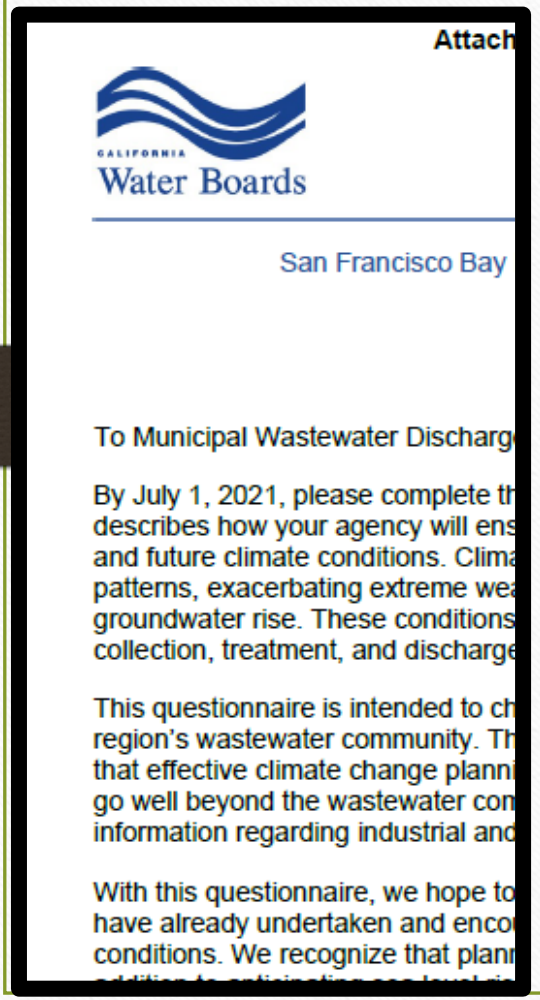
BACWA
BAY AREA
CLEAN WATER
AGENCIES

Hot Topics

Resiliency Planning

1. Agency Surveys



Attach

California Water Boards

San Francisco Bay

To Municipal Wastewater Discharg

By July 1, 2021, please complete th
describes how your agency will ens
and future climate conditions. Clima
patterns, exacerbating extreme wea
groundwater rise. These conditions
collection, treatment, and discharge

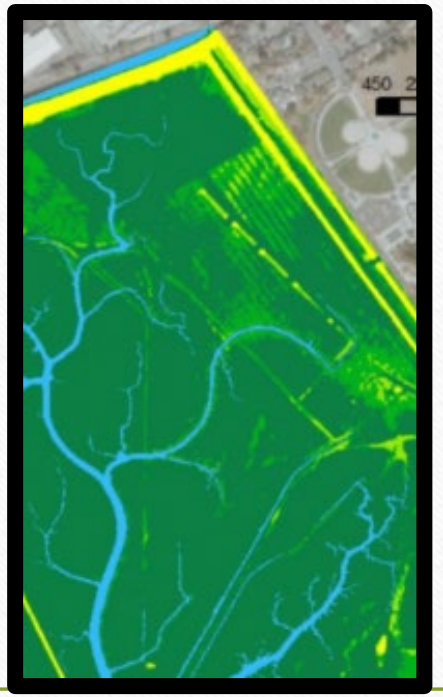
This questionnaire is intended to ch
region's wastewater community. Th
that effective climate change planni
go well beyond the wastewater con
information regarding industrial and

With this questionnaire, we hope to
have already undertaken and encou
conditions. We recognize that plann

2. Sea Level Rise Guidance

3. SSS-WDR

4. Resiliency Planning Now

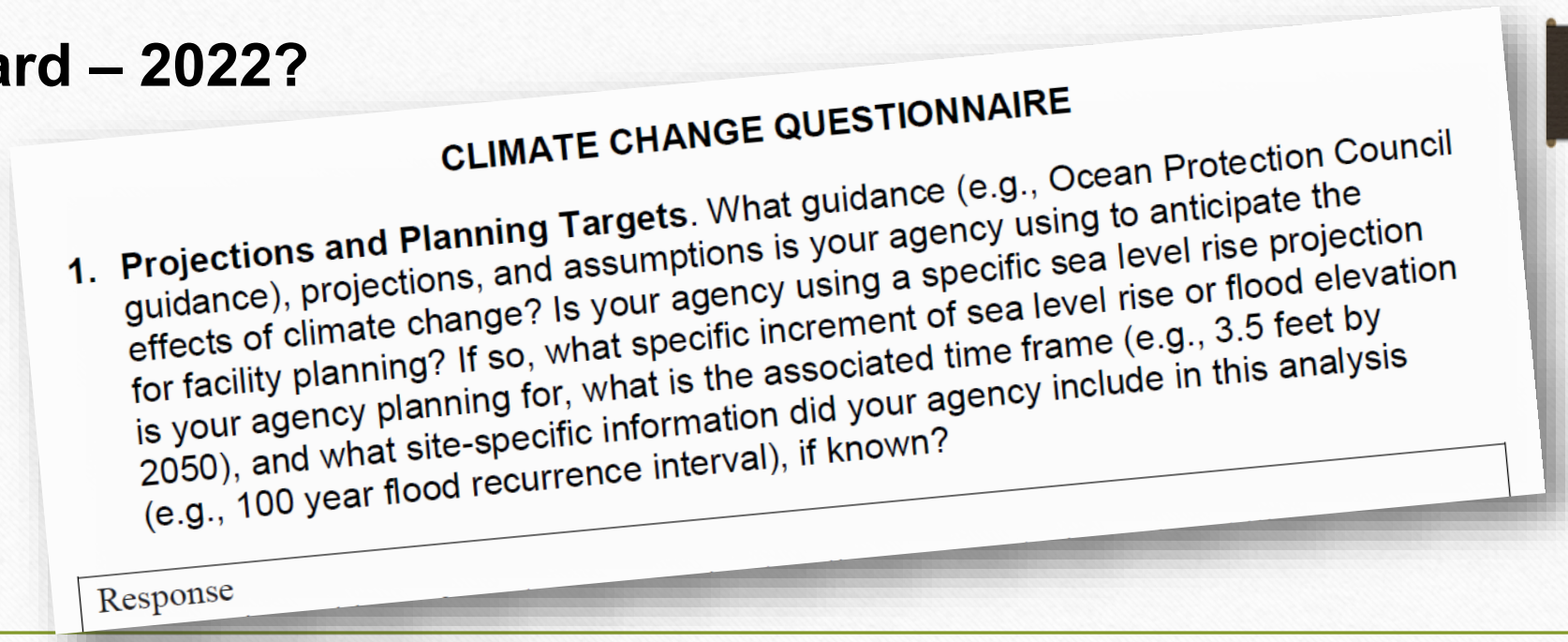


Sources: Ocean Protection Council, Central San, Oro Loma

Climate Change Questionnaires

Regional Water Board – 2021

State Water Board – 2022?



CLIMATE CHANGE QUESTIONNAIRE

1. **Projections and Planning Targets**. What guidance (e.g., Ocean Protection Council guidance), projections, and assumptions is your agency using to anticipate the effects of climate change? Is your agency using a specific sea level rise projection for facility planning? If so, what specific increment of sea level rise or flood elevation is your agency planning for, what is the associated time frame (e.g., 3.5 feet by 2050), and what site-specific information did your agency include in this analysis (e.g., 100 year flood recurrence interval), if known?

Response

Current NPDES Permitting Approach

Current SF Bay Approach: Fact Sheet in NPDES Permits

Sea Level Rise. Approximately 1,000 linear feet of the Facility's collection system are susceptible to flooding at 25 centimeters of sea level rise. This portion of the collection system is protected by three sealed manholes …

Sea Level Rise. In 2019, the Discharger adopted the District Strategic Plan, which includes activities to address sea level rise, including the identification of anticipated impacts, potential mitigation strategies, and partnerships that will contribute to a coordinated and regional response to this issue. …

Sea Level Rise Adaptation Planning. To adapt to rising sea levels, the Discharger developed a sea level rise adaptation plan titled *Wastewater Climate Change Plan* (Plan) in June 2019. This Plan aligns with the *State of California Sea-Level Rise Guidance* (Ocean Protection Council, 2018 Update) …

Current NPDES Permitting Approach

Los Angeles Regional Water Board Approach: Special Provision in all NPDES Permits

a. **Climate Change Effects Vulnerability Assessment and Mitigation Plan**. The Discharger shall consider the impacts of climate change as they affect the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Discharger shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the wastewater treatment facility's operation, water supplies, its collection system, and water quality, including any projected changes to the influent water temperature and pollutant concentrations, and beneficial uses. For facilities that discharge to the ocean including desalination plants, the Climate Change Plan shall also include the impacts from sea level rise. The Climate Change Plan is due 12 months after the effective date of this Order.

Regional Water Board Climate Change Survey

Projections and Planning Level Targets:

What is your agency planning for?

Vulnerability Assessment:

- Sea Level Rise
- Groundwater Rise
- Changing Climate & Weather
- Power

Adaptation Strategies:

- Collaboration
- Infrastructure Improvements
- Monitoring
- Emergency Response Planning
- Finance

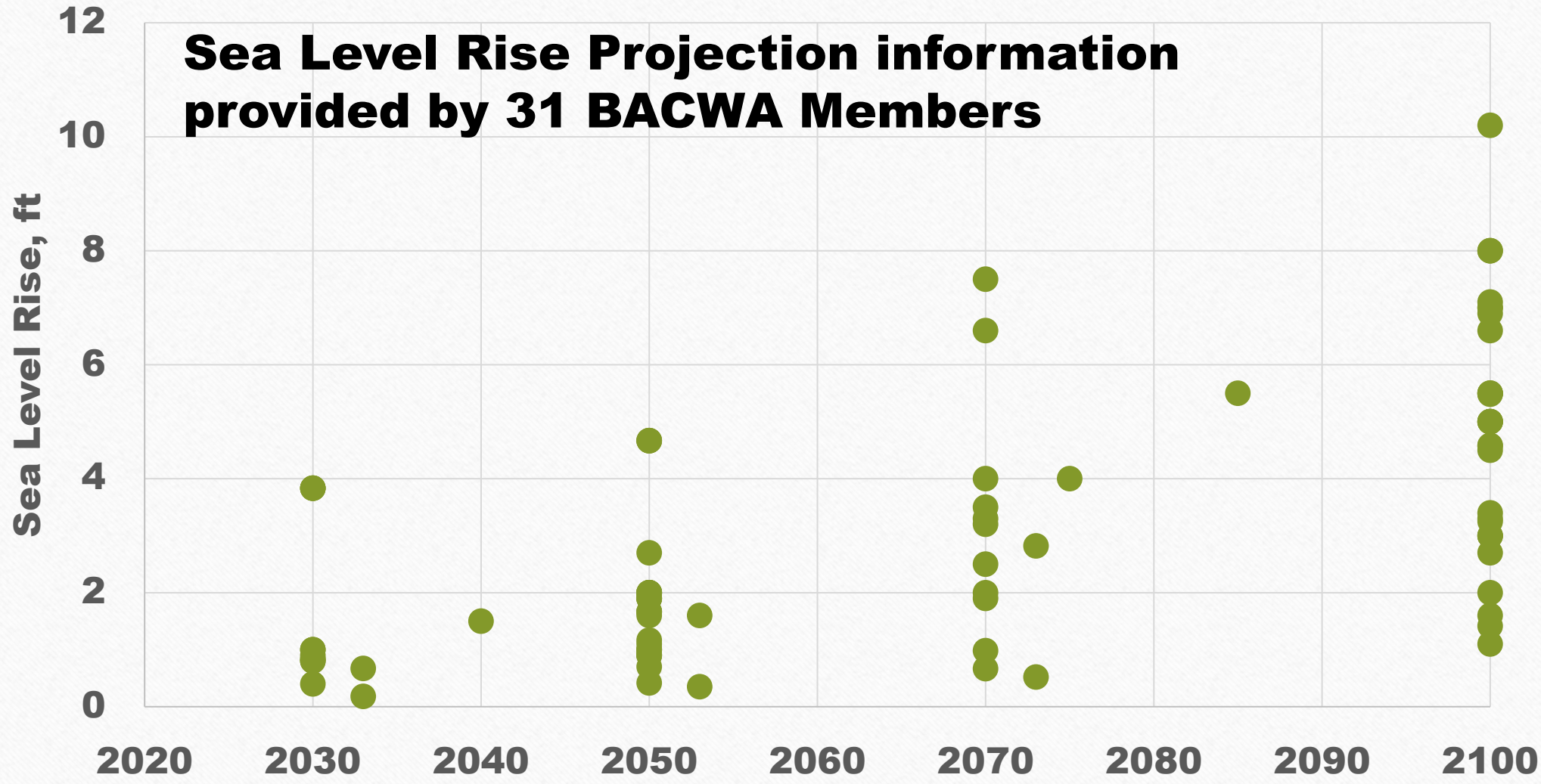
February 2022 Executive Officer's Report

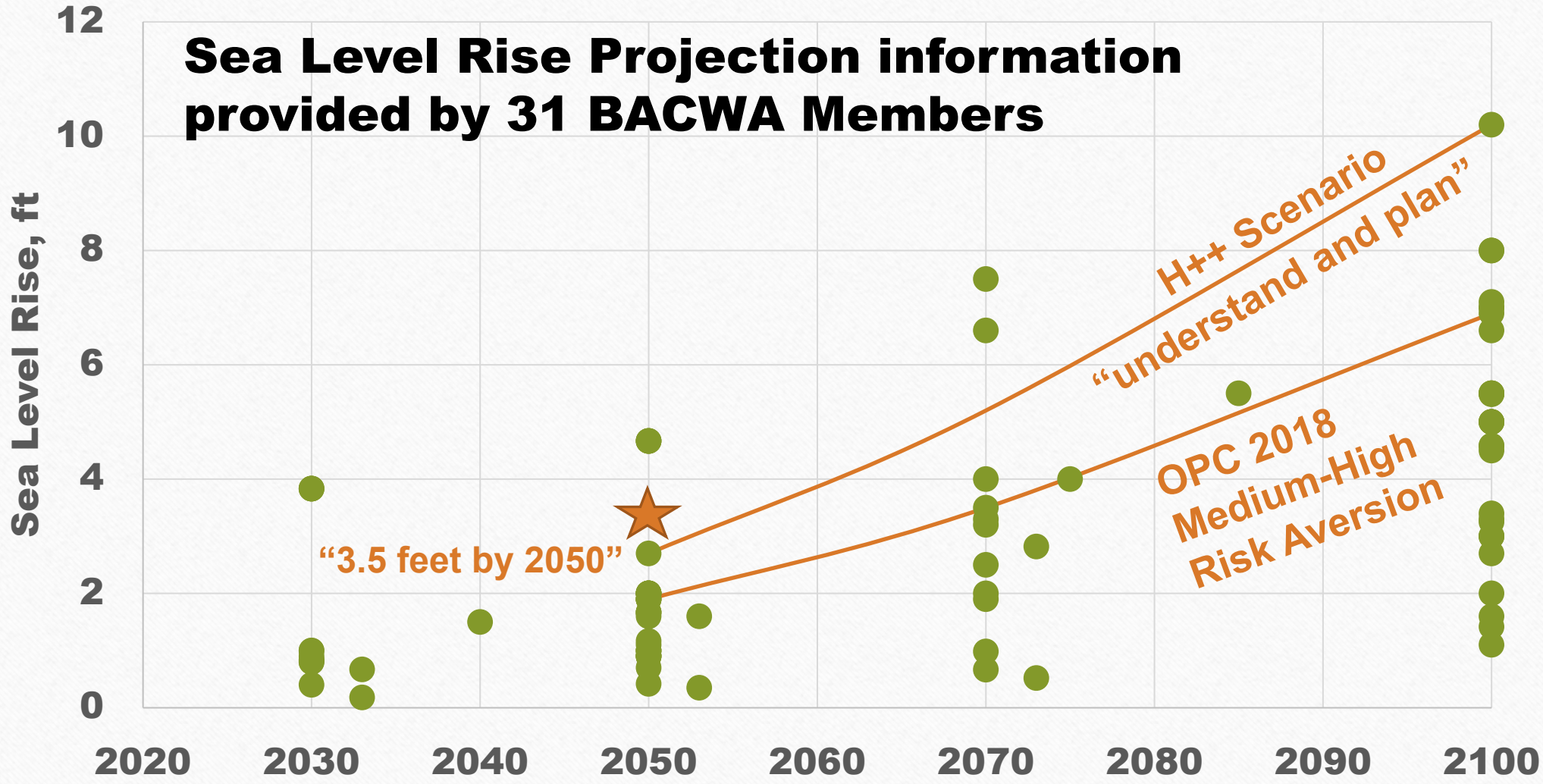
- Regional Sea Level Rise Projections Vary
- Dischargers are Planning for Sea Level Rise and Storm Surges
- Dischargers with High Flood Risk are Taking Action
- The Questionnaire is Driving Action
- "Based on our review of the responses to the questionnaire, we are optimistic that good progress is being made."

Climate Change Survey Responses

- Facility-driven vs. Climate-driven Adaptation Planning

- About 1/3 of agencies have incorporated Sea Level Rise into routine capital planning
- Sea Level Rise projections heavily influenced by relationships with regional partners


Sea Level Rise Projection information provided by 31 BACWA Members
Sea Level Rise, ft
12
10
8
6
4
2
0
2020
2030
2040
2050
2060
2070
2080
2090
2100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12
10
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4
2
0
2020
2030
2040
2050
2060
2070
2080
2090
2100
H++ Scenario
"understand and plan"
OPC 2018
Medium-High
Risk Aversion
"3.5 feet by 2050"

Reissuance of Statewide Sanitary Sewer Systems Waste Discharge Requirements (SSS-WDR)

2006

State Water Board adopted 1st statewide Sanitary Sewer Systems General Order

2013

State Water Board Executive Director amended Monitoring and Reporting requirements

2018

Staff began preliminary outreach for a future reissuance

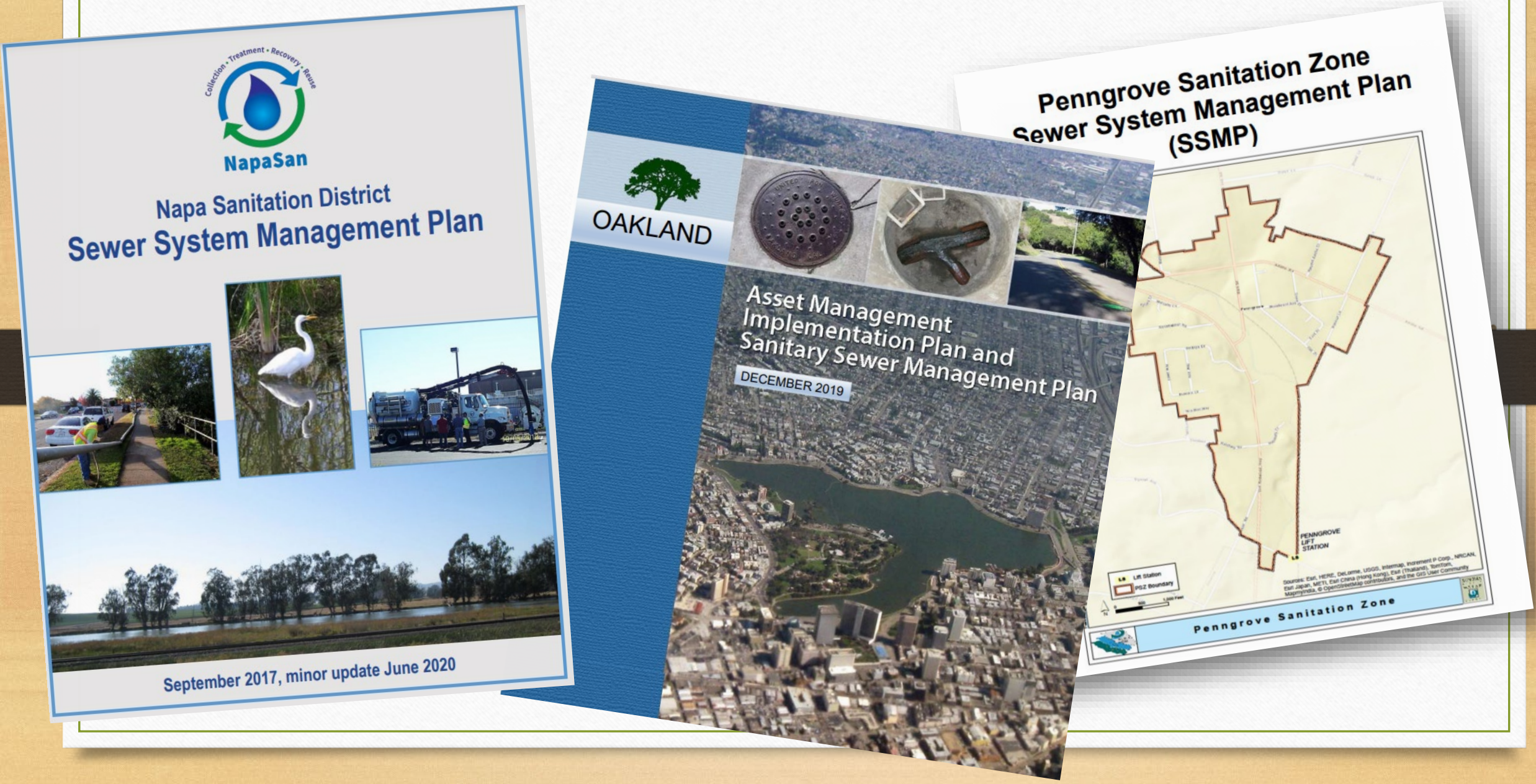
2021

Staff gathered feedback on an informal draft Order

2022

The State Water Board issued proposed General Order for public comments

Source: State Water Board


Collection • Treatment • Recovery • Reuse
NapaSan
Napa Sanitation District
Sewer System Management Plan
September 2017, minor update June 2020
OAKLAND
Asset Management
Implementation Plan and
Sanitary Sewer Management Plan
DECEMBER 2019
Penngrove Sanitation Zone
Sewer System Management Plan
(SSMP)
PENNGROVE
LIFT
STATION
Lift Station
PSZ Boundary
Penngrove Sanitation Zone

Climate Change Resiliency Requirements in Draft SSS-WDR

System-specific Resilience: Identifying and Prioritizing Actions

PROPOSED ORDER
SECTION 5.6 AND
ATTACHMENT D

Sewer System Management Plan must include procedures to:

- Address short-term and long-term system resilience
- Proactively prioritize:
  - Operation and maintenance
  - Condition assessments
  - Repair and rehabilitation

Source: State Water Board

Climate Change Resiliency Requirements in Draft SSS-WDR

8. SYSTEM EVALUATION AND CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

The Plan must provide procedures and activities for the Enrollee to assess system condition and capacity, and **prioritize rehabilitation actions** to address:

- Local / regional climate change impacts;
- Environmental impacts;
- Change in waste flow rates and system users;
- Customer use of household and commercial products; and
- Other current and forecasted system-specific impacts that threaten the sewer system.

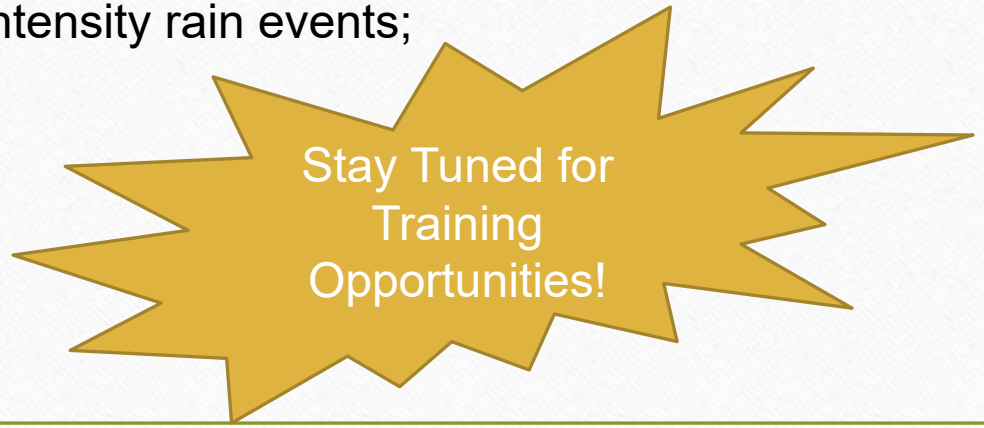
…

Climate Change Resiliency Requirements in Draft SSS-WDR

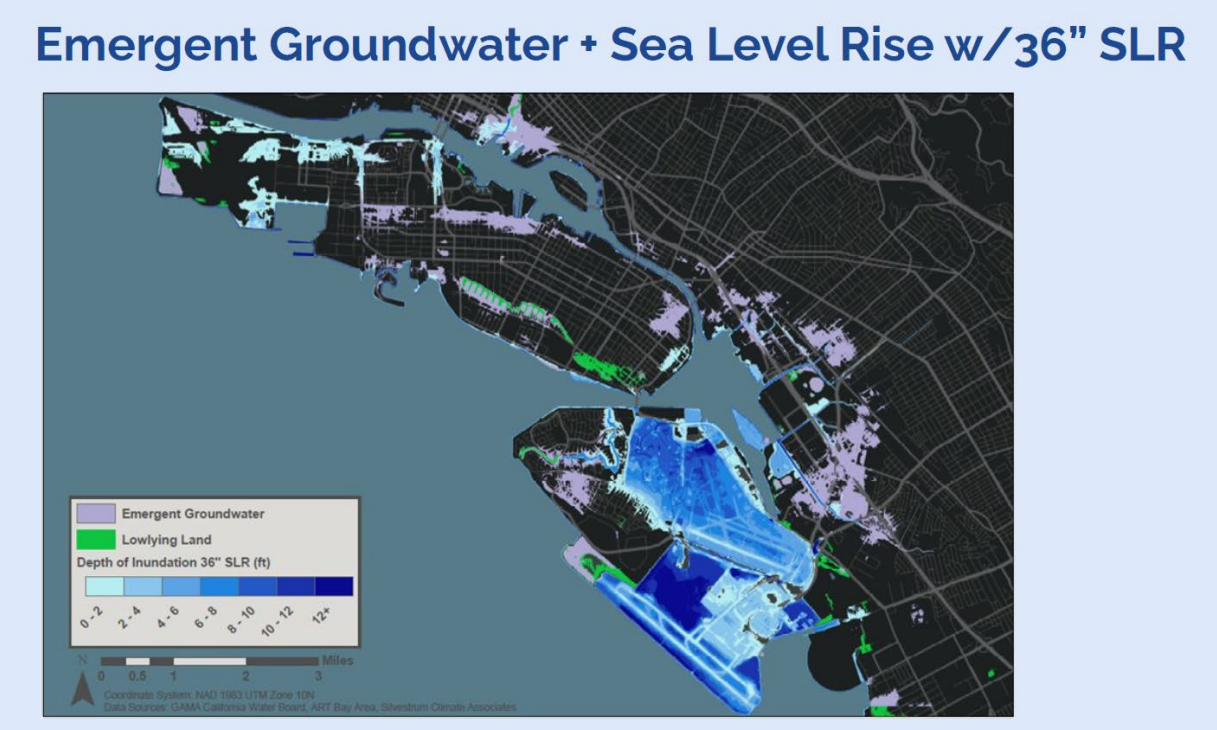
Causes of Spills as listed in the Draft SSS-WDR:

"Sewer system damage from identified system-specific environmental, and climate-change impacts, including but not limited to:

- Sea level rise impacts including flooding, coastal erosion, seawater intrusion, tidal inundation and submerged lands;
- Increased surface water flows due to higher intensity rain events;
- Flooding;
- Wildfires and wildfire induced impacts;
- Earthquake induced damage;
- Landslides; and
- Subsidence"



Groundwater Rise



Source: SFEI, Silvestrum

- SFEI Project – *Shallow Groundwater Response to Sea Level Rise*
- Mapping "highest annual" shallow groundwater elevation
- Workshop in August 2022

Reasons to do Resiliency Planning Now

- A good time to consider Nature-Based Solutions
- Regulations are on the way
- Learn from water utilities and municipalities
- Flexibility
- Regional collaboration and funding availability
- Future cost savings

Questions?