliminary trash device installation		\$15,000	\$20,000
Preliminary trash capture device installation work		\$20,000	
Development of 1-6 th grade trash reduction curriculum	\$10,000	\$10,000	\$10,000
Subtotal	\$10,000	\$75,000	\$50,000
Phase 2			
Coordination with schools		\$10,000	\$10,000
Introductory sessions with students		\$20,000	
Student field trips and sessions to witness device installation		\$20,000	\$50,000
Trash capture device purchase and installation	\$740,000	\$217,500	
Device cleanouts and assessments (with student participation)		\$20,000	
1-6 th grade field trips and visits		\$10,000	\$20,000
Litterati contest (prizes and promotion)	\$5,500		
Subtotal	\$745,500	\$297,500	\$80,000
Phase 3			
Device cleanouts and assessments (with student participation)		\$13,500	\$60,000
Trash data analysis and trash reduction activities selection and implementation with student participation (supplies and	\$40,000	\$20,000	\$22,000

personnel)			
2 Litterati contests (prizes and promotion)	\$3,000	\$5,000	
1-6 th grade field trips and visits		\$5,000	\$20,000
Subtotal	\$43,000	\$43,500	\$102,000
Phase 4			
Final trash assessment (with student participation)		\$20,000	\$60,000
Trash analysis and student peer presentations		\$20,000	\$22,000
1-6 th grade field trips and visits		\$5,000	\$20,000
Litterati contest (prizes and promotion)	\$1,500	\$5,000	
Subtotal	\$1,500	\$50,000	\$102,000
Total	\$800,000	\$466,000	\$334,000

V. HAYWARD PROGRAMMATIC CAPABILITY, PAST PERFORMANCE

The City of Hayward possesses an extensive history of effectively administering local, state, and federal assistance grants supporting a wide variety of city services areas. This assistance has included hundreds of thousands of dollars of external funding that has appreciably advanced city service programs in public safety, education, energy, and renewable and recyclable waste streams. Notable examples of the City's grant administration history in the last three years include:

Granting Agency	Grant Title	Purpose	Amount	Date	Notes
CalRecycle	Beverage Container Recycling Grant	Fund purchase of outreach materials to support and promote beverage container recycling services; also \$113,000 were used to purchase and install trash capture devices in order to comply with the City's MRP.	\$40,000 to \$45,000 annually	FY2000-2015	Annual Reports are submitted to report revenue received and expenses incurred. An Annual Grant Application is also submitted.
Department of Energy	Energy Efficiency and Conservation Block Grant	Implement the City's Climate Action Plan, preserve and create jobs, and promote economic recovery as required by the American Recovery and Reinvestment Act of 2009	\$1,361,900	CY 2010 - 2012	Objectives were met and grant was closed out in December 2012.
Federal Department of Education	Promised Neighborhood Education Grant	Fund used to optimize the 'cradle to career' educational spectrum in Hayward using place-based education and neighborhood improvement strategies.	\$25,000,000	CY 2012-2016	The City of Hayward and other community partner agencies serve as subrecipients to CSUEB, the primary grant recipient. Hayward has met all reporting requirements.
Federal Housing and Urban Development Agency (HUD)	Community Development Block Grant	Funds used for local community development activities such as affordable housing, anti-poverty programs, and infrastructure development.	\$2,000,000/year	For the past 20 years and more	Hayward is a formula grantee and has met all federal regulations and requirements to be able to continue to receive funding.
California Board of State and Community Corrections (BSCC)	California Gang Reduction, Intervention and Prevention (CalGrip) Program	To provide support to gain prevention, intervention and suppression activities.	\$1,500,000	CY 2009-2014	Hayward has met all state regulations and requirements to be able to continue to receive funding.

Federal Department of Education	Fund for the Improvement of Education Grant (under the No Child Left Behind Act)	To conduct after school homework assistance programs.	\$263,318	FY 2007-2012	Hayward is a formula grantee and has met all federal regulations and requirements to be able to continue to receive funding.
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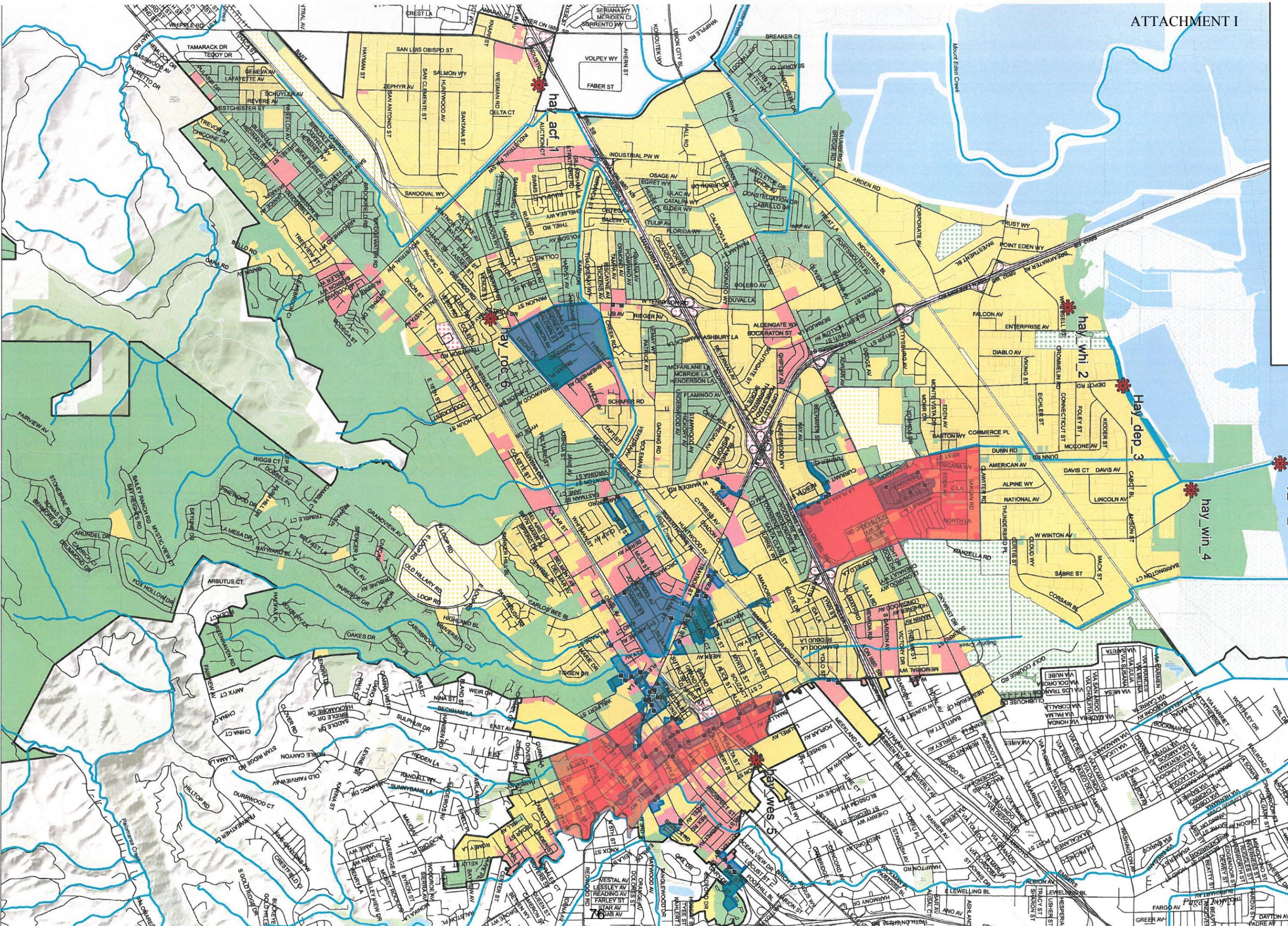
VI. HAYWARD EXPERTISE/QUALIFICATIONS FOR PROJECT

City staff will successfully achieve the Project goals with the dedicated and qualified team committed to the Project. This team will include City staff from the Public Works Utilities & Environment Services Department with assistance from the Street Maintenance and Engineering Departments. The Project's team members have experience managing Federal Safe Routes to School grants, including all reporting requirements, and corresponding educational outreach programs. The subject outreach program spanned two municipalities, delivering traffic safety programs to students K-12 in a district with roughly 30,000 students. This familiarity with managing school programs will benefit the proposed education component of this grant. Team members have also worked closely with the Hayward Unified School District to facilitate operation of a summer jobs training program for local youth. The program, California Youth Energy Services, trains youth to install energy and water efficiency measures, and perform simple energy audits for local residents, free of charge. The City is the lead in facilitating the program, but partners with HUSD to provide facility space to house the program and also assist with applicant recruitment.

The Project Manager will be Elisa Wilfong. Elisa is the City's Water Pollution Control Administrator who manages the City's stormwater pollution prevention program. Combined with Elisa's over fifteen years of environmental compliance and water quality knowledge and expertise, Elisa provides over ten years of experience with students, particular young children and previously working with stream restoration and monitoring with high school students for two years during the 'Clean Streams/Clean Bay' grant project along Coyote Creek in the city of San Jose. Project Coordinators will be associate engineers and administrative analysts skilled with the engineering aspects of trash capture device installation and maintenance as Hayward has one large trash capture device and seventy-nine (79) small trash capture devices installed within the city. The Project coordinators also provide experience implementing of the public outreach component of the Municipal Regional Permit. This includes a dedicated staff member on the Public Information and Participation subcommittee of the Alameda County Clean Water Program, as well as coordination of multiple outreach events at the local level throughout the year. The focus is to educate residents and business owners about stormwater pollution prevention.

VI. CONCLUSION

The Project will improve water quality on a watershed basis by directly removing trash from the storm sewer system, preventing trash from entering the San Francisco Bay and creating an innovative youth-based process where the project's trash reduction effort will be conducted by local school children. The City's project milestones with youth participation include design and installation of two trash capture devices, collection of trash in each installed device, removing trash collected and properly disposing of trash, tracking, characterizing and quantifying the trash collected, and using the tracking data to focus trash outreach, engaging the public to be aware of the loads of trash collected in the devices, all at the hands of children.



Legend

Trash Generation Category

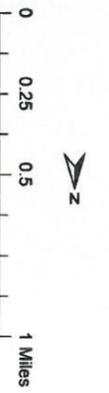
- Low
- Medium
- High
- Very High

Proposed Full Trash Capture

- Creek/Shoreline Hotspot
- Full Capture Location
- Non-Jurisdictional (Dot color = Generation Category)

Streets

- City Boundary
- Agency Boundary
- Creeks
- Parcel Boundary



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

Map Created By:
 EOA, Inc.

Date:
 December 19th, 2013



HAYWARD UNIFIED SCHOOL DISTRICT

Building a Culture of Success



Stan "Data" Dobbs
Superintendent/CEO

Dr. Matt Wayne
Assistant Superintendent,
Educational Services

Lisa Grant-Dawson
Assistant Superintendent,
Business Services

Leticia Salinas
Assistant Superintendent,
Human Resources

Chien Wu-Fernandez
Assistant Superintendent,
Student & Family Services

Megan Corey
Executive Director,
Classified Human
Resources and
Personnel Commission

July 11, 2014

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105
415-972-3400

Dear Ms. Valiela:

It is with great pleasure that I write to you in support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages our youth to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup Hayward. Our agency's mission is to improve the environment and community by reducing trash and working with children to create a cleaner, healthier future for them and their families. We not only recognize the challenge of reducing trash but the challenge to engage children, making the link from littering as a social issue to the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and project our local watershed.

If funded, our organization looks forward to supporting this project by partnering to educate and outreach to schools and families to reduce trash and expects to contribute \$200,000 worth of staff time over the term of the grant project. We believe this project has the potential to product sustainable and replicable results by empowering and educating our youth and improving our community's future. Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project.

Sincerely,

Lisa Grant-Dawson
Assistant Superintendent, Business Services



CALIFORNIA STATE
UNIVERSITY
E A S T B A Y

College of Letters, Arts, and Social Sciences
Department of Anthropology, Geography and
Environmental Studies

25800 Carlos Bee Boulevard, Hayward, CA 94542-3049
510.885-3193 (phone) • <http://class.csueastbay.edu/geography/> • www.csueastbay.edu

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Valiela,

It is with great pleasure that I write to you in support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our immediate community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages local youth to learn about how trash impacts the environment, how to reduce trash, and how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup Hayward. Cal State East Bay's strategic commitment includes *"contributing to a sustainable planet through our academic programs, university operations, and individual behavior"* and *"supporting the civic, cultural, and economic life of all communities in the regions we serve through partnerships that promote education and social responsibility."* Thus we join with the City of Hayward in recognizing the joint challenge of reducing trash and engaging children, making the link between littering as a social issue and the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and project our local watershed.

If funded, my department looks forward to supporting this project by partnering to educate and outreach to schools and families to reduce trash and potentially could contribute around \$64,000 worth of in-kind services (student intern labor plus staff supervision) over the term of the grant project. We believe this project has the potential to produce sustainable and replicable results by empowering and educating our youth and improving our community's future.

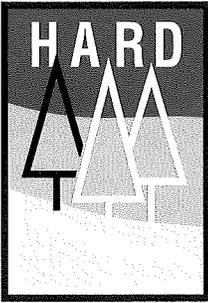
Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project.

Sincerely,

Michael D. Lee Ph.D.
Professor

THE CALIFORNIA STATE UNIVERSITY

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HAYWARD AREA RECREATION AND PARK DISTRICT

1099 'E' Street, Hayward, California 94541-5299 • Telephone (510) 881-6700 FAX (510) 888-5758

July 14, 2014

Luisa Valiela, SFBWQIF Lead Watersheds Office
 EPA Region 9 (WTR-3)
 75 Hawthorne Street
 San Francisco, CA 94105
 415-972-3400

Dear Ms. Valiela:

It is with great pleasure that I write to you in support for the "Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project" grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages our youth to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup Hayward. Our agency's mission is to improve the environment and community by reducing trash and working with children to create a cleaner, healthier future for them and their families. We not only recognize the challenge of reducing trash but the challenge to engage children, making the link from littering as a social issue to the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and project our local watershed.

If funded, our organization looks forward to supporting this project by partnering to provide collaborative educate and outreach to local families and our recreation participants to reduce trash and expects to contribute \$60,000 of in-kind donation of staff time and facility use over the term of the grant project. We believe this project has the potential to product sustainable and replicable results by empowering and educating our youth and improving our community's future.

Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project.

**BOARD OF
DIRECTORS**

Louis M. Andrade
 Paul W. Hodges Jr.
 Minane Jameson
 Carol A. Pereira
 Dennis M. Waespi

Sincerely,


 Kerrilyn Ely
 Recreation Superintendent

GENERAL MANAGER
 John Gouveia



2950 PERALTA OAKS COURT • P.O. BOX 5381 • OAKLAND • CA • 94605-0381
T. 1 888 EBPARKS F. 510 569 4319 TDD. 510 633 0460 WWW.EBPARKS.ORG

July 16, 2014

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105
415-972-3400

Dear Ms. Valiela:

It is with great pleasure that I write to you in support of the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward. We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (particularly the Hayward Shoreline one of the shoreline parks that we manage), and engages our youth to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup the City of Hayward.

The District's mission is to improve the environment and community by protecting and managing open space lands. This project will directly contribute to our mission by reducing trash and working with children to create a cleaner, healthier future for them and their families. We not only recognize the challenge of reducing trash but the challenge to engage children, making the link from littering as a social issue to the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and project our local watershed.

If funded, our organization looks forward to supporting this project by partnering to educate and provide outreach to schools and families to reduce trash and expects to contribute \$10,000 worth of in-kind services over the term of the grant project to accomplish these goals. We believe this project has the potential to produce sustainable and replicable results by empowering and educating our youth and improving our community's future.

Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community and the East Bay Regional Park District. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project.

Sincerely,

Matthew Graul
Chief of Stewardship

Board of Directors

Ayn Wieskamp President Ward 5	Whitney Dotson Vice-President Ward 1	Ted Radke Treasurer Ward 7	Doug Siden Secretary Ward 4	Beverly Lane Ward 6	Carol Severin Ward 3	John Sutter Ward 2	Robert E. Doyle Page 1 of 2 Local Manager
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July 15, 2014

Hayward Promise Neighborhood
Chabot College
25555 Hesperian Blvd
Hayward, CA 94545

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105
415-972-3400

Dear Ms. Valiela:

It is with great pleasure that I write to you in support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages our youth to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup Hayward. Our agency's mission is to improve the environment and community by reducing trash and working with children to create a cleaner, healthier future for them and their families. We not only recognize the challenge of reducing trash but the challenge to engage children, making the link from littering as a social issue to the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and protect our local watershed.

If funded, our organization looks forward to supporting this project by partnering to educate and outreach to schools and families to reduce trash [and expects to contribute \$2,500/year in-kind funding over the 4-year term of the grant project.] We believe this project has the potential to product sustainable and replicable results by empowering and educating our youth and improving our community's future.

Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project.

Sincerely,

Marie DeLeon
Grant Project Manager

KEEP HAYWARD CLEAN & GREEN**TASK FORCE**www.hayward-ca.gov/KHCG

777 B STREET HAYWARD, CA 94541

July 16, 2014

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105
415-972-3400

Dear Ms. Valiela:

It is with great pleasure that I write to you in support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages our youth to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup Hayward. Our agency's mission is to improve the environment and community by reducing trash and working with children to create a cleaner, healthier future for them and their families. We not only recognize the challenge of reducing trash but the challenge to engage children, making the link from littering as a social issue to the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and project our local watershed.

If funded, our organization looks forward to supporting this project by partnering to educate and outreach to schools and families to reduce trash and expects to contribute staff time over the term of the grant project to accomplish these goals. We believe this project has the potential to product sustainable and replicable results by empowering and educating our youth and improving our community's future.

Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project.

Sincerely,



Stacey Bristow, Interim Deputy Director Development Services
Staff Liaison, Keep Hayward Clean and Green Task Force

July 8, 2014

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Valiela:

It is with great pleasure that I write to you in support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages our students to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter, and cleanup Hayward. Our school is committed to improving the environment and community by reducing trash and working with children to create a cleaner, healthier future for them and their families. We not only recognize the challenge of reducing trash but the challenge to engage children, making the link from littering as a social issue to the harmful pollution it creates downstream for people, wildlife, and the entire local and global ecosystem. Cleaning up trash is not enough; we need to address the behaviors that cause littering. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project would directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and project our local watershed.

If funded, Moreau Catholic High School looks forward to supporting this project by partnering to educate and outreach to our students and families to reduce trash, and expects to contribute staff time over the term of the grant project to accomplish these goals. We believe this project has the potential to produce sustainable and replicable results by empowering and educating our youth and improving our community's future.

Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable. We strongly encourage your funding consideration for this project. Thank you.

Sincerely,



Mr. Terry Lee
President



Protecting Alameda County Creeks, Wetlands & the Bay

July 8, 2014

Luisa Valiela, SFBWQIF Lead
 Watersheds Office
 EPA Region 9 (WTR-3)
 75 Hawthorne Street
 San Francisco, CA 94105
 415-972-3400

399 Elmhurst St.
 Hayward, CA
 94544
 p. 510-670-5543

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 Union City
 County of Alameda
 Alameda County Flood
 Control and Water
 Conservation District
 Zone 7 Water Agency

Dear Ms. Valiela:

On behalf of the Alameda Countywide Clean Water Program (Program), I am very pleased to support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

The Program's member agencies are striving to reduce the amount of trash that is getting into our creeks and the Bay. As you know, this is a very difficult problem, and success will require a wide range of activities including source control, trash capture, and public education. This project will not only reduce trash and protect local water bodies, but will also provide a model for our other member agencies and jurisdictions throughout the Bay Area as we continue our effort to reduce the impacts of litter on our creeks and the Bay.

If funded, the Program will coordinate closely with the City of Hayward and anticipates expending significant staff resources in support of the project. We strongly encourage your funding consideration for this project.

Sincerely,

James Scanlin
 Program Manager



FOR YOUTH DEVELOPMENT®
FOR HEALTHY LIVING
FOR SOCIAL RESPONSIBILITY

July 14, 2014

Luisa Valiela, SFBWQIF Lead
Watersheds Office
EPA Region 9 (WTR-3)
75 Hawthorne Street
San Francisco, CA 94105
415-972-3400

Dear Ms. Valiela:

It is with great pleasure that I write to you in support for the Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project grant proposal submitted by the City of Hayward.

We are enthusiastic about the prospect of this project as it directly reduces trash in our community, protects our local sensitive water bodies (i.e., Hayward's creeks and the San Francisco Bay), and engages our youth to learn about how trash impacts the environment, how to reduce trash, how to work collaboratively in our neighborhood and with their peers to prevent litter and cleanup Hayward. Our agency's mission is to improve the lives of our community members through Youth Development, Healthy Living, and Social responsibility. The Hayward Youth-Based Trash Capture, Reduction, and Watershed Education Project is a shining example of a program that incorporates all 3 of these focus areas. We know that it will directly coordinate local efforts with local agencies and Hayward's youth to actively reduce trash and protect our local watershed.

If funded, our organization looks forward to supporting this project by partnering to educate and outreach to schools and families to reduce trash. We believe this project has the potential to produce sustainable and replicable results by empowering and educating our youth and improving our community's future.

Keeping Hayward's local creeks and the San Francisco Bay free of trash would benefit the health of the community. Educating and engaging our youth makes this goal far more achievable, while also creating strong leaders for tomorrow. We strongly encourage your funding consideration for this project.

Sincerely,

Kenny Altenburg
Branch Operations Director
Eden Area YMCA
951 Palisade St
Hayward, CA 94542

DATE: March 23, 2015

TO: City Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT: City Hall Containers for Garbage, Recyclables, and Organics

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

When City Hall was completed in 1998, the building was furnished with garbage and recycling receptacles, including many of the green fiberglass containers in use today. Over the years, containers of various shapes, sizes, and materials have been added, which contribute to a hodge-podge of containers in different locations as can be seen in the photos below. In 2013, separate collection of organics (food scraps and paper towels from restrooms) began in City Hall using plastic containers in staff areas and metal containers in restrooms. Many staff areas are currently equipped with small green pails for food waste that are suitable for household use, but are too small for use in an office setting. Organics collection occurs sporadically in public areas of City Hall with temporary containers provided depending on the event and arrangements made by the event organizer. Many of the receptacles throughout the building have labels that are outdated as recyclables no longer require sorting. Glass, cans, and paper can all go in one recycling container.

Existing Garbage and Recycling Receptacles in City Hall:



4th Floor Break Room



Basement Elevator Area



1st Floor Elevator Lobby

General Plan Policies – Hayward’s General Plan, adopted on July 1, 2014, includes the following policies and implementation programs related to collection of recyclables and organics in City facilities:

Public Facilities and Services Element, Policy 7.7: Municipal Collection of Recyclables and Organics – The City shall continue to require its franchisee to arrange for regular collection of recyclables and organics from all municipal facilities.

Public Facilities and Services Element, Policy 7.16: Organics Collection – The City shall encourage residents and businesses to separate for collection food and food-soiled paper using organics collection services provided by the City’s franchisee.

The City’s new Franchise Agreement with Waste Management, approved by Council in January, includes aggressive goals for diversion of materials from the landfill. As such, an extra effort needs to be made in City facilities to set an example for proper recycling and to help achieve the City’s diversion goals.

DISCUSSION

As City Hall is used for many public and private events on a regular basis, it is important that attractive and clearly labeled containers be provided to help educate or reinforce habits that are encouraged in home and business settings. An easy-to-use recycling program is important as an educational tool, as well as to further improve the City’s landfill diversion efforts.

Staff has researched a variety of styles, materials, and sizes of containers and is presenting this report so that the Committee may comment on size, quantity, material, and placement of the proposed containers. Staff proposes four types of new container: 1) large containers for public areas; 2) small containers for public areas; 3) large containers for staff areas; and 4) small containers for staff areas. A list of the proposed locations for each container type is included as Attachment I.

Public Areas

Large Containers – Staff found one container design that is visually appealing, allows for clear labels with graphics, and has lids to keep each compartment closed. For the rotunda, the first floor elevator lobby, areas outside the Council Chambers, and Conference Room 2A, staff recommends the product shown below. It is used at the California Academy of Sciences and has swinging lids and signage on the side that can be customized. Each unit would have exterior dimensions of 48 inches long, 24 inches deep, and 30 inches tall. Staff recommends the containers that have the openings on the top so that the overall height can be kept to a minimum and also to prevent items from being left on top of the units. Alternatively, the unit below on the right-hand side with doors on the side could be ordered. The containers are available from a company called Creative Pipe, which is located in Rancho Mirage, California. The receptacles are made to order and are manufactured in Taiwan.

Proposed Containers for Public Areas:



Model No. EVRSII-SS-3.3-PSF-SS-LF



Model No. EVRSII-SS-3.4-PSF-SS-LF

Small Containers– For other public areas such as the third and fourth floor elevator lobby areas and smaller public conference rooms, staff recommends a smaller version of the unit shown above. Each unit would be forty-two inches long, eighteen inches deep, and thirty inches tall.

Staff Areas

Large Containers– For the kitchens and break rooms that are not accessible to the public, staff recommends large plastic containers similar to those that are currently used, but with lids and signs that clearly identify the purpose for each container. Both the stickers and the signs can be customized. Each unit would be eleven inches wide, twenty inches deep, and thirty inches tall. The container for organics would have a flip lid as shown in the middle image below. The lid has a vent with an activated charcoal filter to minimize and absorb odors and eliminate unwanted smells. According to the manufacturer, “The new Lift Lid is easy to use from either the side or front of the lift feature and will stand alone once up – leaving both hands free to scrape plates. When in the closed position, the lid will seal off container contents.”

The City of Davis began using these containers in December 2013 and they received a second shipment in February 2015 as they are making this their standard receptacle for all city facilities. Davis city staff have been pleased with and recommend the containers. These plastic containers are made with at least 35% recycled content and are 100% recyclable.

Proposed Large Containers for Staff Areas:



Small Containers– For smaller break rooms, copier rooms, and conference rooms where there is not sufficient space for the larger units shown above, staff recommends ten-gallon containers shown below. Each unit would be eleven inches wide, fifteen inches deep, and twenty-one inches tall. The one with the green lid would replace the small green pails currently in use. These plastic containers are made with at least 35% recycled content and are 100% recyclable.

Proposed Small Containers for Staff Areas:



Restrooms currently have one container each for paper towels. Custodians are composting this waste. Staff proposes leaving the existing containers in place but adding labels to the existing containers to let people know that these are for paper towels and compostables only.

Labels – The labels below have been developed in partnership with Waste Management and will be applied to residential and commercial carts throughout Hayward. Staff will create similar labels for the indoor containers that use the same colors and images to provide for consistent messaging.



ECONOMIC IMPACT

The new containers in City Hall will have little impact on the local economy, but will serve as example to help people improve recycling and organics separation at their own homes and businesses.

FISCAL IMPACT

Purchase of new containers for City Hall will have no impact on the General Fund. The total cost will be absorbed by Waste Management of Alameda County per the new Franchise Agreement.

NEXT STEPS

Environmental Services staff will continue to coordinate with Facilities staff on exact placement, installation and maintenance of the containers. Environmental Services staff will implement an outreach campaign to City employees to ensure the new containers are used appropriately.

Prepared by: Erik Pearson, AICP, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:

Fran David, City Manager

Attachments:

- Attachment I List of Proposed Containers and Locations

Floor	Location	Room #	Public?	Proposed Containers (unless otherwise noted, each unit has space for all three streams)				
				T/R/O Large Public 48" L x 24" D x 34" T	T/R/O Small Public 42" L x 18" D x 30" T	T/R/O Large Staff	T/R/O Small Staff	Organics Only
0	Basement near elevator				1			
1	Rotunda		Y	4				
1	Guard Station		N				1	
1	Women's Room		Y					add label
1	Men's Room		Y					add label
1	Permit Center		Y		1			
1	Kitchen		N			1		
1	Permit Center Conf Room	1C	Y		1			
1	Planning Copy Room		N				1	
1	Planning Conference Room	1E	N		1			
1	Elevator Lobby		Y	1				
1	Code Enforcement Conference		N				1	
1	Fire Conference Room		N			1		
1	Revenue Conference Room		N				1	
1	Revenue Break Room		N			1		
1	Revenue Service Counter		Y		1			
2	2A Conference Room	2A	Y	1				
2	Hallway outside of 2A		Y	1				
2	Women's Room		Y					add label
2	Men's Room		Y					add label
2	Elevator Lobby		Y		1			
2	Pre-function Area (Outside Chambers)		Y	1				
2	Council Chambers		Y		1			
2	Ante Room (outside Council Chambers)		N		1			
2	Kitchen outside 2B		N			1		
2	Public Works Copy Room		N			1		
2	CED Copy/Fridge Room		N			1		
2	City Council Conference Room	2B	N				1	
2	Public Works Conference Room	2C	N				1	
2	CED large Conference Room	2D	N				1	
2	CED small Conference Room	2E	N					
3	Women's Room		Y					add label
3	Men's Room		Y					add label
3	HR Fridge/Supply Room		N			1		
3	HR Copy/Storage Rooms		N			1		
3	Elevator Lobby		Y		1			
3	Staff lunch room		N			2		
3	Finance copy areas		N			1		
3	Finance Fridge/Supply Rooms		N			1		
3	IT copy areas		N			1		
3	HR Conference Room	3A	N				1	
3	Finance large Conference Room	3E	N				1	
3	Tech Services Conference Room	3F	N				1	
3	Finance small Conference Room	3G	N				1	
4	Women's Room		Y					add label
4	Men's Room		Y					add label
4	Elevator Lobby		Y		1			
4	City Manager large Conference Room	4A	Y		1			
4	City Manager small Conference Room	4B	Y				1	
4	Fire Conference Room	4C	N				1	
4	U&ES large Conference Room	4D	N				1	
4	U&ES small Conference Room	4E	N				1	
4	City Attorney Conference Room	4G	N				1	
4	City Manager Copy Area		N				1	
4	City Manager Copy Room		N				1	
4	Kitchen		N			1		
4	Fire Copy Area		N			1		
4	City Attorney Copy Area		N			1		
4	U&ES Copy/Kitchen Area		N				1	
	extra sets for special events					4		
			# of sets:	8	11	20	19	
			Quantity needed for 3 streams:	8	11	60	57	

Legend:
T = Trash
R = Recycling
O = Organics

Large Public

Bin Exterior Dimenions (houses all 3 streams)	Liners (each)	Liner (cubic inches)	Liner (Gallons)
48" L x 24" D x 34" T	14" L x 18" D x 30" T	6,300	27.3

Small Public

Bin Exterior Dimenions (houses all 3 streams)	Liners (each)	Liner (cubic inches)	Liner (Gallons)
42" L x 18" D x 30" T	12" L x 13" D x 26" T	3,276	14.2

Calculation of liner volume assumes 5" of free space at top of each liner

DATE: March 23, 2015
TO: City Council Sustainability Committee
FROM: Director of Utilities and Environmental Services
SUBJECT: Earth Day Events

Earth Day this year is April 22, 2015. This report is to provide the Committee with a brief overview of planned Earth Day events.

Display in City Hall Rotunda – Staff will create a display in the Rotunda to provide information and materials on a variety of topics, including water conservation, recycling, composting, gardening, energy efficiency, renewable energy, and climate change. This year’s display will also include free bagged compost, which will be provided by Waste Management per the current Franchise Agreement.

Return of the Swallows – Staff will attend this event at Chabot College on April 21 and will have a table with resources related to water conservation, recycling, energy efficiency, and climate change.

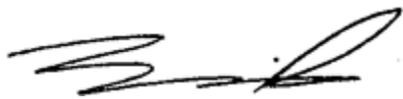
Environmental Awards – On April 21, the City Council will recognize businesses, schools, organizations, and residents who have demonstrated exceptional environmental efforts and leadership in categories such as energy efficiency and conservation, renewable energy, waste diversion, water conservation, and environmental education.

Sun Gallery Exhibition – The Sun Gallery will host an art show on climate change and the California Drought where the City will have a presence. This event involves the local community including school children, businesses, scientists and professors, in an effort to educate families about the environment and water conservation. The gallery will also be hosting a local launch of a Hayward 350.org climate change group, which will be held on Earth Day, the first day of the show.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:



Fran David, City Manager

DATE: March 23, 2015

TO: City Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT: Update on Waste Management Franchise Implementation

The City Council approved a new Franchise Agreement with Waste Management of Alameda County (WMAC) on January 20, 2015¹. The new Agreement took effect March 1, 2015. Following is a brief summary of outreach efforts as well as activities currently underway to ensure that the services offered under the new contract are implemented as intended.

Multi-Family Services – Staff met with a committee of the Rental Housing Association of Southern Alameda County to review new services offered under the new contract. The Association was pleased to know that the bulky pickup service is now available to multi-family properties. They also expressed readiness to work with staff and WMAC to implement organics collection. Staff will attend additional meetings, including general membership meetings, to provide more information about the new services. Staff will also be working with City Code Enforcement and Rental Inspection staff, the Keep Hayward Clean and Green Task Force, the Hayward Promise Neighborhood, and others to promote these new services. Regarding overage charges for overflowing carts and bins, WMAC has agreed to only assess such charges when there is a substantial overage. Staff will be monitoring the charges closely and will follow up with the Rental Housing Association in the fall.

Recycling for All Businesses (Mandatory Recycling Ordinance) – When the Franchise Agreement was approved, Council also approved Hayward’s participation in StopWaste’s mandatory recycling ordinance, which requires all businesses to subscribe to recycling service. The ordinance also requires all multi-family as well as commercial customers that produce significant amounts of organic material to subscribe to organics collection. Staff is working with StopWaste to ensure a coordinated outreach effort related to the mandatory recycling ordinance. While City materials are encouraging compliance now, communications from StopWaste will indicate an effective date of July 1, 2015 and that enforcement will begin in January 2016.

WMAC Outreach Specialists – WMAC is in the process of hiring a full-time employee who will be dedicated to providing outreach services to multi-family and commercial properties in Hayward. This is one of the necessary steps to help the City achieve an 80 percent waste diversion from the

¹ See Item # 7 at <http://www.ci.hayward.ca.us/CITY-GOVERNMENT/CITY-COUNCIL-MEETINGS/2015/CCA15PDF/cca012015full.pdf>

landfill in the next few years. In the next two months, WMAC will hire three temporary employees who will assist with outreach during the first year of the contract.

Letters and Outreach Materials – When Council approved the new Franchise Agreement, Council members requested that staff expand outreach efforts regarding the low-income discount as well as the services that are available to residents of mobile home parks. In response, staff prepared and disseminated a variety of informational materials to single-family residents, mobile home residents, multi-family property owners/managers and business managers regarding the rate increases and the new services that became effective March 1, 2015. Summarized below are the types of materials prepared for each service sector:

Single-Family Residents – Literature included a bill insert in English and Spanish that cited the 9.23% rate increase. Each bill also included a brochure that summarized the two bulky item appointments available, the low-income discount to eligible households, coupons available for free disposal of up to two cubic yards of trash self-hauled to the Davis Street Transfer Station, and other current services.

Mobile Home Park Residents – All mobile home park residents with individual bills issued by Waste Management received the literature described immediately above. In addition, letters were mailed to each resident describing the low-income discount and side yard service available to those who are unable to place their carts at the curb.

Mobile Home Parks with Centralized Billing – Staff contacted the management at each of the three mobile home parks with centralized billing and discussed with each the new services available. Staff also informed the managers that if residents received individual bills, then they may be eligible to receive low-income discounts.

Multi-Family Property Owners/Managers – Letters were mailed to property owners/managers citing the 6.15% overall increase in garbage fees and a 10.98% increase in recycling fees. The letter also described the following new services available at no additional charge: (1) bulky item removal; (2) coupons for free disposal of up to two cubic yards of trash; and (3) separate collection of organics.

Business Managers – Literature included a bill insert in English and Spanish that noted the 6.15% increase in trash rates and that recycling service will now be 20% of the comparable rate for the same size garbage bin. A second insert described the services provided for collection of recyclables and organics, as well as a summary of the state and local regulations regarding participation in those services. In addition, letters in English and Spanish were also mailed to business managers with the above information.

All the letters and brochures described above, the Proposition 218 Notice, and the rate schedule as of March 1, 2015, are posted on the City's website at www.hayward-ca.gov/garbagerates

Self-Haul Coupons – Staff is working with WMAC to revise the self-haul coupons to reflect a wider range of acceptable materials and to remove the requirement to indicate a name or account number

of the person redeeming the coupon. In the meantime, the service is available using the existing coupons.

Website – Staff is working with WMAC to provide a Hayward-specific website hosted by WMAC to provide information on the services that are available and to provide on-line bill payment, etc.

Illegal Dumping – One provision in the new contract requires WMAC to assist the City with picking up illegally dumped debris – up to six times per week. City Maintenance Services staff is working closely with WMAC to implement and coordinate this work.

A representative of WMAC has been invited to attend the meeting to provide further information and to respond to questions.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:



Fran David, City Manager

Suggested Sustainability Committee Quarterly Meeting Topics for 2015

Presenting Department	TOPICS
March 23, 2015	
U&ES	Hydrogen Fuel Cell Cars & Fueling Stations
Dev. Services/U&ES	Rainwater Catchment and Graywater
U&ES	Additional State Emergency Water Conservation Regulations
U&ES	Community Choice Aggregation – Update
U&ES	EPA Stormwater Grant
U&ES	City Hall Litter Containers
U&ES	Earth Day Events
U&ES	Update on Waste Management Franchise Implementation
June 18, 2015	
U&ES	Update on Emergency Water Conservation Regulations
U&ES	Property Assessed Clean Energy (PACE) – Consideration of new programs
Dev. Services	Code Amendments Regarding AB 2188 (small residential solar systems)
U&ES	Public Litter Containers – Locations for New Containers throughout City
U&ES	Update on Home Energy Analyzer Pilot Program & Energy Reduction Initiative
U&ES	Update on PAYS Program
U&ES	Water Supply Outlook, Efficiency, and Conservation
U&ES	Annual Update on Administrative Rule 3.9 – Environmentally Preferred Purchasing Policy
September 10, 2015	
U&ES	Recycled Water Project Update
U&ES	Education and Community Outreach regarding Sustainable Practices
U&ES	Energy Report Update – 2014 Energy Use
U&ES	Waste Reduction Report – Annual Update on Recycling Programs
U&ES	Update on Community Choice Aggregation
U&ES	Update on Green Portal on City’s Website
U&ES	Update on Advanced Metering Infrastructure (AMI) Pilot Program
December 10, 2015	
U&ES	Renewable Energy Generation and Near-Term Potential at City Facilities
U&ES	California Youth Energy Services (CYES) – Report on 2015 Activities
U&ES	Update on PAYS Implementation
U&ES	Review Agenda Topics For 2016