

**COUNCIL SUSTAINABILITY COMMITTEE**

**MEETING**

**MONDAY, MAY 13, 2019**

**PRESENTATIONS**

# **PRESENTATION**

## **REVIEW OF GREEN INFRASTRUCTURE**

MONDAY, MAY 13, 2019

# Green Infrastructure Plan

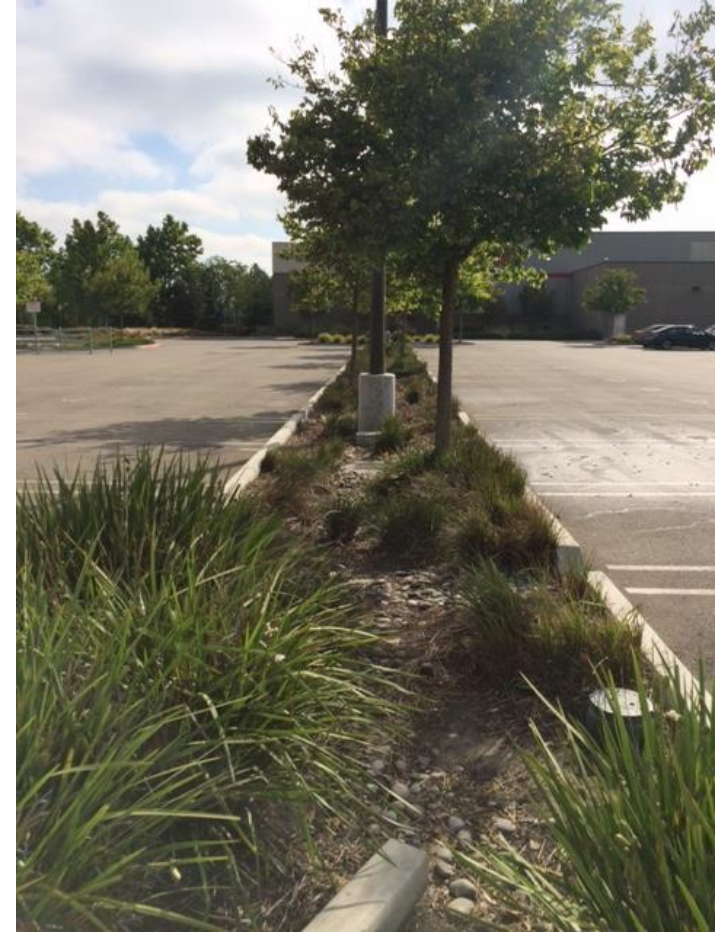
## Council Sustainability Committee

May 13, 2019



# What is Green Infrastructure?

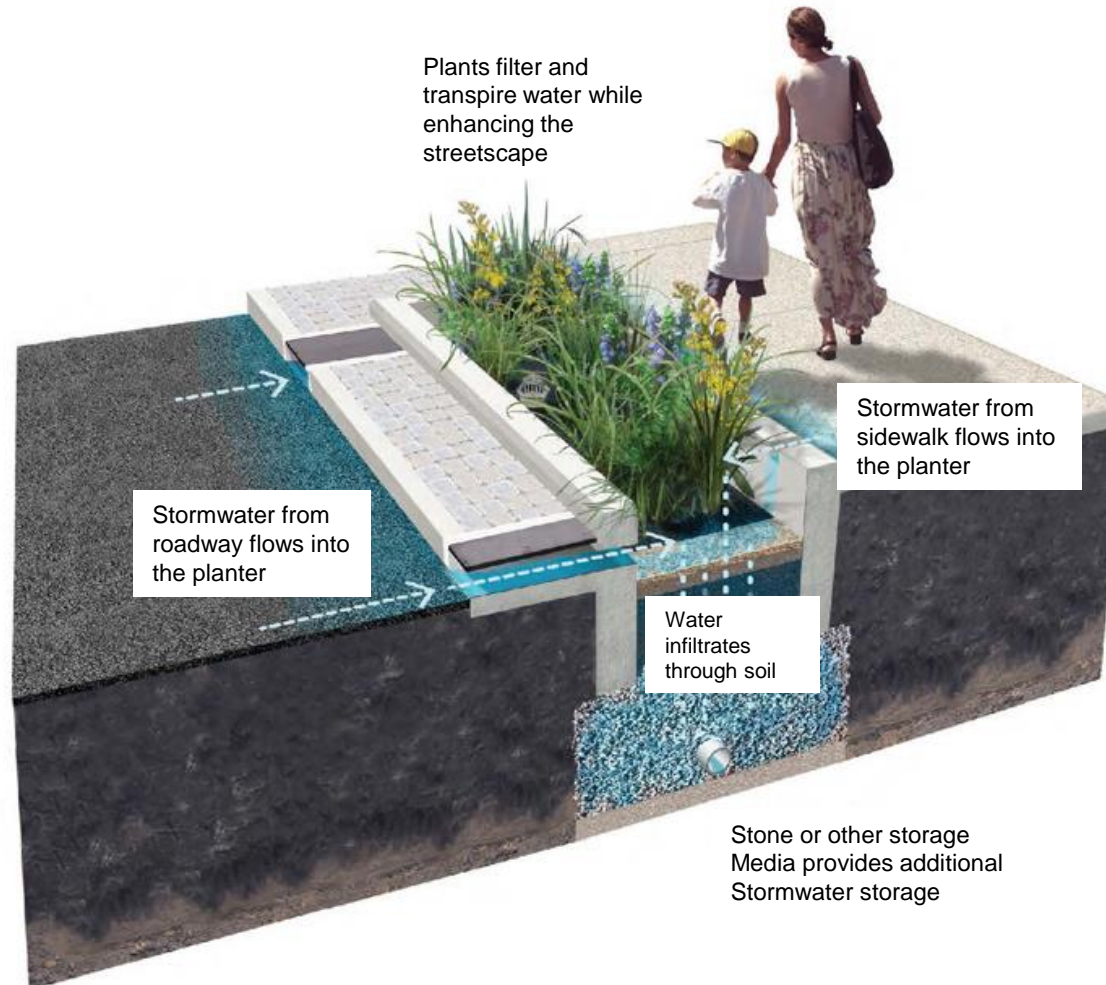
Example: Costco Parking Lot



Bioswales for Stormwater Treatment



# Green Infrastructure Offsets Impervious Surface

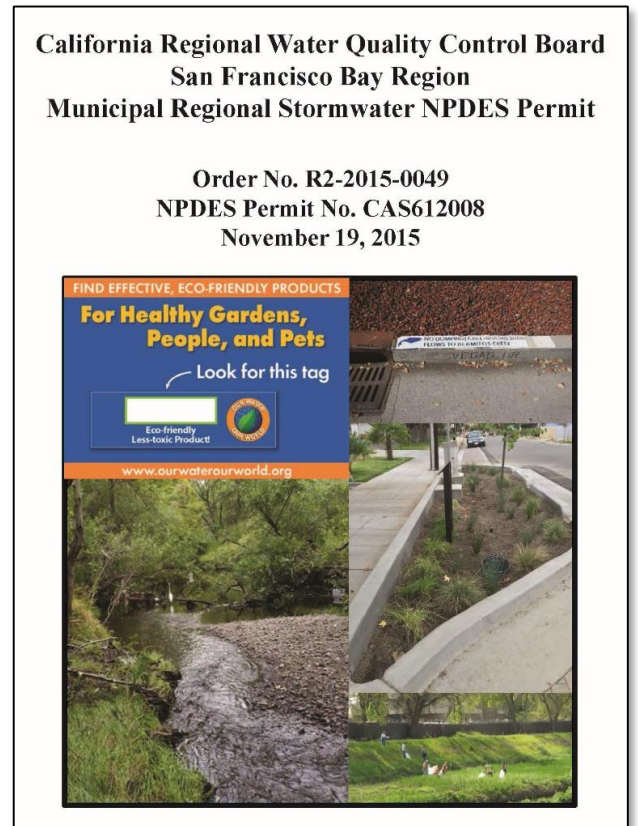


# Stormwater Green Infrastructure Requirements

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## MRP 2.0 Provision C.3

- Develop GI framework and GI plan
- Reduce PCBs and Mercury with GI
- Review all planned public projects and create new projects to meet GI goals in GI plan



# G.I. Plan Requirements

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- Prioritize and map projects (potential and planned; public and private) over the following time schedules:
  - By 2020;
  - By 2030; and
  - By 2040.
- Establish goals for project retrofits over time
- Track and map completed projects (must be publicly available)
- Establish standard specifications for projects
- List planning documents that must be updated to incorporate G.I. requirements
- Evaluate prioritized funding options

# Steps Towards Compliance:

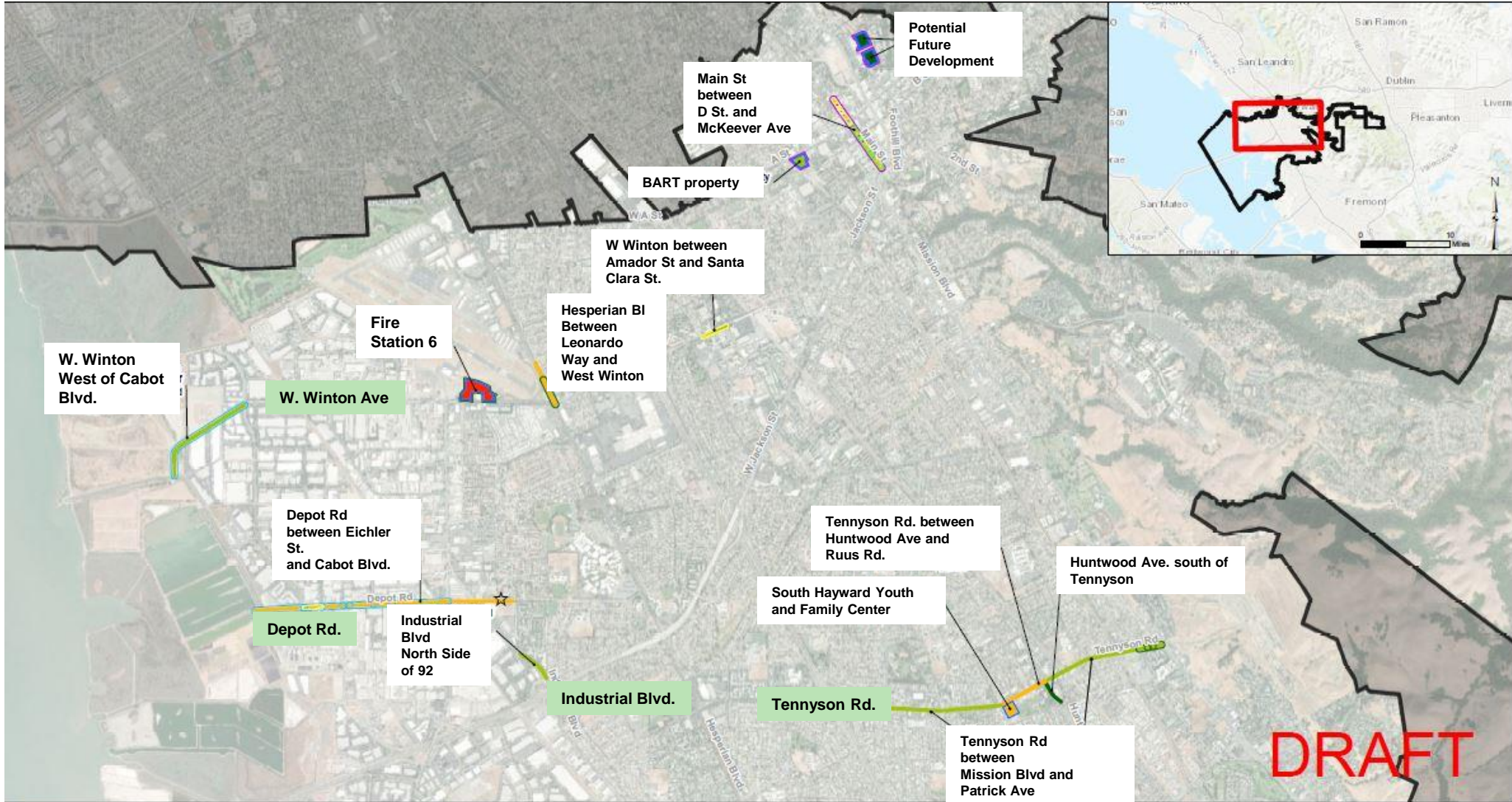
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- Staff created “GI Team”
- GI Team developed draft GI Framework
- Council Approved GI Framework (May 2, 2017)
- Staff hired Geosyntec to assist with GI Plan
- Currently developing project list, assessing funding options, and developing goals/strategy for implementation





# Potential Projects



**Legend**

- Identified Public GI Retrofit Projects<sup>1,2</sup>**
- 2020 Identified Project (1)
  - 2030 Identified Project (5)
  - 2040 Identified Project (5)
  - 2040+Potentially Project (2)

- Master and Specific Plans**
- Shoreline Master Plan
  - Downtown Specific Plan
  - Bike/Ped Master Plan
  - Main St Improvement

- Project Type**
- Regional Opportunity
  - Adjacent to Proposed New or Redevelopment
  - ☆ Affordable Housing Project Location

**Notes:**  
 1. Project count indicated next to anticipated construction year category.  
 2. Cost estimate based on unit GI project implementation costs provided in the Green Infrastructure Cost Estimation Methodology memo prepared for Alameda Countywide Clean Water Program (Geosyntec, 2018).

<p><b>Hayward GI Plan</b>                  Identified Public GI Retrofit Projects                  City of Hayward, California</p>		<p><b>Figure</b> 1</p>
<p><b>Geosyntec</b> consultants</p>		
LAD513	May 2019	

# Potential Projects

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## Parcels:

- Fire Station 6
- South Hayward Youth and Family Center
- BART Property at A & Montgomery

## Right-of-Way:

- Depot Rd between Eichler St & Cabot Blvd
- Hesperian Bl between Leonardo Way & West Winton
- Main St. between D. St. & McKeever Ave

## Right-of-Way (cont.):

- Tennyson Rd between Huntwood Ave and Ruus Rd.
- Industrial Bl North side of Rt. 92
- Tennyson Rd between Mission Blvd & Patrick Avenue
- W Winton Ave. between Amador St. & Santa Clara St.
- W. Winton Avenue west of Cabot Blvd.
- Huntwood Ave south of Tennyson

# Project List Summary

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- 80.9 acres identified
- Priority given to area adjacent to industrial and transportation
- Projects aligned with existing development and known future development





# Funding and Implementation Options

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- Fees (landscaping and lighting, regulatory, stormwater, developer impact)
- Grants and Loans
- Alternative Compliance (fees from development in-lieu of C.3 on private land)
- Multi-Agency Partnerships
- Volunteers





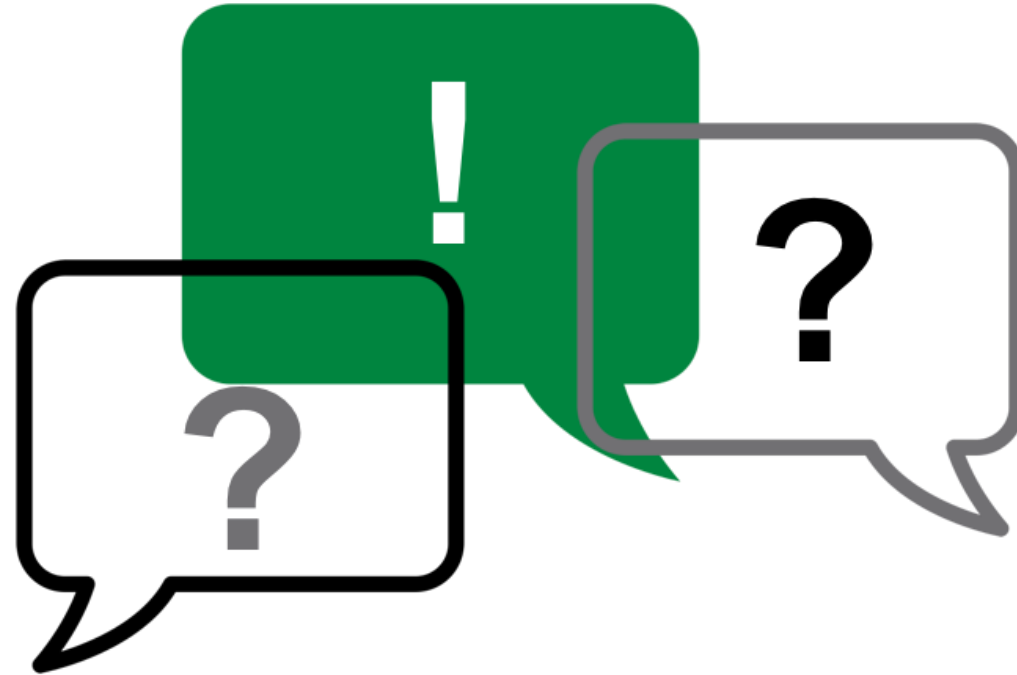
# Next Steps

- Completion of the GI Plan (summer of 2019)
- Present to Council for Adoption (July 2019)
- Submittal of GI Plan to Water Board (Sept. 2019)
- Design and implementation of projects (Fire Station 6 for 2020 and 2030 projects)



# Questions

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# **PRESENTATION**

## **PAYS® PILOT PROGRAM REVIEW**

MONDAY, MAY 13, 2019

# Pay-As-You-Save (PAYS®)

## Council Sustainability Committee

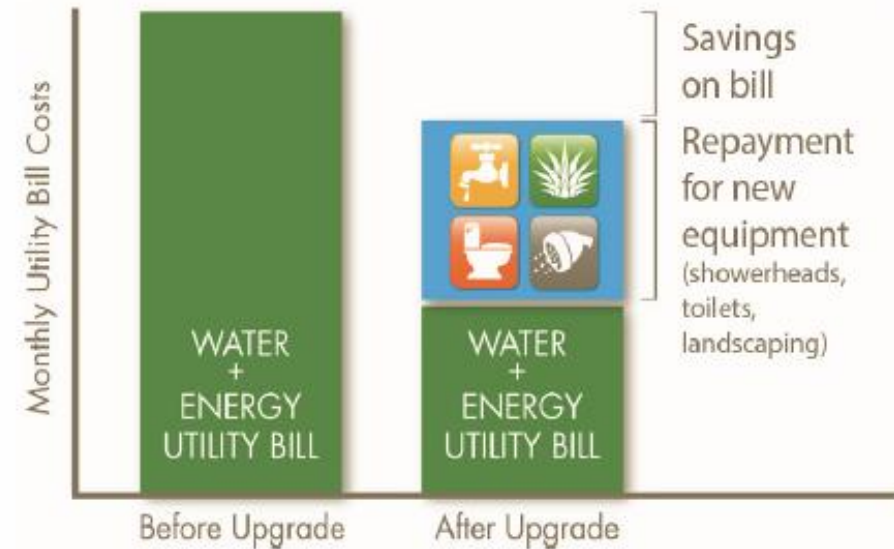
May 13, 2019





# Green Hayward PAYS<sup>®</sup> Pilot Program

- Energy efficiency and water conservation improvements installed with low to no upfront costs.
- Owners pay for improvements with surcharge on water bill
- Improvements must provide for at least \$1.00 in savings for every 80 cents of the surcharge




# Green Hayward PAYS<sup>®</sup> Pilot Program

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- Established summer of 2015
- Six properties have participated
- Used \$143,651 of the \$1,000,000 allocated

# Marketing Since July 2017

- Collateral updates
- Case studies for participating GHP properties (2)
- 664 communications (mailers, outreach calls, etc) to water utility customers



## Green Hayward PAYS® Case Study



**PAYS® slashes water & power bills**  
*Russell Way, Hayward*

Property manager Alfredo Campos wanted a way to save water and upgrade fixtures at his property. The 12-unit apartment complex had existing toilets using from 1.6-3.5 gallons per flush and showerheads using 2.5 gallons per minute. Alfredo reached out to the Green Hayward PAYS® program and received a free site visit to evaluate his opportunity for improvements and savings.

After receiving his no obligation project proposal from the City Contractor: Bottom Line Utilities, Alfredo decided to install high-efficiency water and energy measures through the Green Hayward PAYS® program. Out of pocket, this project would have cost him \$7,776, but with Green Hayward PAYS®, Alfredo had no upfront costs and received \$1,293 in rebates. Alfredo couldn't be happier with the results that addressed his concerns and property needs.

**ANNUAL SAVINGS**

- \$1,668
- 11% Electric
- 16% Gas
- 37% Water

**INSTALLED MEASURES**

- Efficient appliances and fixtures (toilets, showerheads, bathroom and kitchen faucet aerators)
- Energy efficient LEDs for units and common areas
- Hot water controller and pipe insulation

**PROGRAM AT A GLANCE**

- Offered to City of Hayward multifamily properties (5+ units).
- No commitment, free site visit with bill savings estimate.
- Water and energy efficient improvements installed w/ no upfront cost.
- Flexible terms: 3-10 years & no penalty for pre-payment.
- Access to City and PG&E rebates to maximize savings.
- Meets current and upcoming State Codes for plumbing fixtures.

**Contact Us to Find Out More or to Schedule a FREE Site Visit**

510-463-6119 | [environment@hayward-ca.gov](mailto:environment@hayward-ca.gov) | [GreenHaywardPAYS.com](http://GreenHaywardPAYS.com)

Green Hayward PAYS® is available on a first-come, first-served basis. Program was developed by the City of Hayward in partnership with the Bay Area Regional Energy Network, composed of public agencies representing all nine counties within the Bay Area ([www.bayren.org](http://www.bayren.org)).

# Bill Analysis

Property #	# of Units	Cost of Upgrades	Surcharge /Bill	Projected Net Savings/Bill	Average Actual Net Savings/Bill
1	34	\$9,100	\$211	\$329	\$530
2	24	\$12,261	\$285	\$230	\$575
3	12	\$6,483	\$151	\$434	\$170
4	68	\$102,608	\$2,382	\$17,440	-
5	18	\$10,922	\$344	\$88	\$165
6	5	\$2,277	\$53	\$13	-
<b>Total</b>	<b>161</b>	<b>\$143,651</b>	<b>\$3,426</b>	<b>\$18,534</b>	



# Program Challenges

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- Toilet Rebates
- Prevailing Wage Requirements



High-Efficiency Toilet  
Rebate Application

Up to  
**\$100**  
Rebates for  
High-Efficiency Toilets

Effective July 1, 2018 Through June 30, 2019

For the fastest rebate, apply online at [www.BayAreaConservation.org](http://www.BayAreaConservation.org)

**BAWSCA**  
Bay Area Water Supply & Conservation Agency  
650-349-3000  
[www.BayAreaConservation.org](http://www.BayAreaConservation.org)

EPA  
**WaterSense**  
PARTNER

# BayREN Survey

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- Participants highly satisfied with program.
- Forms are too long
- “water savings are “peanuts” relative to rents and the fact that entering a tenant’s unit can make them upset.”
- Near participants commented that the proposed measures were too expensive and the interest rate was too high.

# Water Bill Savings Act

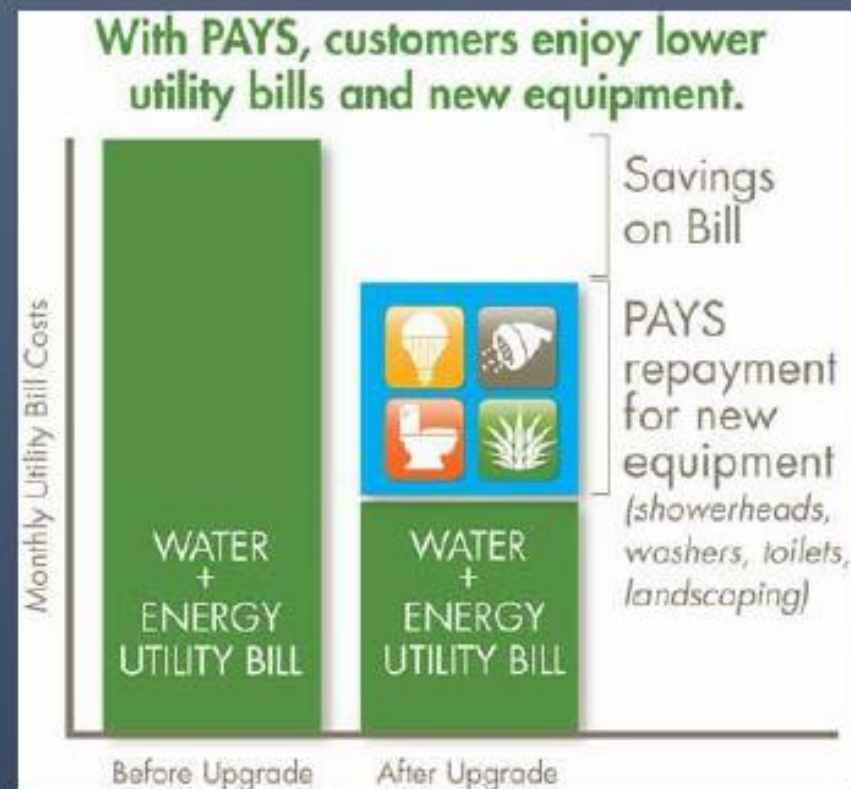
- SB 564 - signed into law by Governor Brown in 2017
- Enables a Joint Powers Authority to issue bonds and loan the proceeds to local water agencies



# WATER BILL SAVINGS PROGRAM

The BayREN Water Bill Savings Program allows water utilities to install eligible improvements in customers' buildings with program assurances field tested by BayREN's PAYS® on-bill pilots:

- No up-front payment, no new debt obligation, no credit checks, and no liens.
- A monthly tariffed surcharge that is significantly lower than estimated savings.
- Participants pay only while they are a utility customer at the project location.
- A guarantee that failed measures are repaired or the payment obligation is terminated.



ASSOCIATION OF BAY AREA GOVERNMENTS  
METROPOLITAN TRANSPORTATION COMMISSION



# REGIONAL PROGRAM MODEL

Organized under MTC/ABAG, the regional Program:

- Facilitates low-cost capital.
- Centralizes administration.
- Streamlines service delivery.
- Simplifies program operation.



ASSOCIATION OF BAY AREA GOVERNMENTS  
METROPOLITAN TRANSPORTATION COMMISSION

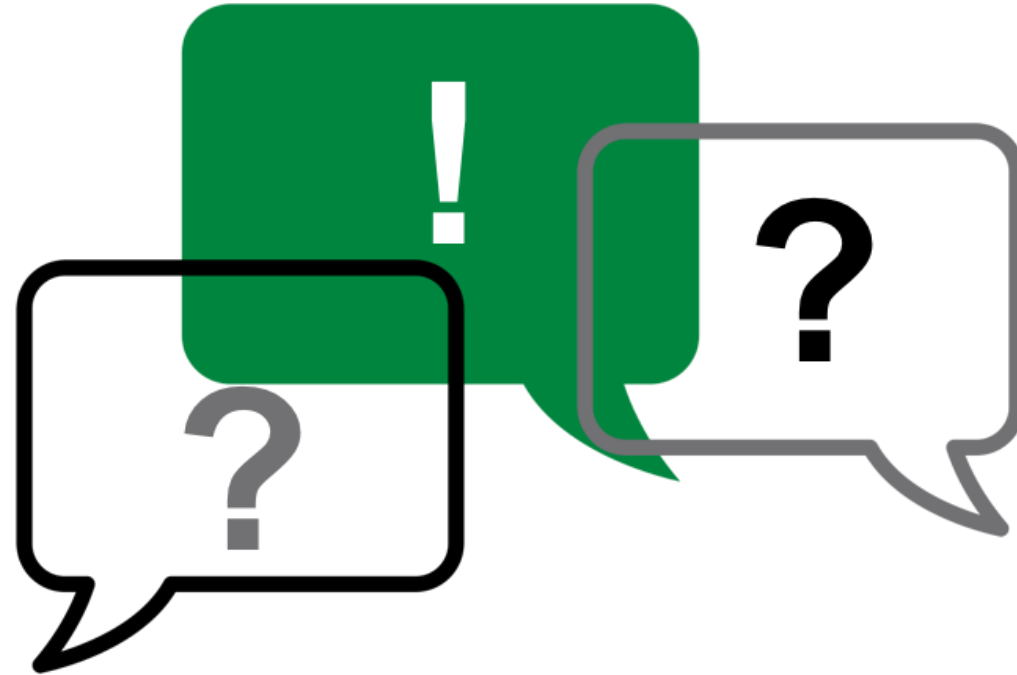
# Regional Water Bill Savings Program

- Participating utilities must submit repayment for installed improvements regardless of collections
- Would free up City funds
- Draft MOU will be developed



# Questions

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# Notes

## Call EBMUD

### **Talked with Joleen on January 11, 2019:**

- Windsor program is on hold Joleen talked with Paul Piazza - administrative costs
- EBMUD has had 4 projects installed
- EBMUD targets a 5-year or less payback
- Looks for MF properties with 3.5 gpf, but many have 1.6
- EBMUD just stopped their toilet rebate program (as of 12/31/2018)
- EBMUD is looking to focus more on commercial

### Fiscal Impact:

as of June 30, 2018, we have spent \$57K of the \$100K contract (BayREN is also supporting Frontier's work)





**PRESENTATION**

**DOWNTOWN STREETS TEAM  
SERVICE AGREEMENT**

MONDAY, MAY 13, 2019



A lush Japanese garden featuring a central pond with a stone lantern on the left, a waterfall cascading over rocks in the center, and numerous meticulously manicured trees and shrubs. The background is filled with tall, dense evergreen trees under a cloudy sky.

# Council Sustainability Committee

Downtown Streets Team Contract

May 13, 2019









# DST Services Provided Hayward

- **Downtown Debris Collection**
- **Tennyson Corridor Debris Collection**
- **Event Sorting Assistance**



# DST Service Days

CURRENT:

PROPOSED Additional Day:

**Downtown:**

- Sunday- Wednesday

8:00 am-noon

Thursday 8:00 am-noon

**Tennyson Corridor:**

- Wednesday – Friday

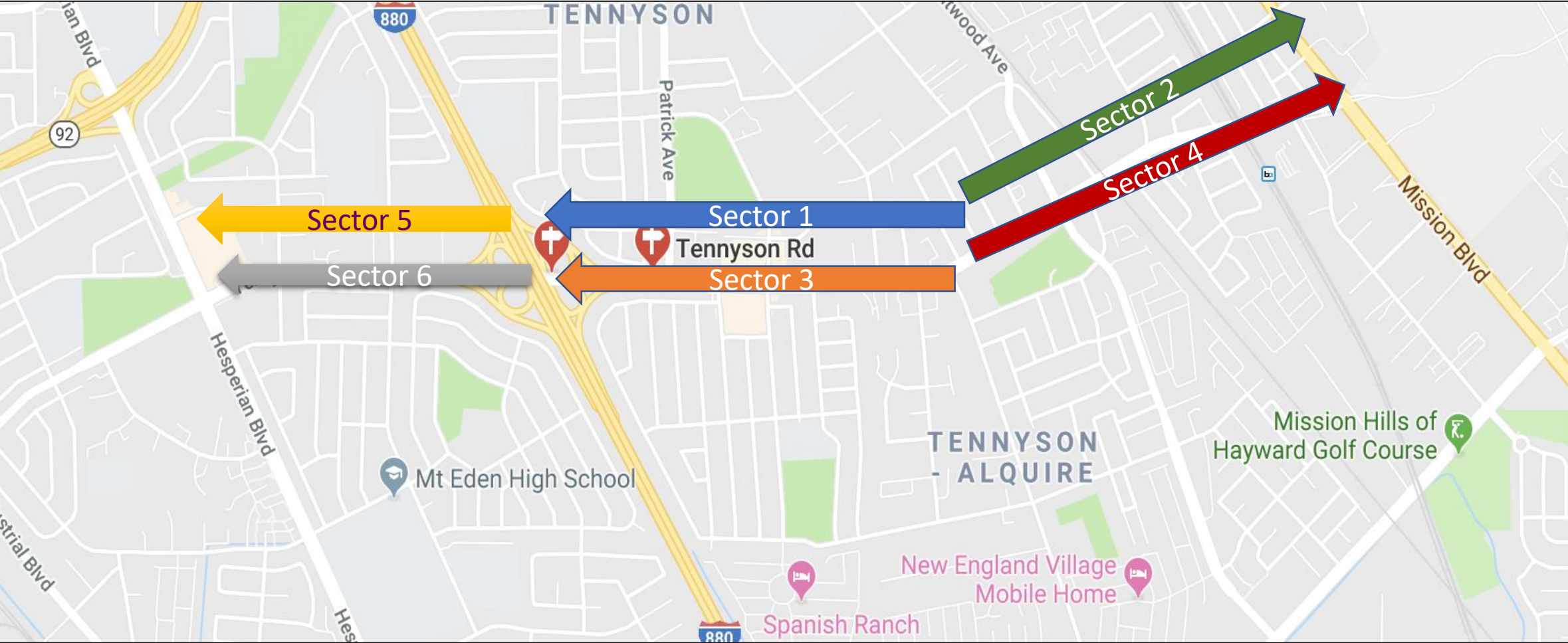
8:00 am-noon

Monday 8:00 am-noon

# Service Area - Tennyson Corridor

Sectors 1-4 are the current area served.

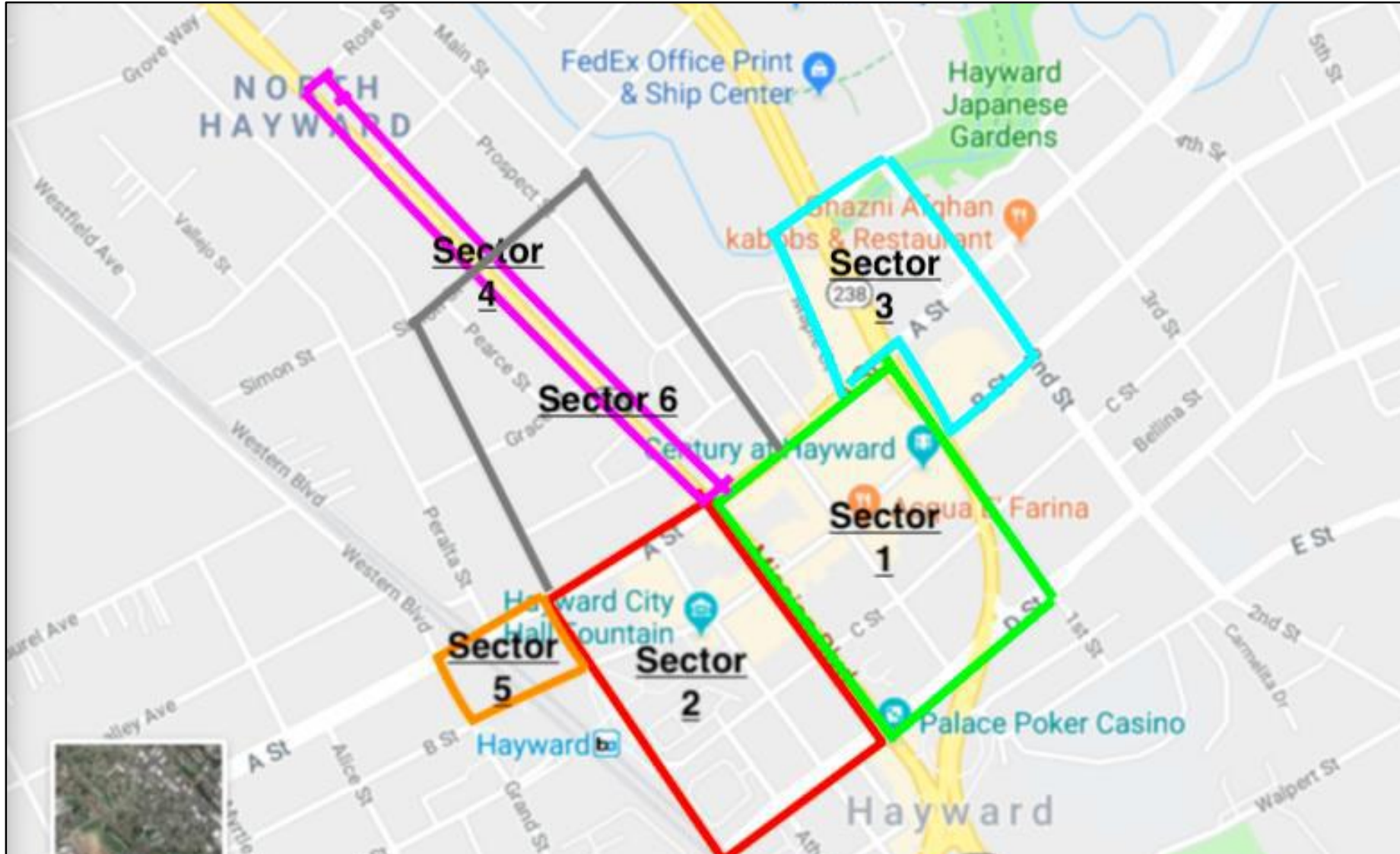
Sectors 5 and 6 show the proposed new areas of service.





# Service Area - Downtown

Sector 6 shows the proposed new area of service.





# Costs of Services

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1. Litter Collection Services	\$37,591
2. Sorting Assistance at Events	<u>\$2,068</u>
	<b>\$39,659</b>

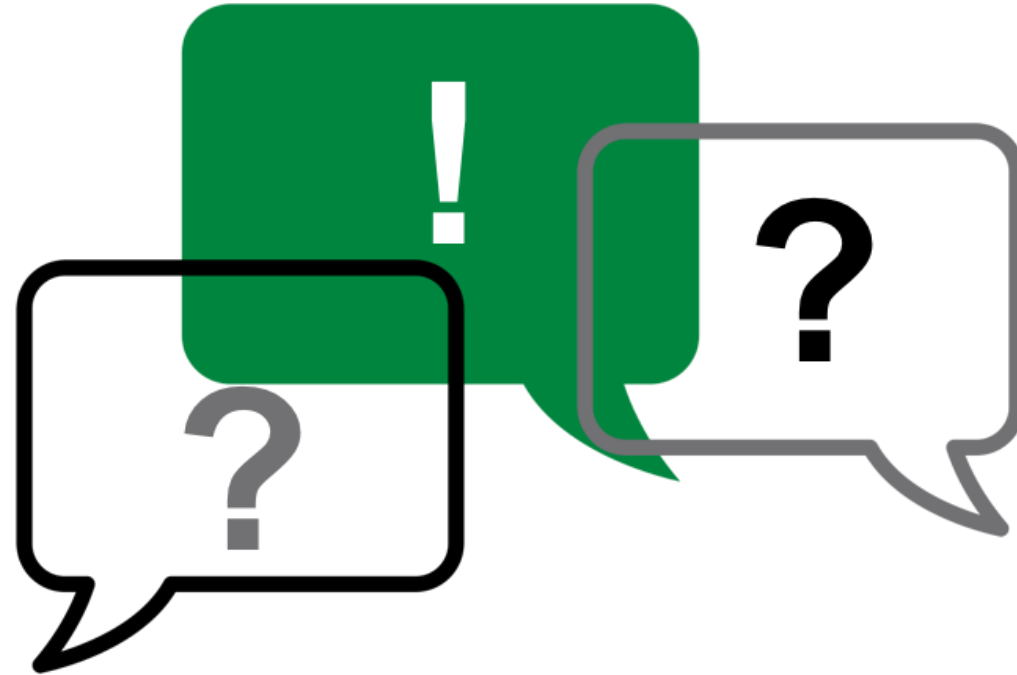
# Recommendation to Committee

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1. Direct staff to negotiate and execute a contract with the Downtown Streets Team to expand the areas of service and days of service for debris collection, and to continue to offer sorting assistance at designated City events.

# Questions

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# **PRESENTATION**

## **UPDATE ON POSSIBLE REACH CODE FOR BUILDING AND ELECTRIFICATION**

MONDAY, MAY 13, 2019

# Possible Reach Code for Building & Vehicle Electrification

## Council Sustainability Committee

May 13, 2019





# Why Pass A Reach Code Now

- **Cost savings**
  - Lower first costs by not constructing natural gas infrastructure
  - Operational costs (dependent on many factors)
- **Emissions reductions**
  - CA Executive Order B-55-18 for Carbon Neutrality by 2045
  - Electricity grid getting cleaner every day with increased renewables
- **Lower-risk**
  - Natural Gas is dangerous in Earthquake Country
- **Healthier indoor air**
  - Eliminate indoor combustion

# EBCE Reach Code Campaign

- Supporting local development of ordinances and compliance alternatives to **increase electrification**
- Retained consultant, TRC Advanced Energy, to develop model codes and support adoption, training and implementation of new codes
- EBCE will provide a **\$10,000 grant** to cities which bring a reach code to their Council for passage

# Cost-effectiveness Studies

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California Energy Codes and Standards Program Released Two Studies:

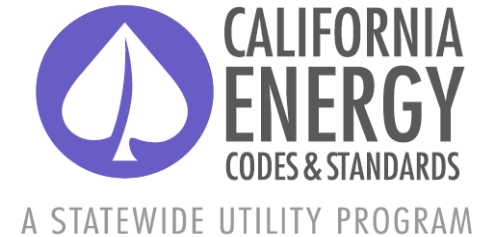
- Residential New Construction
- Non-residential New Construction

Studies Use Two Different Metrics:

- On-Bill
- Time Dependent Valuation (TDV)

Key occupancies covered

- Low-rise residential:  $\leq 3$  stories, single-family and multi-family
- High-rise residential:  $> 3$  stories, multi-family
- Non-residential: office, retail, hotels, etc...



Cost Effectiveness Studies available at:

<https://localenergycodes.com/content/2019-local-energy-ordinances/>

## 2019 Potential Reach Codes Opportunities

Scope / Measure	C/E Study Required?	Timing of Reach Code			Project Types					
		At Construction / Entitlement		Other Trigger (Time of Sale, Date-Certain...)	Single Family	Multifamily			Non-Residential	
		New	Addition / Remodel / Renovation	Existing Building		Low-Rise (≤3)	Mid-Rise	High-Rise (4+)		
Efficiency and/or Renewables	<b>Whole Building (mixed-fuel and all-electric)</b>	Yes	<b>X</b>		<b>X</b>	<b>X</b>	X	<b>X</b>	<b>X</b>	
	Solar PV	Yes	<b>X</b>	<b>X</b>	<b>X</b>		X	<b>X</b>	<b>X</b>	
	Single Measures	Yes	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	X	<b>X</b>	<b>X</b>	
	Rental Property	Yes		X	X		X	X	X	
Energy Plus Water Efficiency	Hot Water Distribution	Yes	X	X		X	X	X	X	Some
	Indoor Water	No	<b>X</b>	<b>X</b>	X	<b>X</b>	X	X	X	<b>X</b>
	Outdoor Water	No	<b>X</b>	<b>X</b>	X	<b>X</b>	X	X	X	<b>X</b>
Process Loads (Equipment)	Commercial Kitchens	Maybe	X	X						X
	Elevators	Maybe	X	X				X	X	X
	Escalators	Maybe	X	X						X
Electric-Ready	<b>240 V Pre-wiring</b>	No	X	X		X	X	X	X	
	<b>Panel Upgrade</b>	No	X	X		X	X	X	X	X
	<b>EV Readiness</b>	No	<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>	X	<b>X</b>	<b>X</b>
	<b>EV Charging</b>	No	<b>X</b>	<b>X</b>		X	<b>X</b>	X	<b>X</b>	<b>X</b>
Information Disclosure	Audits	No		X	<b>X</b>	<b>X</b>	<b>X</b>	X	<b>X</b>	<b>X</b>
	Benchmarking	No		X	<b>X</b>		X	<b>X</b>	<b>X</b>	<b>X</b>

NOTE: Items shown in bold indicate types of reach codes that one or more jurisdictions adopted during the 2016 Code Cycle.

# 2019 Code – Effective January 2020

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## Already included:

### Low-rise residential new construction

- Solar photovoltaics (PV) required (~2.5 kW)
- Panel capacity and wiring for future heat pump water heater
- All-electric compliance pathway

### Non-residential

- No solar PV required (or awarded performance credited)
- No all-electric compliance pathway



# Potential Code Requirements

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## Residential - Single Family - Performance

All residential units will include wiring and breakers for electric water heating, furnace, cooking and clothes drying.

**Mixed Fuel** – Compliance margin of 14-29% above Title 24 requirements.

- Exceed Title 24 by at least [pick a value between 14-29%]

**All-Electric** – Compliance margin of 0% above Title 24 requirements.

- Meet or exceed Title 24

# Potential Code Requirements: Single-Family Res.


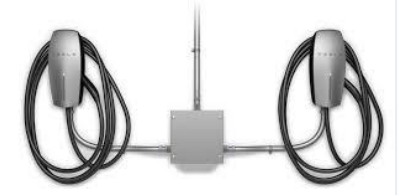

	Electric Pathway	+	Mixed Fuel Pathway <i>Option 1</i>	or	Mixed Fuel Pathway <i>Option 2 (Higher Efficiency)</i>
Compliance Margin	0%		17% (CZ3) 14% (CZ4)		29% (CZ3) 25% (CZ4)
Estimated Increased* Construction Cost	\$0		\$ 6,800 (CZ3) \$ 6,800 (CZ4)		\$10,000 (CZ3) \$10,000 (CZ4)
Emissions Penalty	0%		+60% (CZ3) +70% (CZ4)		+50% (CZ3) +50% (CZ4)
Indoor Air Quality	Best		Worst		Modest
Equipment Utilized	All Electric appliances and systems, no CO monitor		Gas connection, gas meter, gas furnace and water heater. CO monitor required, enhanced energy efficiency. Plus electrical wiring to all gas appliances for future switch to electric		Same as Mixed Fuel Option 1, plus Batteries or Solar Thermal (or equivalent)

Select Option 1 or Option 2 to be paired with the Electric Pathway

# Local Code Examples

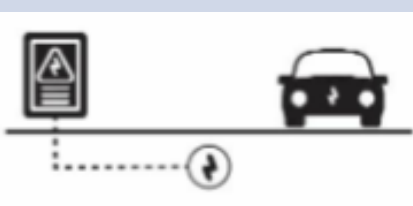
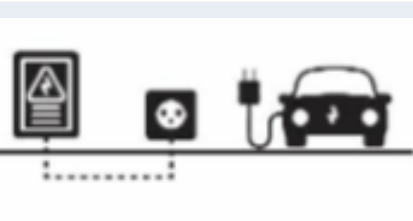

Ordinance Type	Examples
Electric-preferred	<p><b>Marin County</b> and <b>Palo Alto</b> requirements for new buildings:</p> <ul style="list-style-type: none"><li>- Mixed-fuel required to be 10-15% more efficient than state code, or</li><li>- All-electric construction</li></ul> <p><b>Sunnyvale</b> allows for increases in building height or density, and tradeoffs with other green building elements</p>
Carbon Neutral	<p><b>Vancouver, BC</b> will require all new buildings to be carbon neutral by 2025</p>
Natural Gas Bans	<p><b>Arcata</b> and <b>Berkeley</b> have proposed ordinances banning natural gas piping in new buildings:</p> <ul style="list-style-type: none"><li>- No natural gas appliances installed</li><li>- Replace existing municipal natural gas equipment with electric</li></ul> <p><b>Amsterdam</b> plans to phase out natural gas by 2050</p>

# Electric Vehicle Charger Types

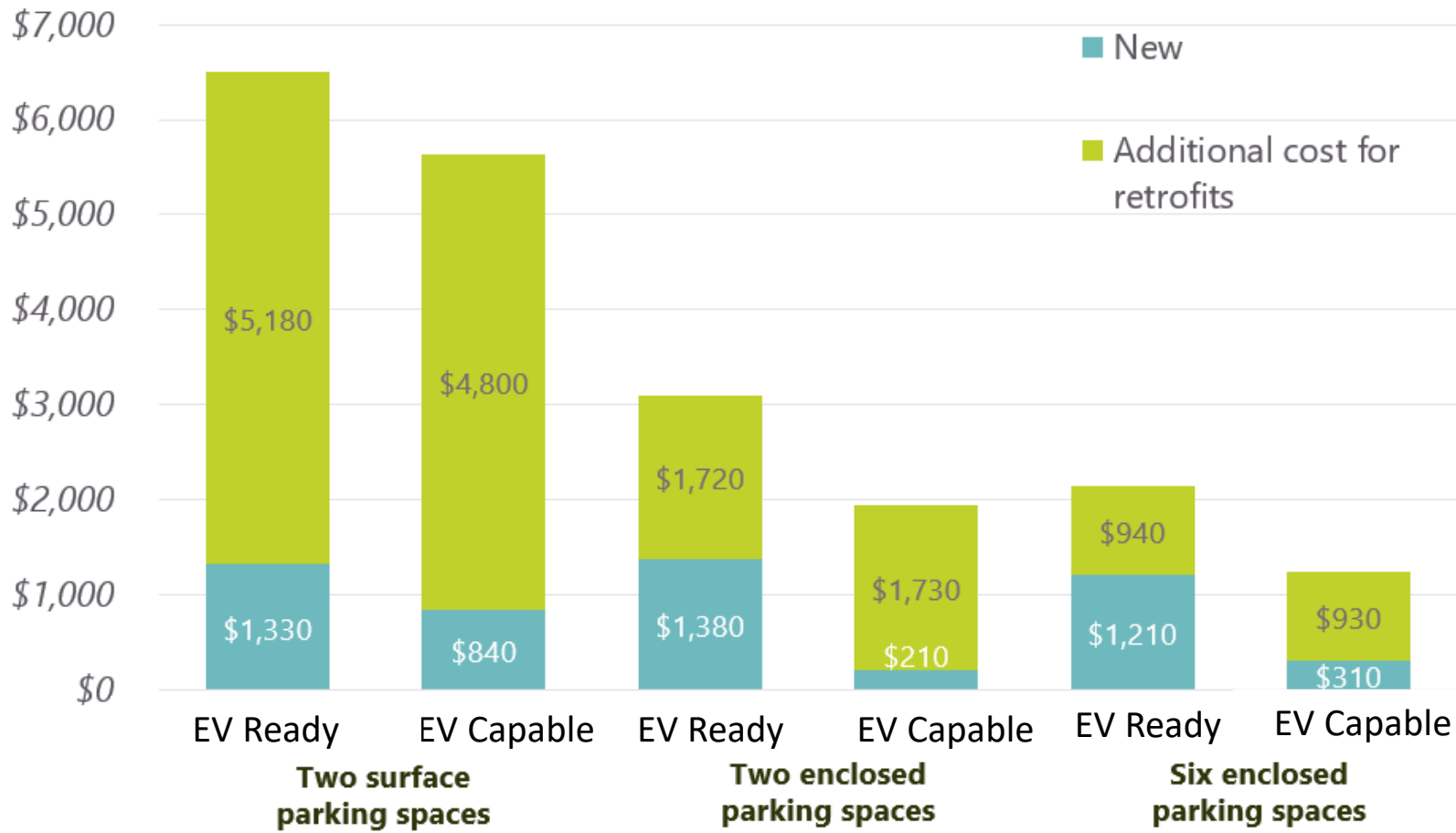
Level 1		15-20 Amp, 120v AC (standard household outlet) Driving Distance provided: 3-4 miles/hour
Level 2		40+ Amp, 208/240v AC Driving Distance provided: 25-30 miles/hour
DC Fast Charge		80-400 Amp, 200-600v DC Driving Distance provided: 125-1000 miles/hour



# EV Parking Space Options

<p>EV Capable</p>		<p>Raceway (conduit), electrical capacity (breaker space)</p>
<p>EV Ready</p>		<p>EV Capable + overcurrent protection devices, wiring and outlet (i.e. full circuit)</p>
<p>EVCI (electric vehicle charger installed)</p>		<p>All equipment to deliver electricity to EV</p>

# EV Charging: Cost of New vs. Retrofit



# Local EV Ordinance Efforts

Building Sector	Baseline (2019 CALGreen Mandatory)	Bay Area Example Current ( 2016) Reach Codes
Single Family	(1) Level 2 <u>EV Capable</u> space	<b>Marin County, San Francisco, Fremont, Palo Alto:</b> (1) Level 2 <u>EV Ready</u> space
Multi Family	<u>EV Capable</u> for 10% of parking spaces	<p><b>San Francisco, Oakland:</b> 10% Level 2 <u>EV Ready</u>; remaining parking spaces EV Capable (including electrical capacity for an addition 50% of spaces assuming load sharing)</p> <p><b>Fremont:</b> 10% of new parking spaces to be <u>EV Ready</u></p> <p><b>Palo Alto and Menlo Park:</b> (1) Level 2 <u>EV Ready</u> space per dwelling unit, and EVSE installation at some spaces</p>
Non-Residential	<u>EV Capable</u> for 6% of parking spaces	<p><b>San Francisco, Oakland:</b> 10% Level 2 <u>EV Ready</u>; remaining spaces EV Capable (including electrical capacity for an addition 50% of spaces assuming load sharing)</p> <p><b>Fremont:</b> 10-20% of new parking spaces to be <u>EV Ready</u></p>

# Options for EV reach codes include:

- Increase number of spaces
- Increase charging capability (Level 1 / 2)
- Increase readiness (Charger Installed vs Capable)
- Expanding to retrofits

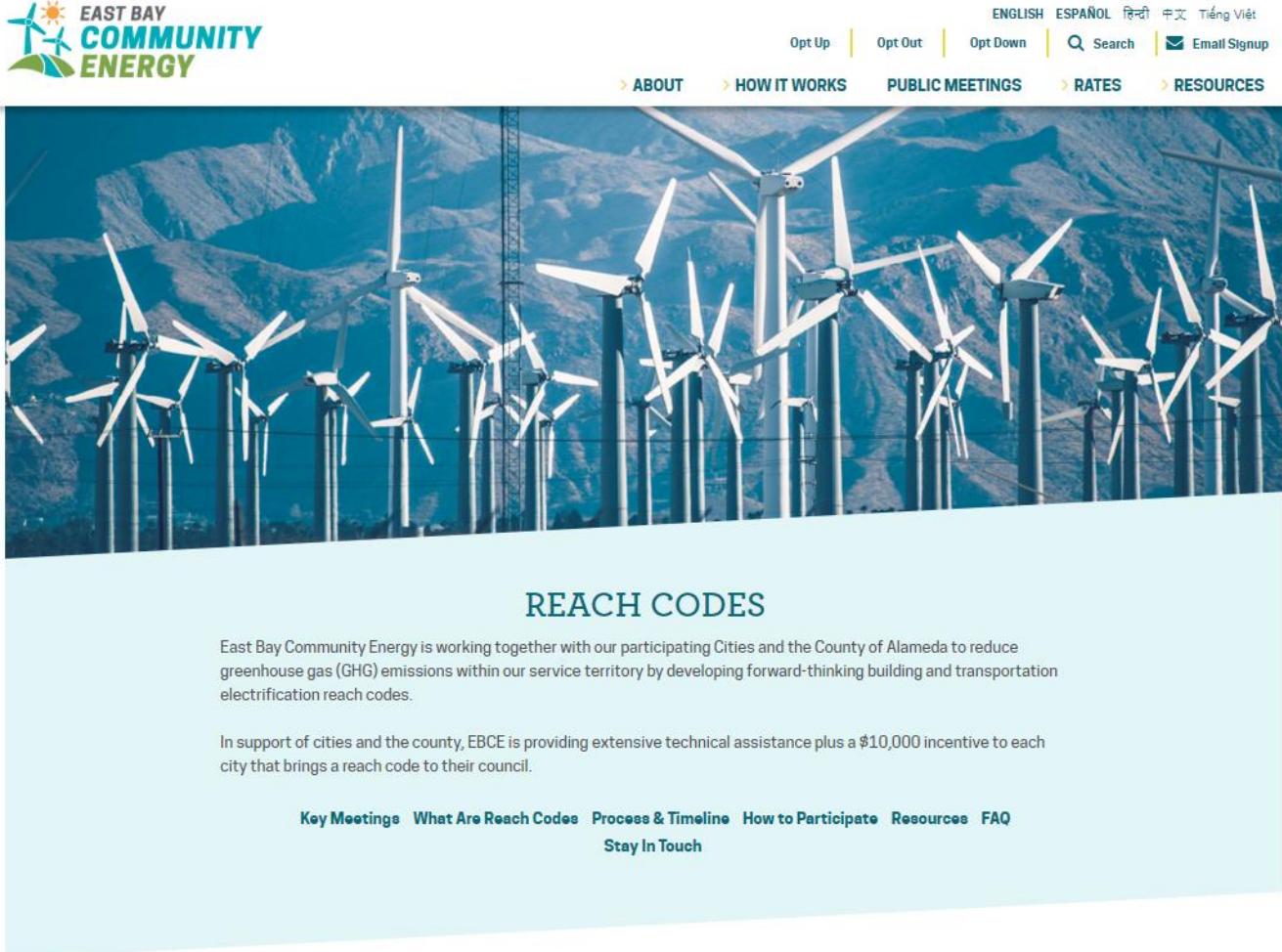


# Public Contact

April 23 and 24, 2019:  
EBCE held four meetings in  
Fremont and Berkeley

May 3, 2019:  
Chamber of Commerce's  
Government Relations Council

<https://ebce.org/reach/>



The screenshot shows the East Bay Community Energy website. At the top left is the logo for East Bay Community Energy, featuring a stylized sun and wind turbine. To the right of the logo are language options: ENGLISH, ESPAÑOL, हिन्दी, 中文, and Tiếng Việt. Below these are links for 'Opt Up', 'Opt Out', and 'Opt Down'. Further right are a search icon and 'Email Signup'. A navigation menu below the logo includes links for 'ABOUT', 'HOW IT WORKS', 'PUBLIC MEETINGS', 'RATES', and 'RESOURCES'. The main content area features a large image of a wind farm with mountains in the background. Below the image is the heading 'REACH CODES' in blue. The text below the heading reads: 'East Bay Community Energy is working together with our participating Cities and the County of Alameda to reduce greenhouse gas (GHG) emissions within our service territory by developing forward-thinking building and transportation electrification reach codes. In support of cities and the county, EBCE is providing extensive technical assistance plus a \$10,000 incentive to each city that brings a reach code to their council.' At the bottom of the section is a horizontal menu with links: 'Key Meetings', 'What Are Reach Codes', 'Process & Timeline', 'How to Participate', 'Resources', 'FAQ', and 'Stay In Touch'.

## Key Meetings

There are a few key dates and events before the new building code takes effect on January 1, 2020.

# Timeline

May – August	Continue Stakeholder Engagement
June	Release of Draft Model Code
July	Present Model Code to Committee
September	Council Introduces & Adopts Ordinance
Late September	File Reach Code for CEC Approval
December	File with CA Building Standards Commission
January 1, 2020	Reach Code would be Effective

# Summary

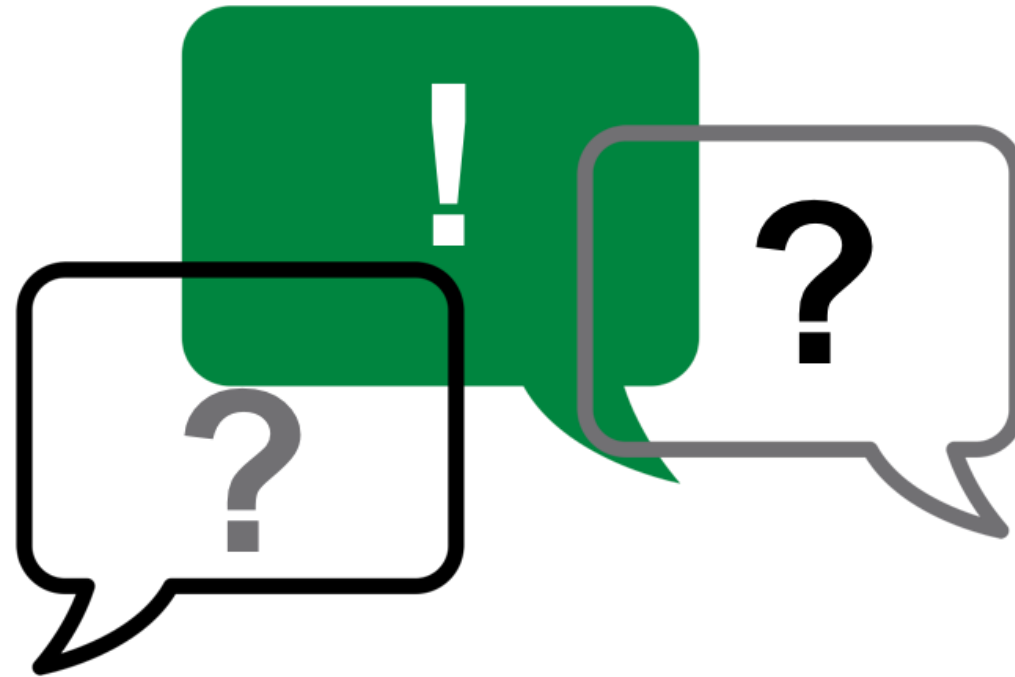
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Staff is seeking the Committee's direction:

1. Allow for Two-Pathway Approach (all-electric and mixed-fuel)?
2. Mixed Fuel Pathway (select one)
  - xx% better than Title 24?
3. EV Charging
  - Ready (outlet) versus Capable (conduit)
  - # of spaces
4. Existing Buildings
  - Require panel upgrades? (threshold?)
  - Require EV Capable spaces? (threshold?)

# Questions

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**PRESENTATION**

**PROPOSED 2019  
AGENDA PLANNING CALENDAR**

MONDAY, MAY 13, 2019

# Proposed 2019 Agenda Planning Calendar

## Council Sustainability Committee

May 13, 2019



# Proposed 2019 Agenda Planning Calendar

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## Monday, July 8, 2019

Annual Update on City's Waste Reduction and Recycling Programs

Litter Reduction – Consideration of Alternatives to a Fee

Draft Reach Code to Encourage Building Electrification

Summary of SB 1383 – Draft Regulations for Organic Waste and Methane Emissions

Update on the Use of Renewable Diesel in City Vehicles

EBCE's Renewable Energy Product for Municipal Accounts

## Tuesday, September 10, 2019

Greenhouse Gas Inventory Update

Standard Conditions of Approval for New Development

Implementation of Solar Projects

Green New Deal

# Proposed 2019 Agenda Planning Calendar

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## **Tuesday, November 12, 2019**

Long Term Water Conservation Framework

Multifamily Building Energy Efficiency (CEC grant-funded project by StopWaste)

Update on Preparation of Shoreline Master Plan

## **Unscheduled Items**

Sustainable Groundwater Plan

City Tree Inventory & Urban Forest



# 2019 Meetings

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Meeting dates for 2019 are:

- **January 14, 2019**
- **March 11, 2019**
- **May 13, 2019**
- **July 8, 2019**
- **September 10, 2019** (moved to Tuesday due to Admission Day being on September 9th)
- **November 12, 2019** (moved to Tuesday due to Veterans Day being on November 12th)

# Questions

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