

Wet Weather Consent Decree Implementation Update

Planning Committee

January 8, 2019

Agenda

- Background
- EBMUD Work
 - Regional Private Sewer Lateral (PSL) Program
 - Regional Technical Support Program (RTSP)
 - Capital Projects
- Compliance Progress
- Next Steps



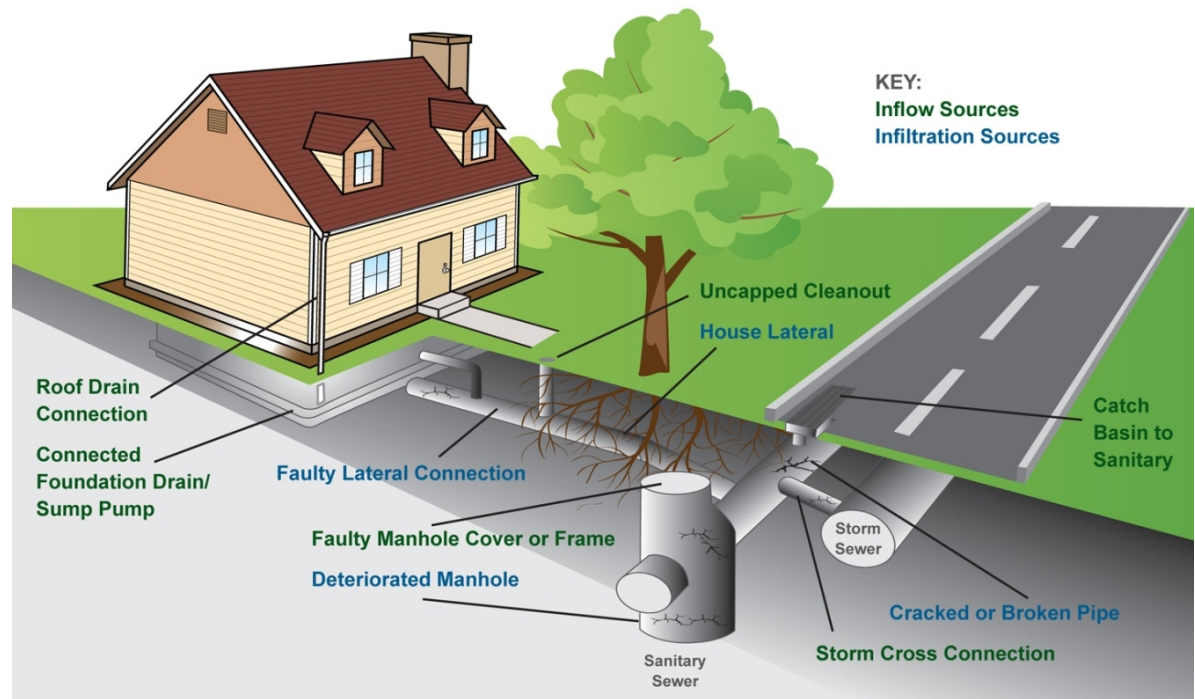
Background



- September 22, 2014 – EBMUD and Satellite agencies enter into Consent Decree
- Consent Decree designed to remove significant amount of inflow and infiltration (I&I) from the collection system, resulting ultimately in cessation of discharge from Wet Weather Facilities (WWFs)
 - To be achieved with an asset management approach
 - If check-in milestones are not met, potential for work to shift towards the traditional capital improvement (additional treatment and/or storage) approach
- Rehabilitation/repair/replacement to be performed by the responsible party
 - Homeowners/business owners responsible for PSLs
 - Satellite agencies responsible for public sewer mains/manholes
 - EBMUD responsible for the Interceptor System

Background

“I&I”: Inflow and Infiltration



Background



- Effective Period of 22 years
- Key checkpoints throughout
 - Check-in #1 2022
 - Check-in #2 2030
 - Overall compliance 2036
- Failure to meet check-in targets results in revised work requirements with significant EPA discretion

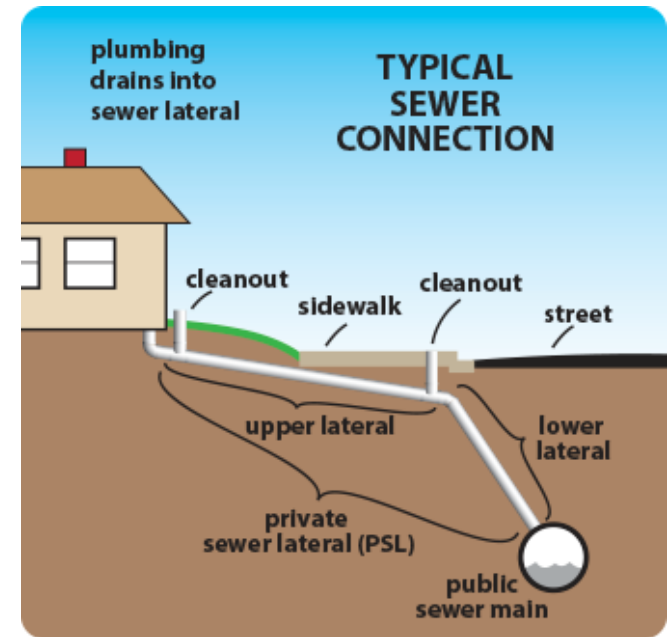
- Regional PSL Program
- RTSP
- Capital Projects
 - Urban Runoff Diversion Project
 - Pump Station Q Force Main Flow Reversal Project

EBMUD Work

Regional PSL Program



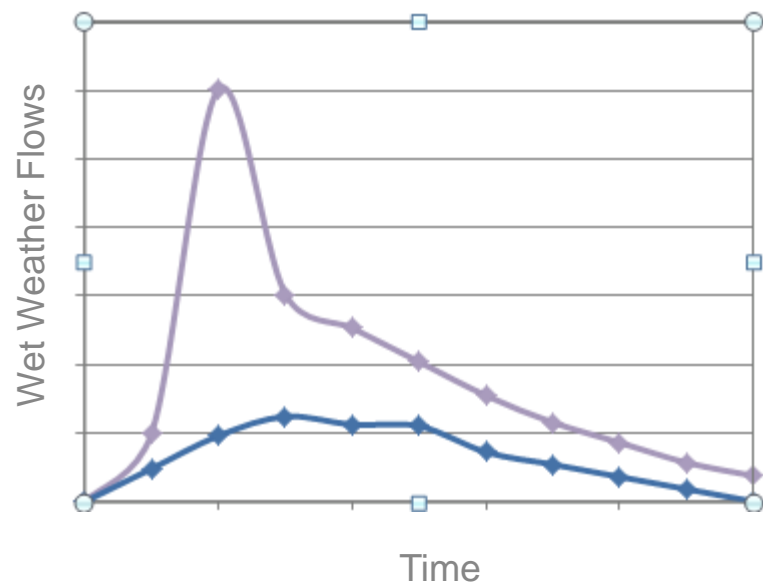
- PSL is privately-owned pipe that conveys waste flows from property to publicly-owned sewer mains

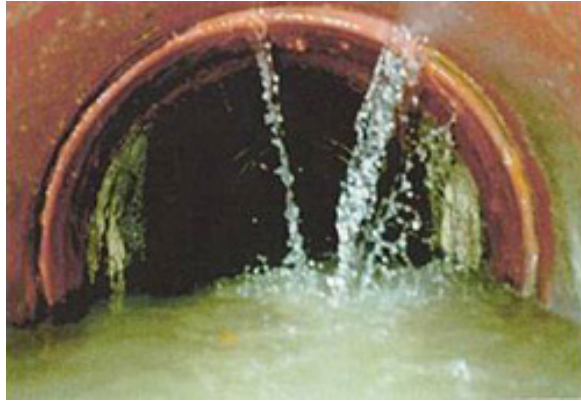


- Collectively, PSLs in the region are equivalent in length to the publicly-owned regional collection system

- Regional PSL Program includes all of SD-1, except for the City of Berkeley (which manages its own)
- Approx. 31,635 certificates issued since 2011
 - 24% of all parcels within program boundaries
 - Approx. 425 miles of PSLs certified leak-free
 - Certifications are 20% behind projections
- 94% compliance in FY18 for properties meeting a trigger, exceeding the KPI of 90%

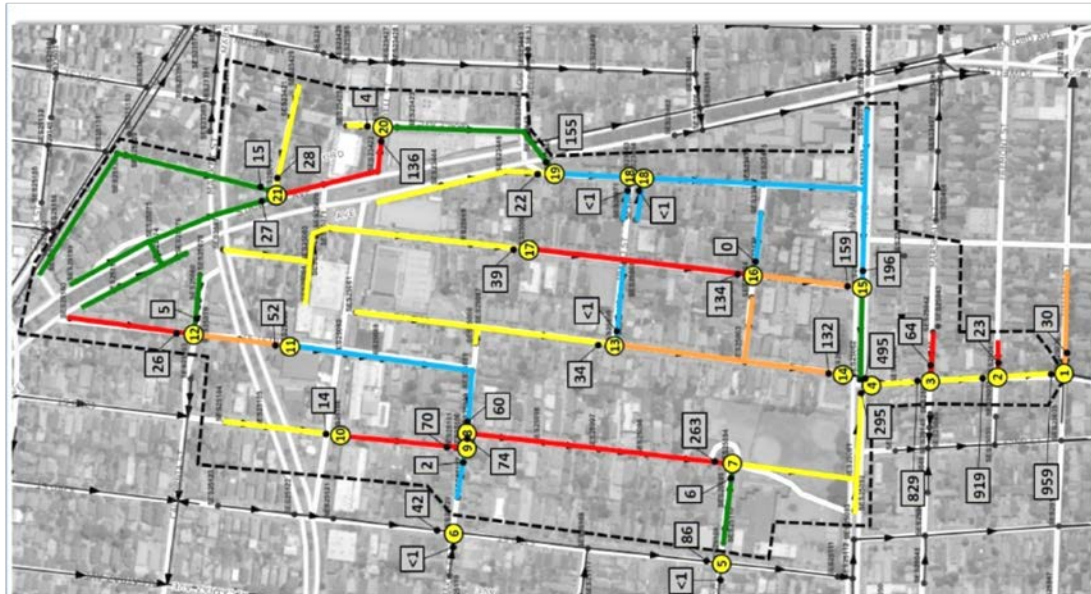
- Program Components
 - Requires minimum of \$2M/yr to identify sources of I&I
 - EBMUD identifies specific sources of I&I
 - Satellite communities pursue source elimination





- Technical approach to identify significant flow sources and understand system response to storms
- Supplements satellite mainline sewer rehabilitation and Regional PSL Program to achieve further flow reductions
- Critical to meet Consent Decree check-in targets and discharge elimination date

- Unique Investigation Methodologies Used
 - Flow Isolation Studies
 - Time Lapse Camera Manhole Inspection
 - Combined Investigations
 - Dye testing with push camera inspection and top-side manhole inspection



- Over 150 specific sources of I&I identified to date totaling over 10 MGD of peak flow during a storm event
 - 6 sources contribute 6.7 MGD
 - Significant number of small sources have been identified throughout the regional collection system

EBMUD Work Capital Projects



Urban Runoff Diversion Project

- Divert dry weather flow from Alameda County Stormwater pump station in Oakland (~500,000 gpd)
- Mitigation project for ongoing operation of WWFs
- 129 MG diverted to the MWWTP in FY18



Pump Station Q Force Main Flow Reversal Project

- Modify existing facilities to reduce discharges from Point Isabel WWF
- ~1600 feet of new pipe in Berkeley
- Required completion by September 2020



Compliance Progress Influent Volumes



- Compliance at check-ins is based on modeled discharge reductions relative to baseline
- Annual modeling is done to assess progress
- Fourth annual calibration completed in December 2018

Facility	Baseline Influent Volume (MG)	FY18 Influent Volume (MG)	% Reduction
Point Isabel WWF	26.7	25.5	4%
Main Wastewater Treatment Plant	355.9	336.5	5%
San Antonio Creek WWF	13.2	10.8	18%
Oakport WWF	66.2	45.7	31%
Total	462.0	418.5	9%

Compliance Progress



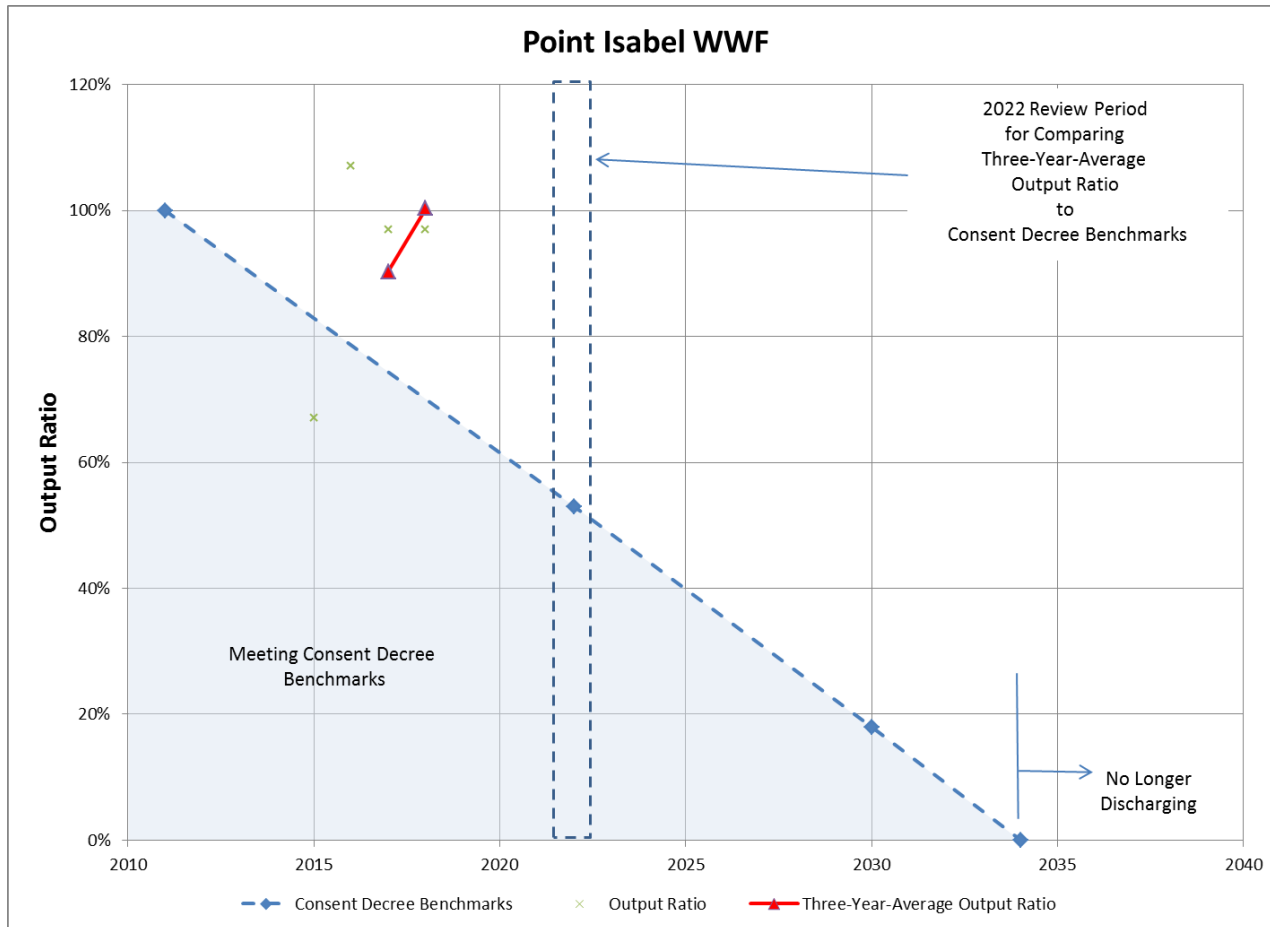
- System-wide reductions have varied due to climatological impacts
 - FY15 was the fourth year of a drought
 - FY17 had 65% more rain than average
 - FY18 precipitation was close to average

	With Calibrated Groundwater		With Baseline Groundwater		Expected	
	Volume Ratio	% Reduction	Volume Ratio	% Reduction	Volume Ratio	% Reduction
FY15	85%	15%	98%	2%	97%	3%
FY16	91%	9%	96%	4%	96%	4%
FY17	94%	6%	93%	7%	95%	5%
FY18	91%	9%	89%	11%	94%	6%

Compliance Progress Point Isabel WWF



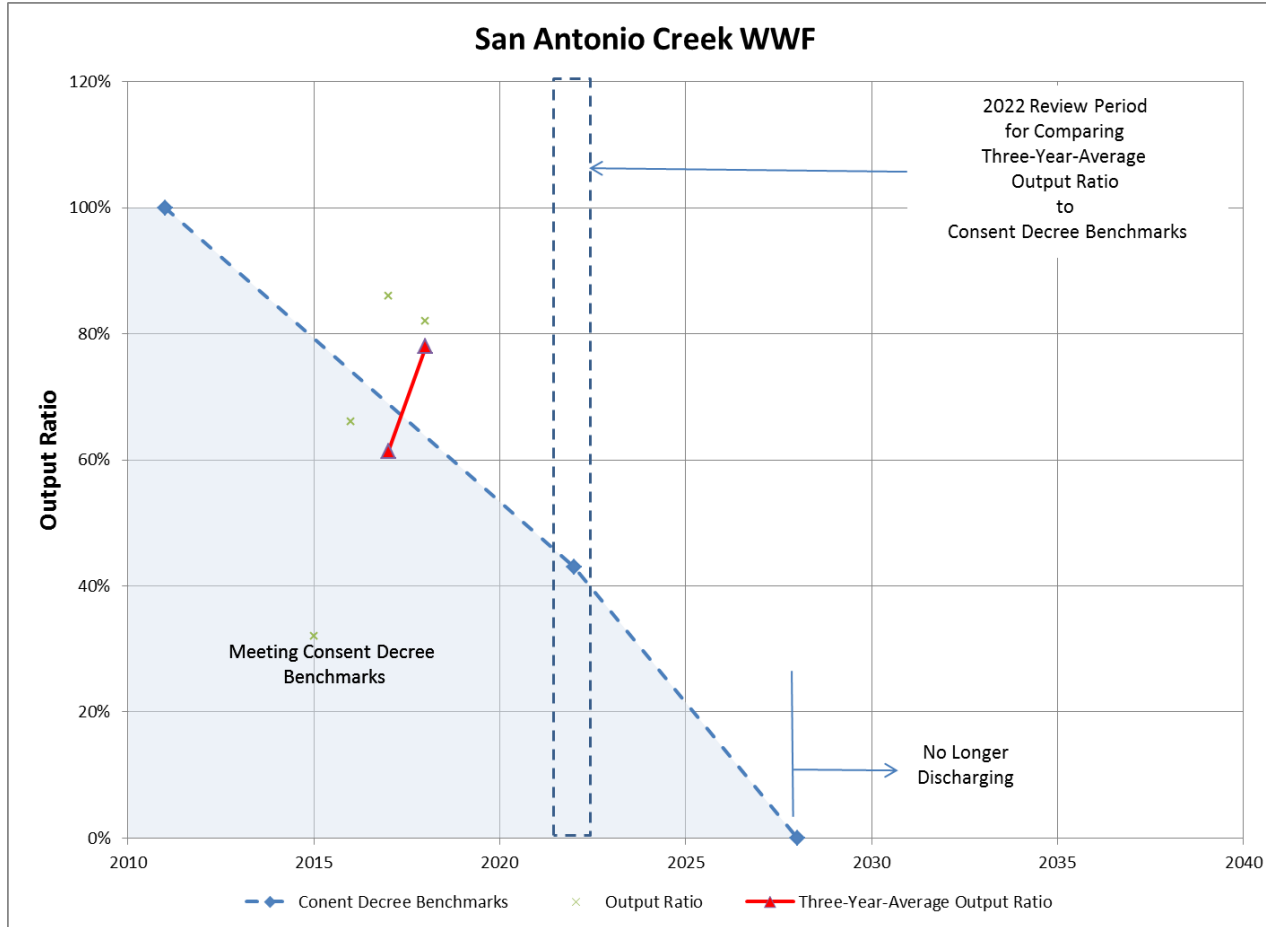
Output Ratio = modeled current discharge/modeled baseline discharge



PI WWF remains
at risk of not being
in compliance for
the 2022 Check-in

FY18
Three-Year-Average
Output Ratio = 100%
(0% reduction)

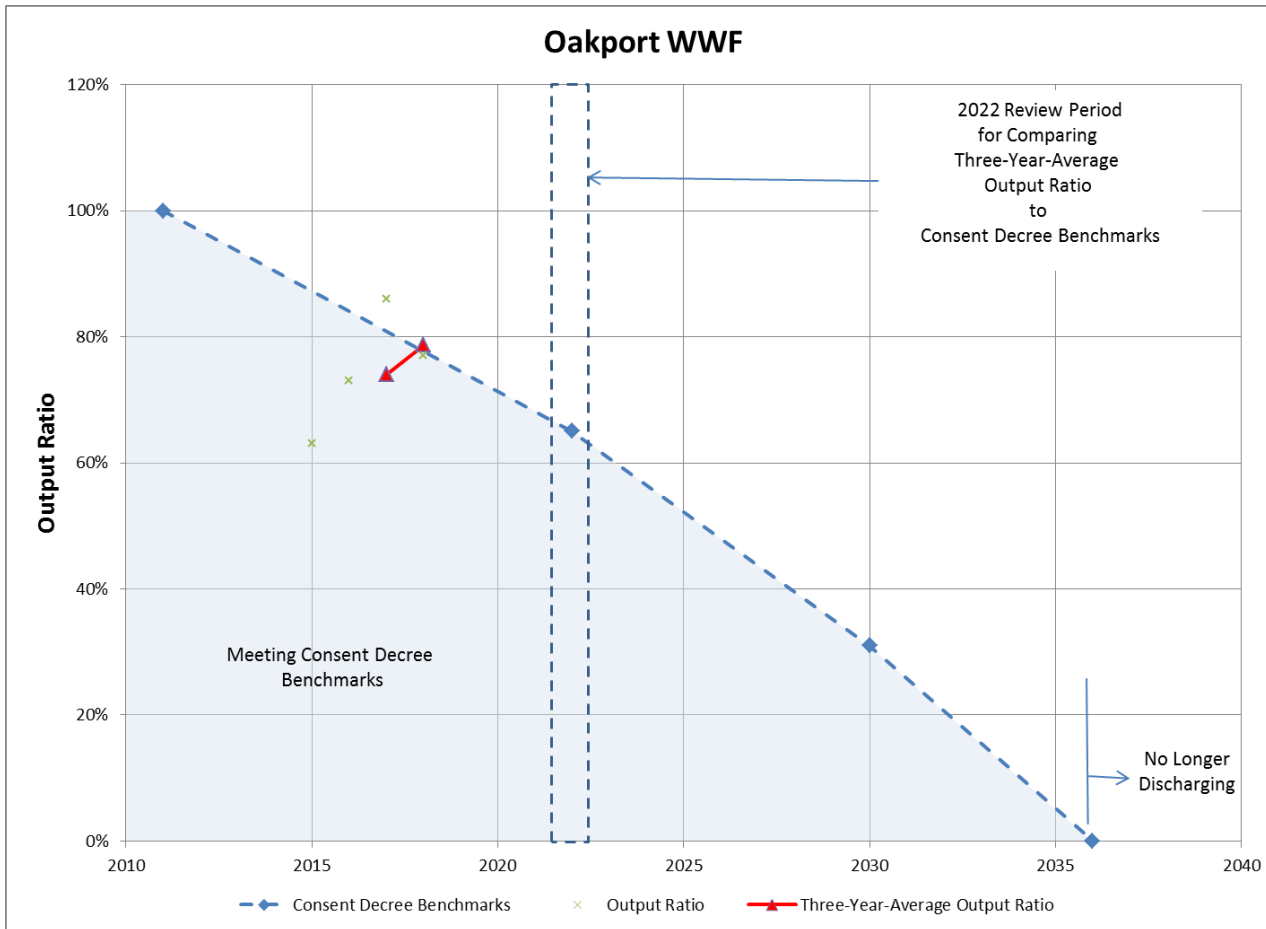
Compliance Progress San Antonio Creek WWF



SAC WWF is at risk of not being in compliance for the 2022 Check-in

**FY18
Three-Year-Average
Output Ratio = 78%
(22% reduction)**

Compliance Progress Oakport WWF



OAK WWF is at risk of not being in compliance for the 2022 Check-In

**FY18
Three-Year-Average
Output Ratio = 79%
(21% reduction)**

Compliance Progress Summary



- System-wide, work has been effective at removing I&I
 - Localized reductions vary
 - Multi-seasonal climatological impacts have significant influence on annual results
- All three WWFs are currently at risk of not being in compliance at the 2022 Check-In

Next Steps



- Continue to implement and refine RTSP
- Continue implementation of Regional PSL Program and Capital Projects
- Continue collaboration with Satellite agencies to locate and remove I&I
- Continue to monitor performance regarding flow reductions and prepare for the 2022 check-in

Pretreatment and Pollution Prevention Program Update

Planning Committee

January 8, 2019

Background



- Pretreatment and Pollution Prevention Programs are required by NPDES Permit
- Goals to protect:
 - San Francisco Bay
 - Infrastructure
 - Treatment process
 - Worker safety



*Cuyahoga
River, 1952
Photo: Cleveland
State University
Library*

*Louisville, KY
1981
Photo: Louisville
Courier Journal*



Permit Type	No. Permits
Categorical Industrial Users (CIUs)	3
Non-Categorical Significant Industrial Users (SIUs)	10
Non-Significant CIUs/ "Zero Dischargers"	19
Other permitted Industrial Users	16
Total Permitted Industrial Users	48

- Issue and maintain permits
- Inspect permitted facilities
- Enforce on permit violations



Pretreatment Program Adapting to Change



≡ Berkeleyside



End of an era: Berkeley's Pacific Steel Casting shuts down after 84 years

BUSINESS



By Frances Dinkelspiel, Sept. 6, 2018, 11 a.m.

For much of the last 84 years, when the sky was dark and most Berkeley residents were asleep, Pacific Steel Casting's three plants on Second Street in West Berkeley were in full swing making parts for trucks, buses, ships

- Ensure proper permit closure and identify new businesses needing permits

The screenshot shows a webpage from Gtm (Green Tech Media) with a navigation bar for Solar, Grid Edge, Storage, Wind, More, Trending, Podcasts, and Resources. The main article is titled "VCs Continue Investing in Batteries: Sila Nano Gets \$70M for Silicon Anode Tech" and is categorized under "ENERGY STORAGE". The article text states: "Sila claims it can increase lithium-ion battery capacity by up to 40 percent." The author is Eric Wesoff, dated August 20, 2018. Below the text is a photo of several Sila Nano battery cells. A small notification bubble with the number "2" is visible. At the bottom right, there is a call to action: "Sign up for our weekly Energy Storage Newsletter!".

Pretreatment Program

Local Limits



SECTION 3

LIMITATIONS ON DISCHARGES

Arsenic	2	mg/L
Cadmium	1	mg/L
Chlorinated Hydrocarbons (total identifiable)	0.5	mg/L
Chromium (total)	2	mg/L
Copper	5	mg/L
Cyanide	5	mg/L
Iron	100	mg/L
Lead	2	mg/L
Mercury	0.05	mg/L
Nickel	5	mg/L
Oil and Grease	100	mg/L
pH	not less than 5.5	S.U.
Phenolic compounds	100	mg/L
Silver	1	mg/L
Temperature	150 ⁽¹⁾	°F
Zinc	5	mg/L

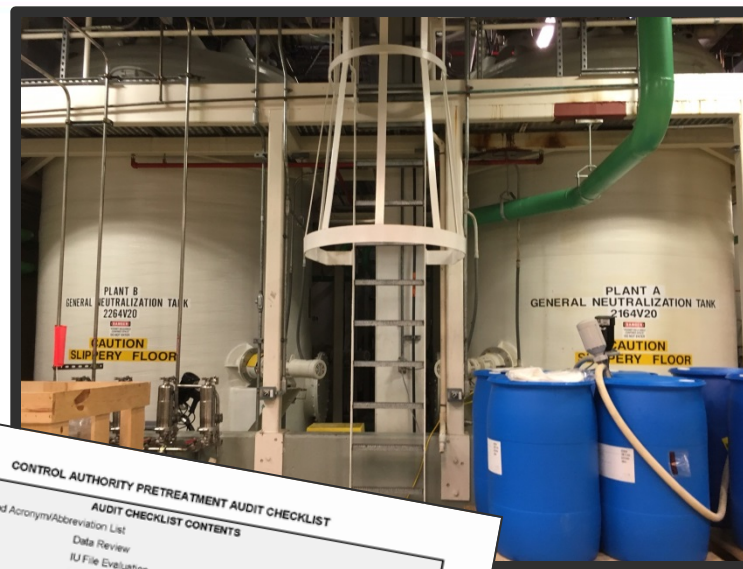
- Wastewater Control Ordinance specifies pollutant limits for all dischargers
- Local Limits reviewed on 5 year cycle
 - 2018: No changes, limits are protective

Pretreatment Program

Compliance Inspection and Audit



- January 2017: EPA/Regional Board contractor performed inspection
- February 2018: Inspection report issued
- January 2019: Pretreatment Compliance Audit scheduled



CONTROL AUTHORITY PRETREATMENT AUDIT CHECKLIST

AUDIT CHECKLIST CONTENTS

Cover Page and Acronym/Abbreviation List

Section I Data Review

Section II IU File Evaluation

Section III Observations and Concerns

Attachment A Pretreatment Program Status Update

Attachment B Pretreatment Program Profile

Attachment C Legal Authority Review Checklist

Attachment D Worksheets

Site Visit Data Sheet

WENDB Data Entry Worksheet

PCA Required ICIS Data Elements Worksheet

RNC Worksheet

Supporting Documentation

Control Authority (CA) name and address _____

Treatment Plant Name _____ Date(s) of audit _____

NPDES Permit Number _____ Effective Date _____ Expiration Date _____ Permit Reviewed?

AUDITOR(S)

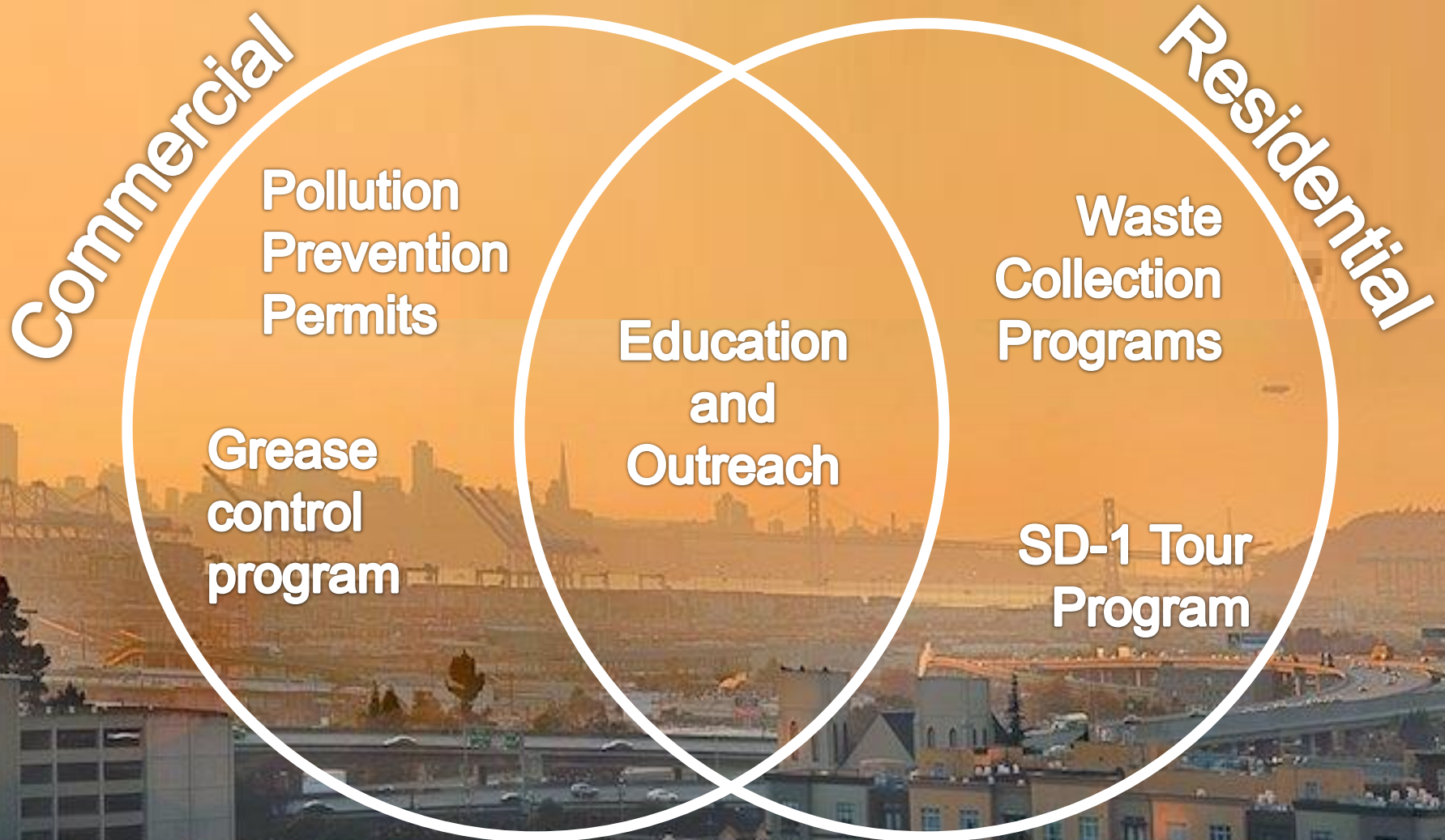
Name	Title/Affiliation	Telephone Number	Email Address

CA REPRESENTATIVE(S)

Name	Title/Affiliation	Telephone Number	Email Address

*Identified program contact

Pollution Prevention Program Program Components

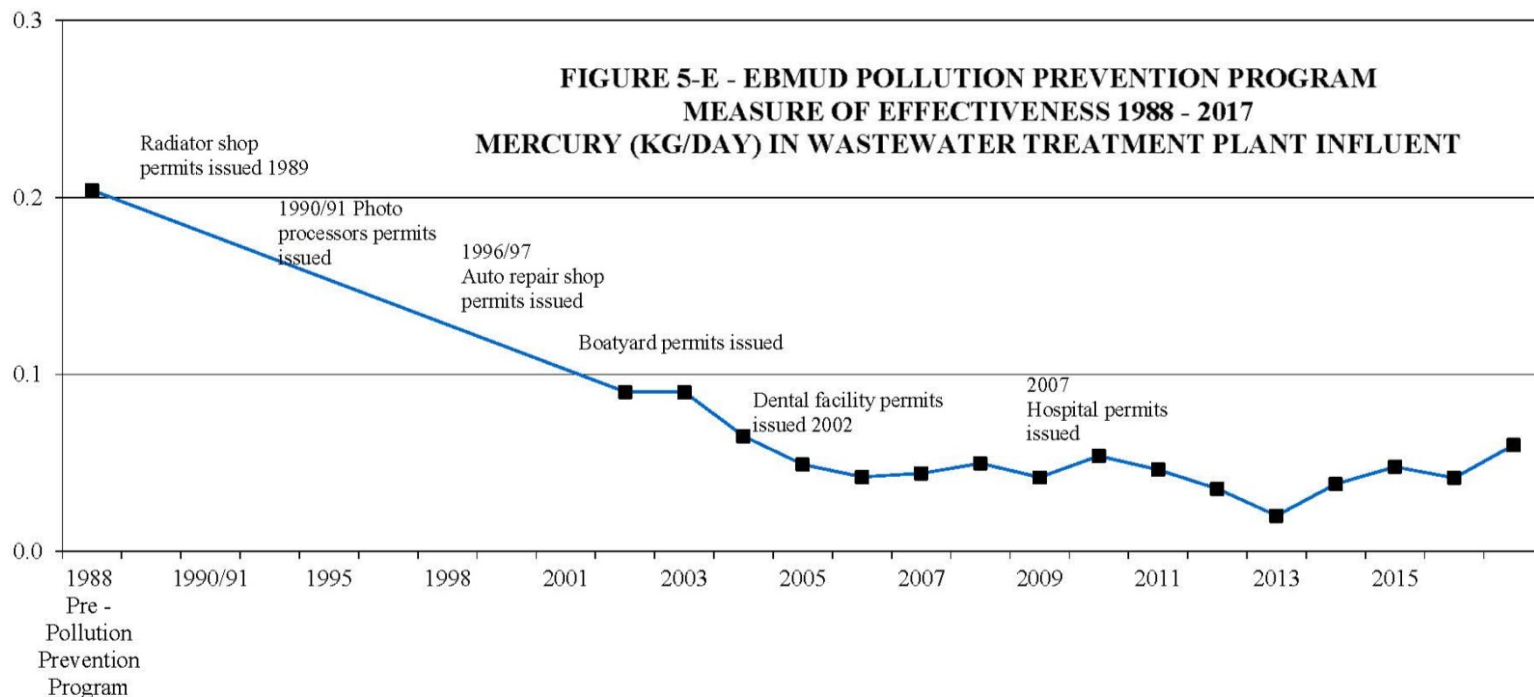


Pollution Prevention Program

Commercial Permits



- Permits with Best Management Practices are issued to a variety of industries
- Currently >1,000 permits issued



Pollution Prevention Program Outreach and Education



- Treatment Plant Tour Program
 - Since 2016, 150 tours and over 2,200 visitors
- Attend community events
- Clean Bay contacts
510-287-1651
cleanbay@ebmud.com
ebmud.com/cleanbay

*Oxygen
plant,
SD-1*



*Alameda
Earth
Day*

Pollution Prevention Program

Outreach and Education (Cont)



- September 2018, 12-page insert for the East Bay Express

From Watershed to Bay

In honor of California Coastal Cleanup Day and Creek to Bay Day, the East Bay Municipal Utility District and our partners along our watersheds, waterways and the San Francisco Bay invite you to join us in **TAKING ACTION**.

PROTECT A CREEK 4

KNOW WHAT TO FLUSH 8

WASTEWATER 101 10

A CLEAN BAY BEGINS WITH YOU.
www.ebmud.com/cleanbay

Partners in Action

STAND BY THE BAY, TAKE IN THE VIEWS, WATCH THE WAVES. EBMUD AND OUR EMPLOYEES WORK HARD TO PROTECT THIS JEWEL BUT WE CAN'T DO IT ALONE. WE RELY ON OUR COMMUNITY PARTNERS AND YOU.

The impacts of urban living on our natural environment are always evolving. That's why EBMUD partners with the San Francisco Estuary Institute, a leader in monitoring the health of the Bay, and supports like-minded nonprofit groups like Baykeeper and Save the Bay.

Together we work to keep the Bay clean, study emerging pollutants like tiny plastic "threads" that shed from synthetic materials, as well as monitor the concentrations of nutrients in the Bay. We are working toward a better understanding of these complex challenges through science so we can find the best solutions.

While we further our understanding of how to best protect our natural environment, we remind you that you too can protect the Bay.

SEE POLLUTION IN THE BAY? CALL BAYKEEPER!

If you see a leaking pipe, illegal dumping, sewage or other pollution in SF Bay, report it to Baykeeper and we'll investigate!

Report pollution to **1-800-KEEP-BAY**, **Hotline@Baykeeper.org**, or **Baykeeper.org**

SAN FRANCISCO BAYKEEPER.

ON THE CASE, ON THE WATER, ON YOUR SIDE.

SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD is part of the California Environmental Protection Agency, and our job is to protect and improve the quality of San Francisco Bay, creeks, wetlands, groundwater, and other natural water resources in the region. We issue permits for actions that have the potential to pollute these waters, enforce compliance with permit requirements, and investigate and require cleanup of polluted waters. We also work with the public and private partners to promote stewardship and collaborative efforts. Find more information and opportunities to participate at www.WaterBoards.ca.gov/SanFranciscoBay/

Water Boards

On October 6, 2018, join us for our third annual Bay Day!

SAVE THE BAY Bay Day

GET INVOLVED AT WWW.BAYDAY.ORG

Our lives and our communities are all connected to San Francisco Bay. Seven million Bay Area residents, 400 native species, our economy and quality of life all depend on it. The future of our Bay depends on how we conserve and care for this natural resource — the economic and ecological heart of the Bay Area. Bay Day is one critical day every year for us all to celebrate our beautiful Bay. You'll get a restoration event or nature program near you.

23rd Annual CREEK TO BAY DAY
Saturday, Sept. 15, 2018
Volunteer to clean and green Oakland!

Accessibility request?
Contact adoption@oaklandnet.com, (916) 238-7611, T11 for relay service

(510) 238-7611
oaklandcreektobay.org

CITY OF OAKLAND PUBLIC WORKS | EAST BAY MUNICIPAL UTILITY DISTRICT | CALIFORNIA COASTAL COMMISSION

12 FROM WATERSHED TO BAY | EBMUD.COM | EAST BAY MUNICIPAL UTILITY DISTRICT

Pollution Prevention Program

Waste Collection



"I LOVE TO COOK FOR MY FAMILY. THAT'S WHY I KEEP FATS, OILS AND GREASE OUT OF MY SINK AND IN THE COMPOST."

Fats, oils and grease from cooking belong in the compost – not the sink! When fats, oils and grease are washed down the drain they can solidify in your pipes and cause sewage backups in your home, business or neighborhood. Sewage can enter the San Francisco Bay from there. Keep your sink running clean so you can keep cooking amazing meals.

You can drop off your used cooking grease at the EBMUD wastewater treatment plant for recycling. EBMUD also helps restaurants and other food facilities control grease. Contact us at Cleanbay@ebmud.com for more information.



- Grease Collection
 - 5 locations for residential customers to deposit used fryer oil
- Pharmaceutical Collection
 - 8 locations, including here (1st floor AB)



"I GREW UP FLUSHING OLD PILLS DOWN THE TOILET. NOW I KNOW THAT MEDICATIONS CAN POLLUTE THE BAY SO I BRING MY EXPIRED PILLS TO A DROP BOX."

Flushing expired or unwanted medicines down the toilet can harm the San Francisco Bay. The best way to safely get rid of your expired and unwanted medicines is to discard them at a free EBMUD disposal bin. Find a collection site near you at ebmud.com/cleanbay.

Pollution Prevention Program

Encouraging Behavior Change



**"WE USED TO FLUSH OUR WIPES,
BUT THEY CLOGGED OUR TOILET.
NOW WE THROW THEM AWAY."**

Although they say flushable, wipes can clog pipes. These clogs can cause sewage to back up and overflow in your home or neighborhood. Remember to only flush the 3 Ps – poop, pee and paper. Wipes belong in the trash, not the toilet. Find out more at ebmud.com/3ps.



Print messages mirrored in billboard and bus shelters.

Treatment plant screenings (mostly wipes)



Pollution Prevention Program Implementing District Values



Coastal Cleanup



September 2018



Next Steps



- Prepare for 2019 Pretreatment Compliance Audit
- Pretreatment 101 Training
- Issue Notice of Significant Non-compliance for 2018
- Publish the 2018 Annual Pretreatment Report
- Continue to improve the Pretreatment and Pollution Prevention programs