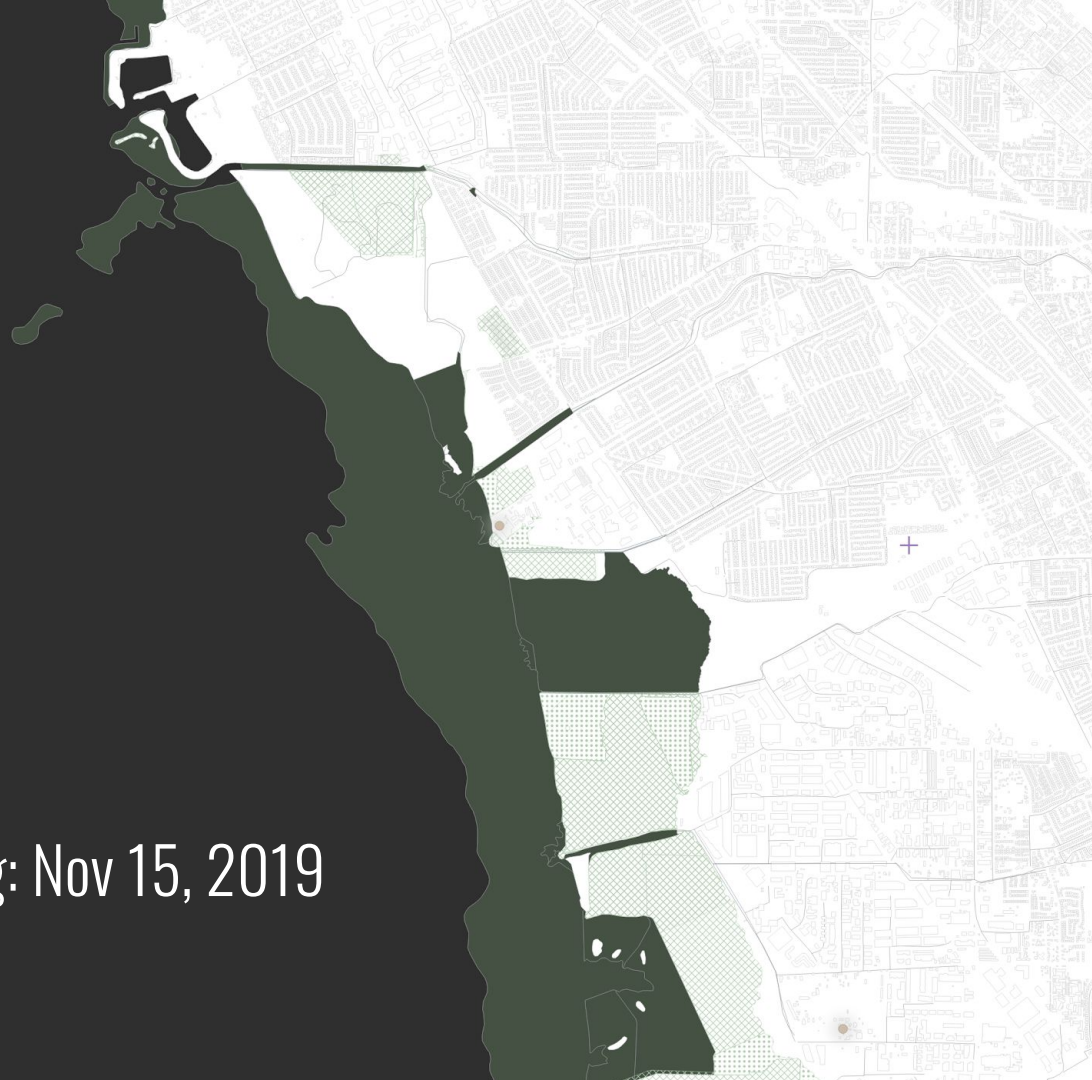


Briefing:

# Nature-Based Solutions for Nutrient Management

BACWA Executive Cmte. Meeting: Nov 15, 2019



# AGENDA

1. Introduction to the Nature-Based Nutrient Reduction Project
2. Overview of Scoping & Evaluation Plan
3. Feedback on the Scoping & Evaluation Plan
4. Review next steps

# WHY ARE WE TALKING ABOUT THIS?

1. Requirement of the 2<sup>nd</sup> Nutrient Watershed Permit (Prov. 6.C)
2. Regulatory and discharger interest in multi-benefit projects for nutrient reduction
3. Explore alternatives to steel & concrete solutions
4. Projects moving forward & support is needed

Final Document due to Water Board December 1, 2019

# SCOPING AND EVALUATION PLAN

Integrates two key elements of Provision VI.C.2 of the Nutrient Watershed Permit:

1. Scoping Plan
2. Evaluation Plan

# SCOPING AND EVALUATION PLAN

## Permit Language: Scoping Plan

By December 1, 2019, the Dischargers shall, individually or in collaboration with regional stakeholders, submit a Scoping Plan describing the level of work proposed to conduct the evaluation. The Scoping Plan shall include, but is not limited to, the level of work to complete the following for each Discharger's facility and subembayment:

- Identification of sites, if any, for potential wetlands treatment systems;
- Identification of sites, if any, for potential wetlands creation or enhancement;
- Identification of sites, if any, for potential horizontal levee creation; and
- Identification of any of the above sites that are associated with a defined Operational Landscape Unit.

The Scoping Plan shall also include a schedule to complete, within one year of submitting the Scoping Plan, the identification of all potential sites that could use natural systems.

# SCOPING AND EVALUATION PLAN

## Permit Language: Evaluation Plan

If a Discharger identifies potential sites, it shall proceed with an evaluation for its facility and subembayment. By July 1, 2020, the Discharger shall, individually or in collaboration with regional stakeholders, submit an Evaluation Plan and schedule describing the methods and means for conducting the evaluation. The evaluation shall include, but not be limited to, the following tasks:

- Estimation of nitrogen (total inorganic nitrogen) and phosphorous (total phosphorus) discharge reductions associated with each project or associated Operational Landscape Unit;
- Identification of ancillary adverse effects and ancillary benefits from each project (e.g., removal of emerging contaminants, creation of habitat, or protection against sea level rise) or associated Operational Landscape Unit;
- Assessment of the feasibility, efficacy, reliability, and cost-effectiveness of each project; and
- Identification of potential challenges to implementing each project (e.g., regulatory barriers).

The Dischargers shall implement the Evaluation Plan tasks within 45 days of submittal.

# Broad Project Outline

1. Survey & desk-based analysis
2. Preliminary assessments
3. Identify facilities for new planning-level design
4. Support existing projects on regulatory framework, stakeholders, governance
5. Team of SFEI/HDR/advisors

## Data Collection & Screening

- Desk-based screening of physical possibilities for nature-based solutions to wastewater treatment
- Discharger survey to collect data, identify institutional opportunities barriers to implementation
- Preliminary assessment of NBS opportunities and corresponding estimated nutrient load reductions
- Identify 5-10 facilities for site-specific alternatives analysis

## Site-Specific Evaluation

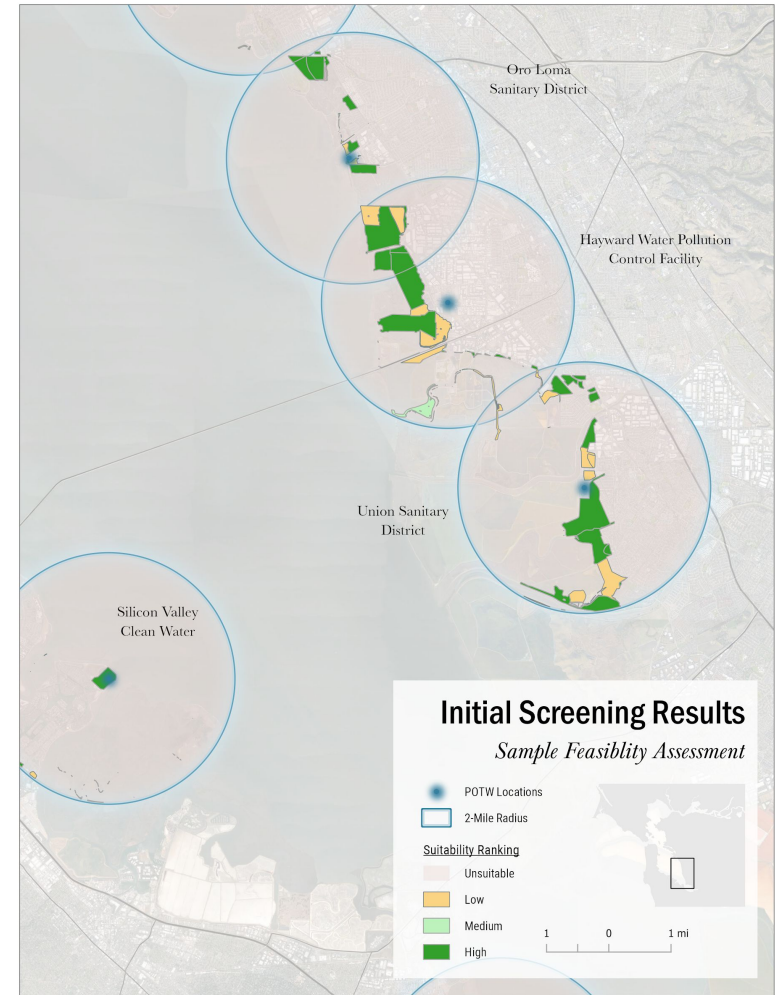
- Site inspections & interviews with key discharger staff at a select number of facilities
- Develop site-specific alternatives at 5 to 10 dischargers with considerable potential, including cost estimates, regulatory considerations, comparison with grey-scape solutions, and planning-level designs
- Supplement existing geospatial resources to incorporate site-specific SLR adaptation strategies

## Barriers & Coordination

- Compile information on NBS projects regionally and beyond
- Address barriers to implementation (regulatory, governance, and the public)
- Coordinate with OLU initiative to develop sea level rise adaptation pathways at discharger- and OLU-scales
- Work with SFEP's *Transforming Shorelines* Project to help accelerate project implementation & enhance inter-agency coordination

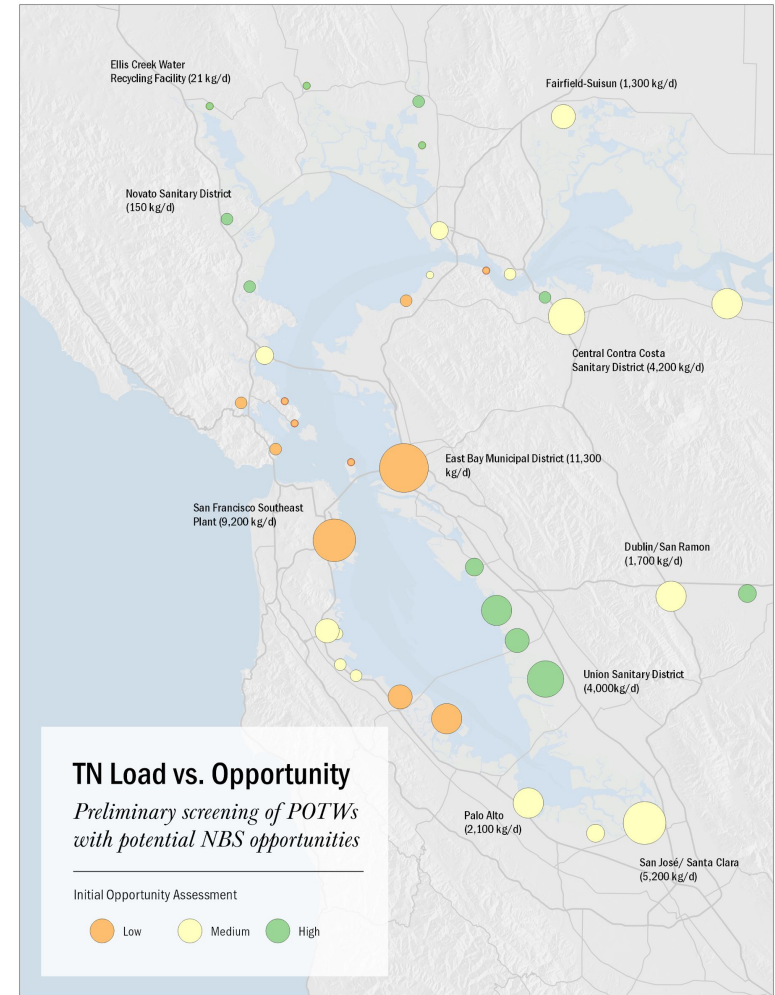
# Follows Analysis from 2017

- Desk-based screening requires better data
- Did not consider real world constraints
- Supports existing/planned projects and id new ones for preliminary design to accelerate implementation & reduce hurdles



# Facilities with High Potential

- Petaluma
- Sonoma Valley
- Las Gallinas
- Mt. View
- EBDA Facilities
- Napa
- Novato
- American Canyon



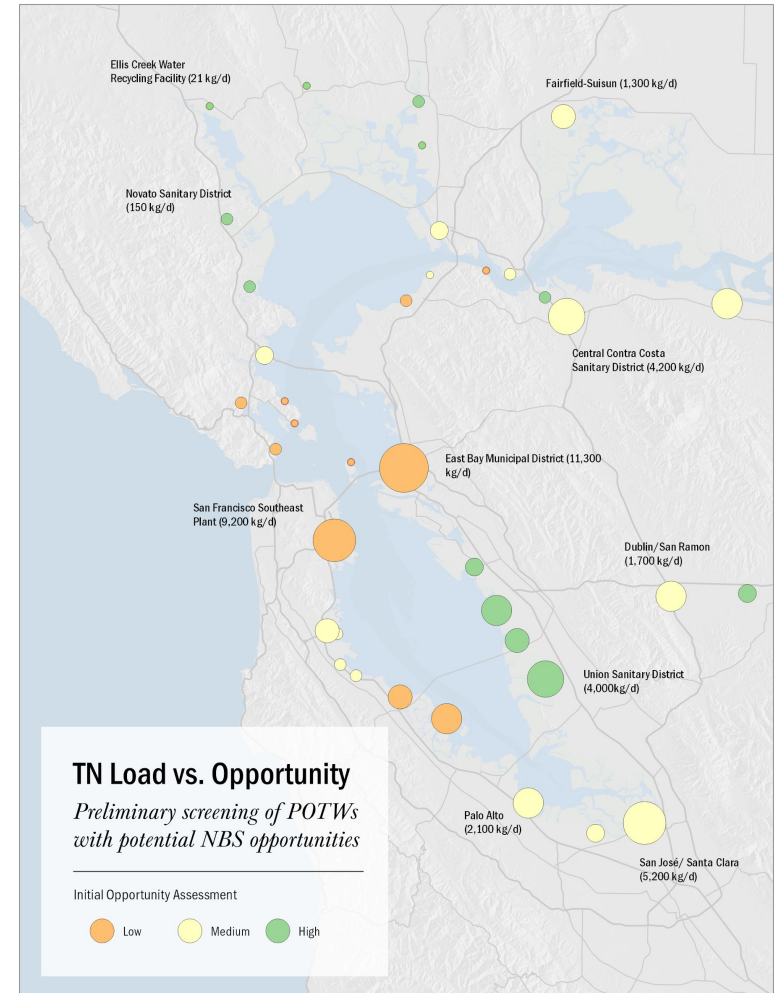
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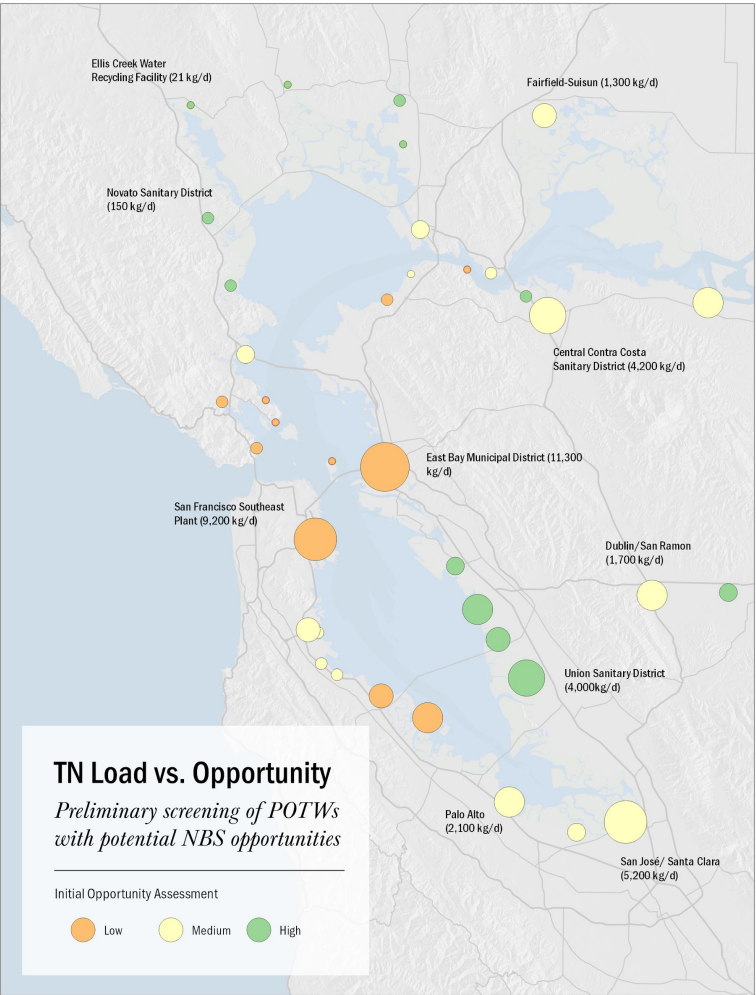
# Facilities with Medium Potential

- San José/Santa Clara
- Sunnyvale
- Palo Alto
- Burlingame
- Millbrae
- SFO
- South SF



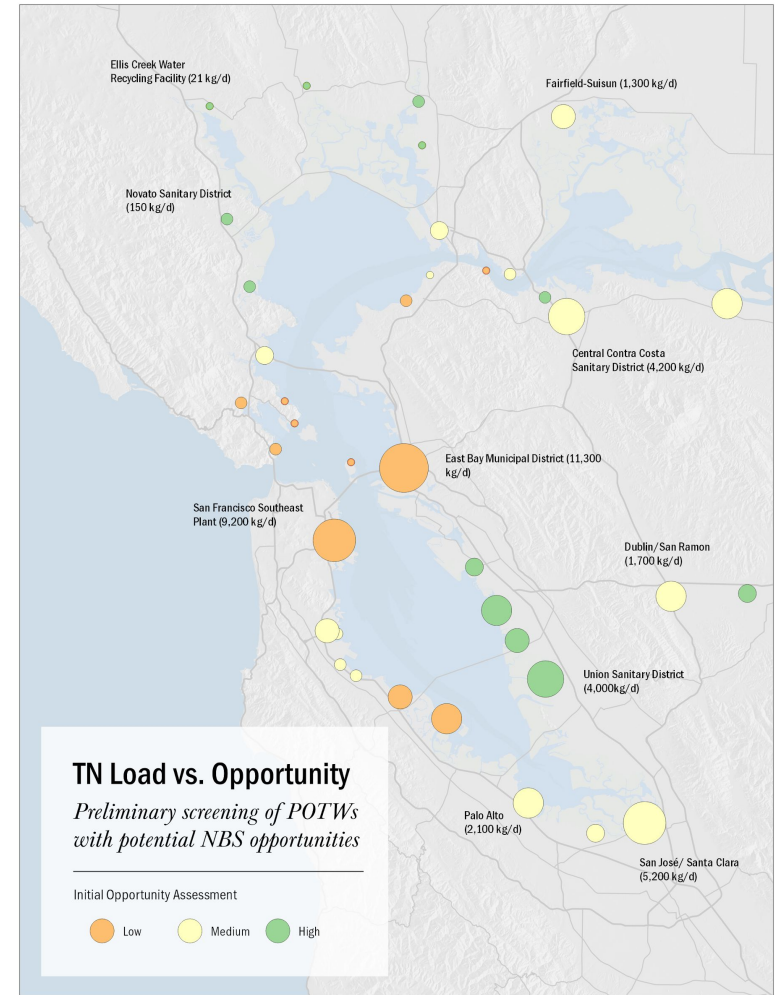
# Facilities with Medium Potential cont.

- Central Contra Costa
- Delta Diablo
- Fairfield Suisun
- Vallejo
- Rodeo
- Central Marin

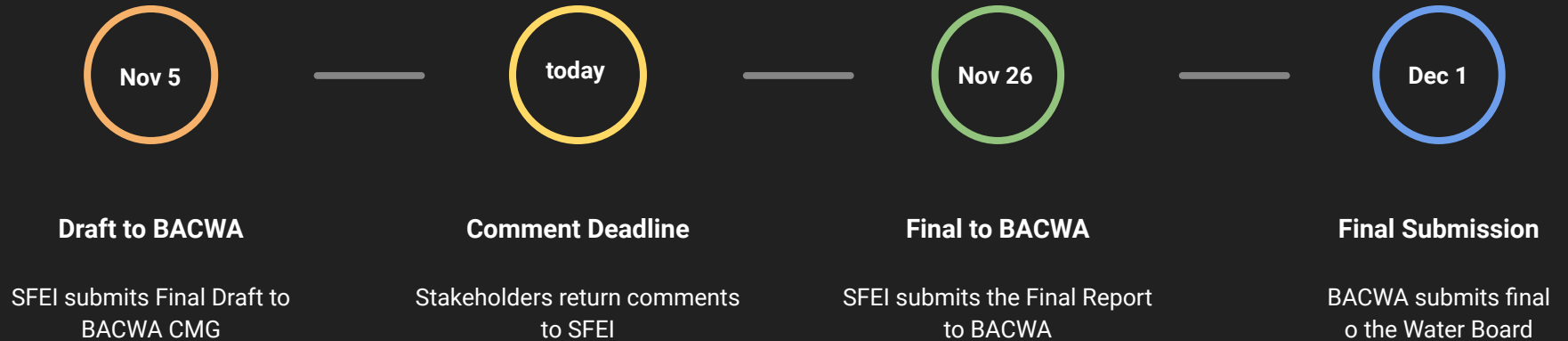


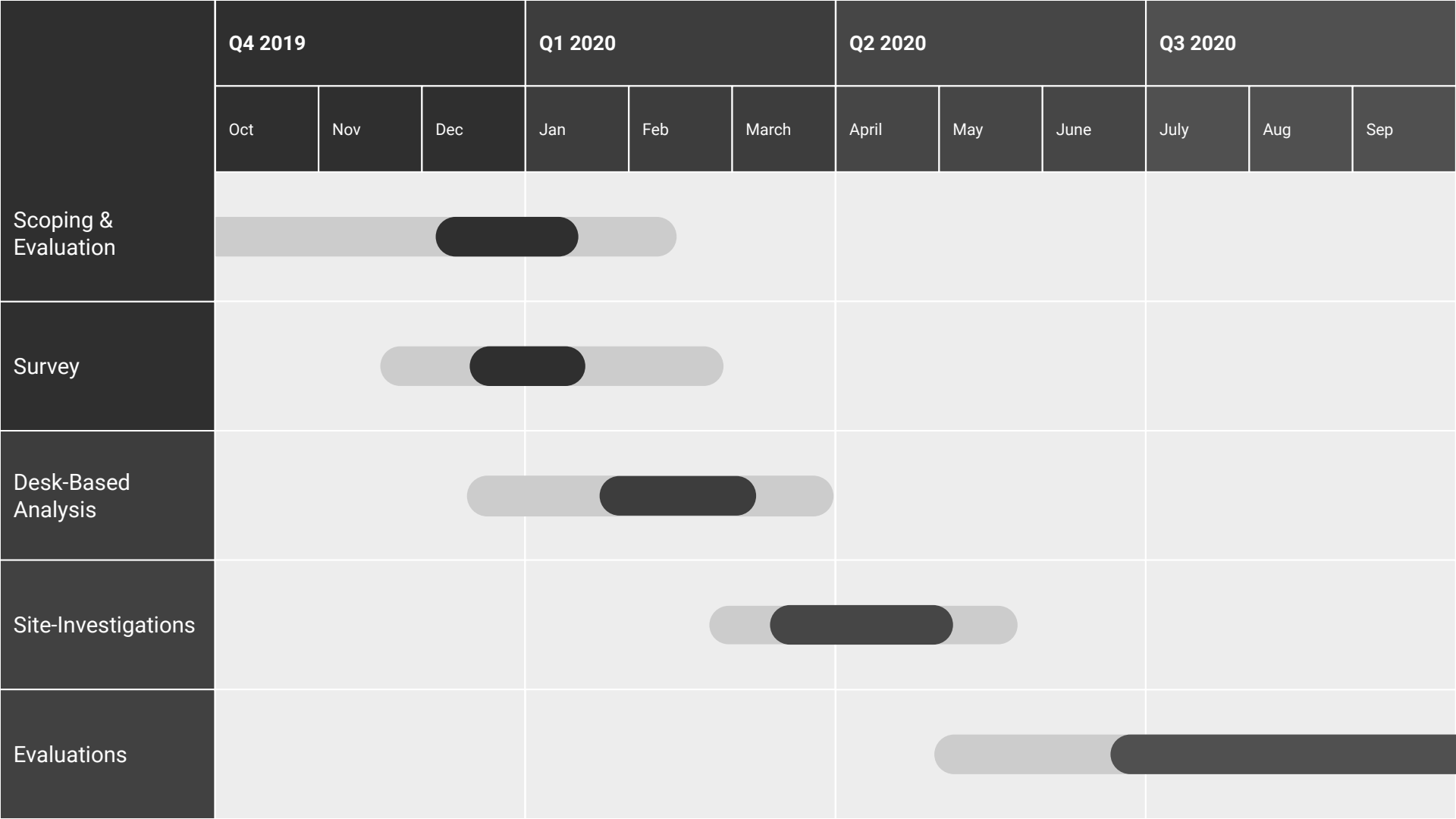
# Facilities with Low Potential

- EBMUD
- SFPUC
- Treasure Island
- Silicon Valley
- San Mateo
- Pinole
- Marin (4)



# Timeline for Plan Review and Submission

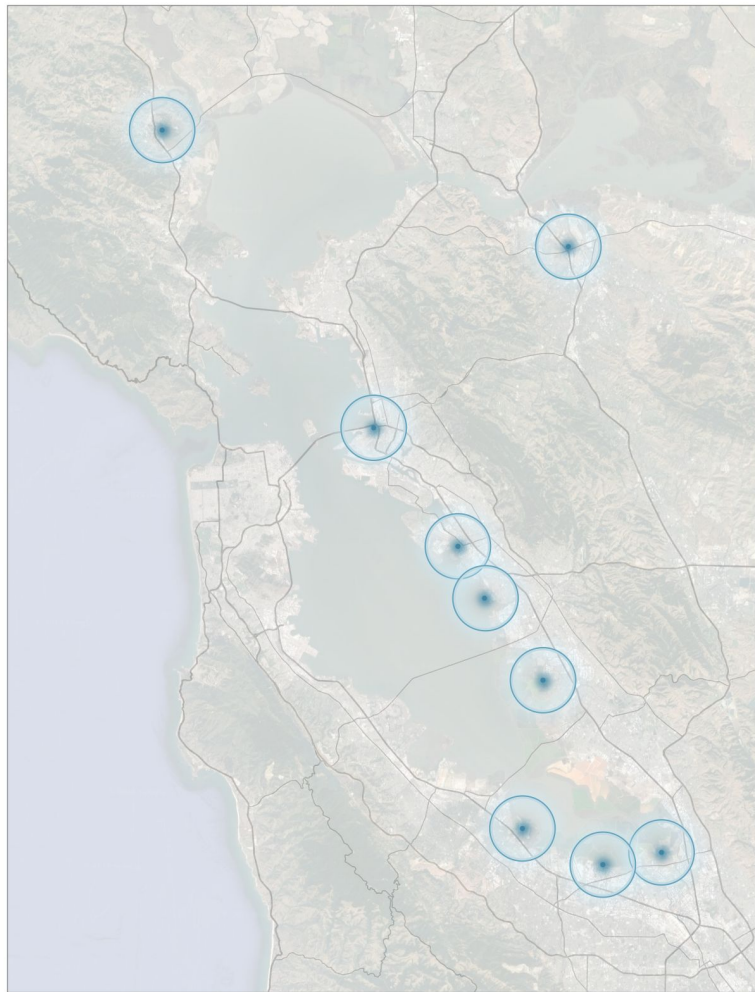




# NEXT CMG MEETING

Meeting Date: January 17

Where: San Leandro WPCP





# Nature-Based Solutions for Nutrient Management

CMG Meeting #4: Oct 11, 2019