

# Orinda Water Treatment Plant Disinfection Improvements Project



**Orinda Masonic Lodge**

**October 21, 2019**

# Project Team



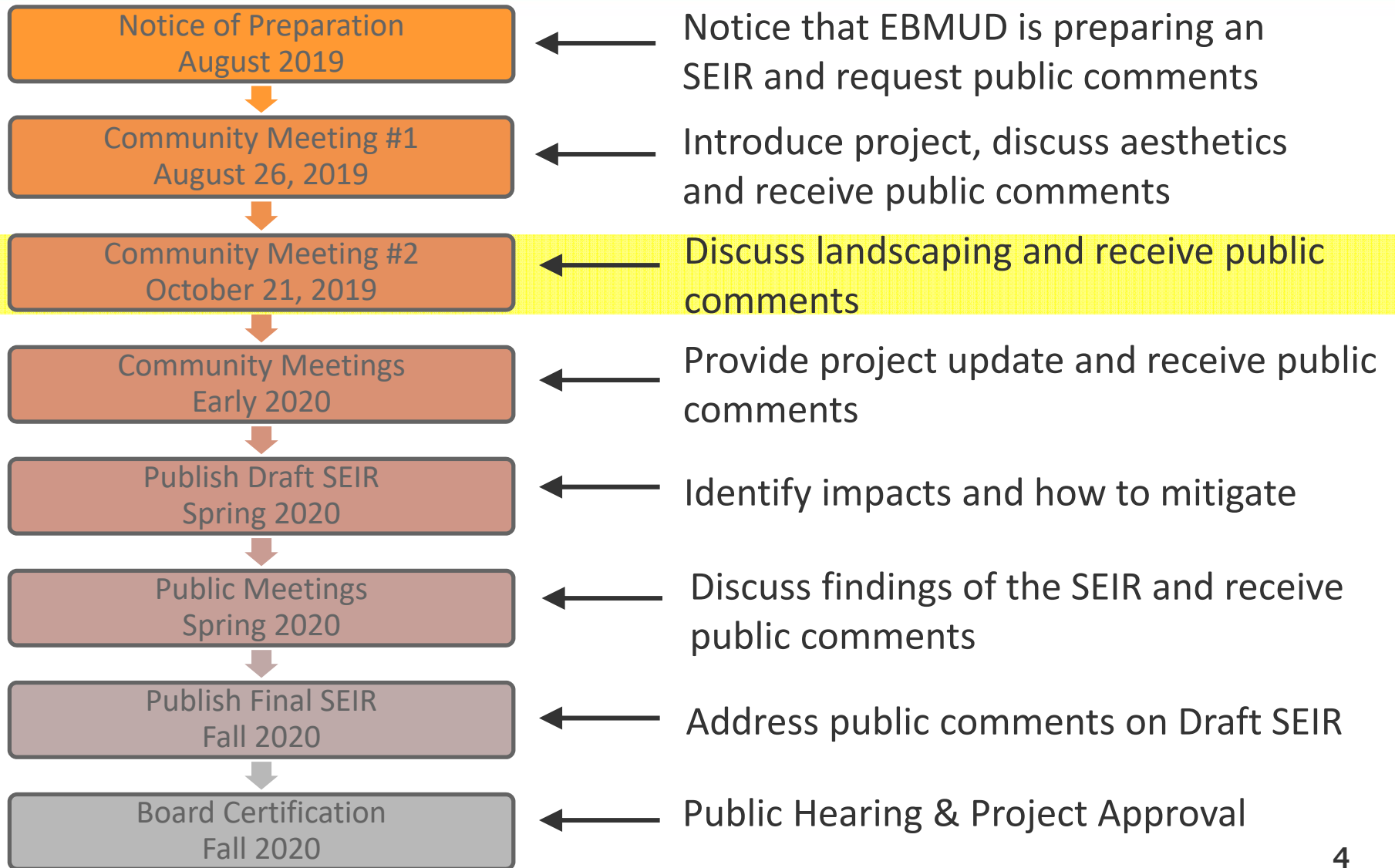
- EBMUD
  - David Rehnstrom, P.E., Division Manager
  - Jeni McGregor, P.E., Senior Engineer
  - Chien Wang, P.E., Project Manager
  - Kathryn Horn, Community Affairs
  - Jeff Bandy, P.E., Design Project Manager
- Consultants
  - Environmental Science Associates (ESA), CEQA
  - Environmental Vision, Visual Simulations

# Agenda



- CEQA Process
- Project Background
- Project Purpose and Site Planning
- Landscaping and Visual Simulations
- Environmental Outreach and Next Steps
- Q & A

# CEQA Planning & Public Process



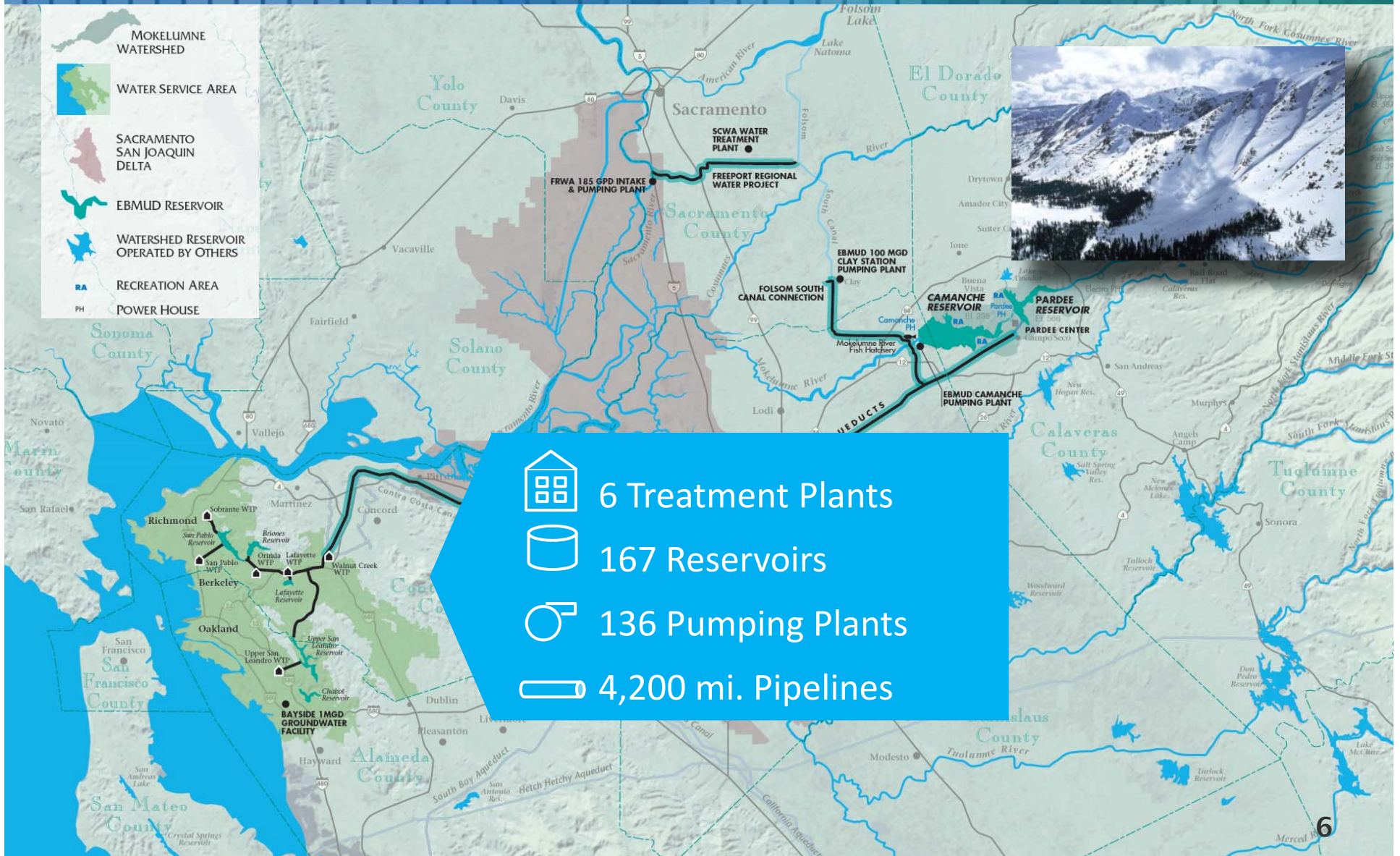


An aerial photograph of the Orinda Water Treatment Plant, showing several large rectangular aeration basins, administrative buildings, and a parking lot. The image is overlaid with a semi-transparent grid pattern. The text "Background on EBMUD and Orinda Water Treatment Plant" is centered over the image.

# Background on EBMUD and Orinda Water Treatment Plant

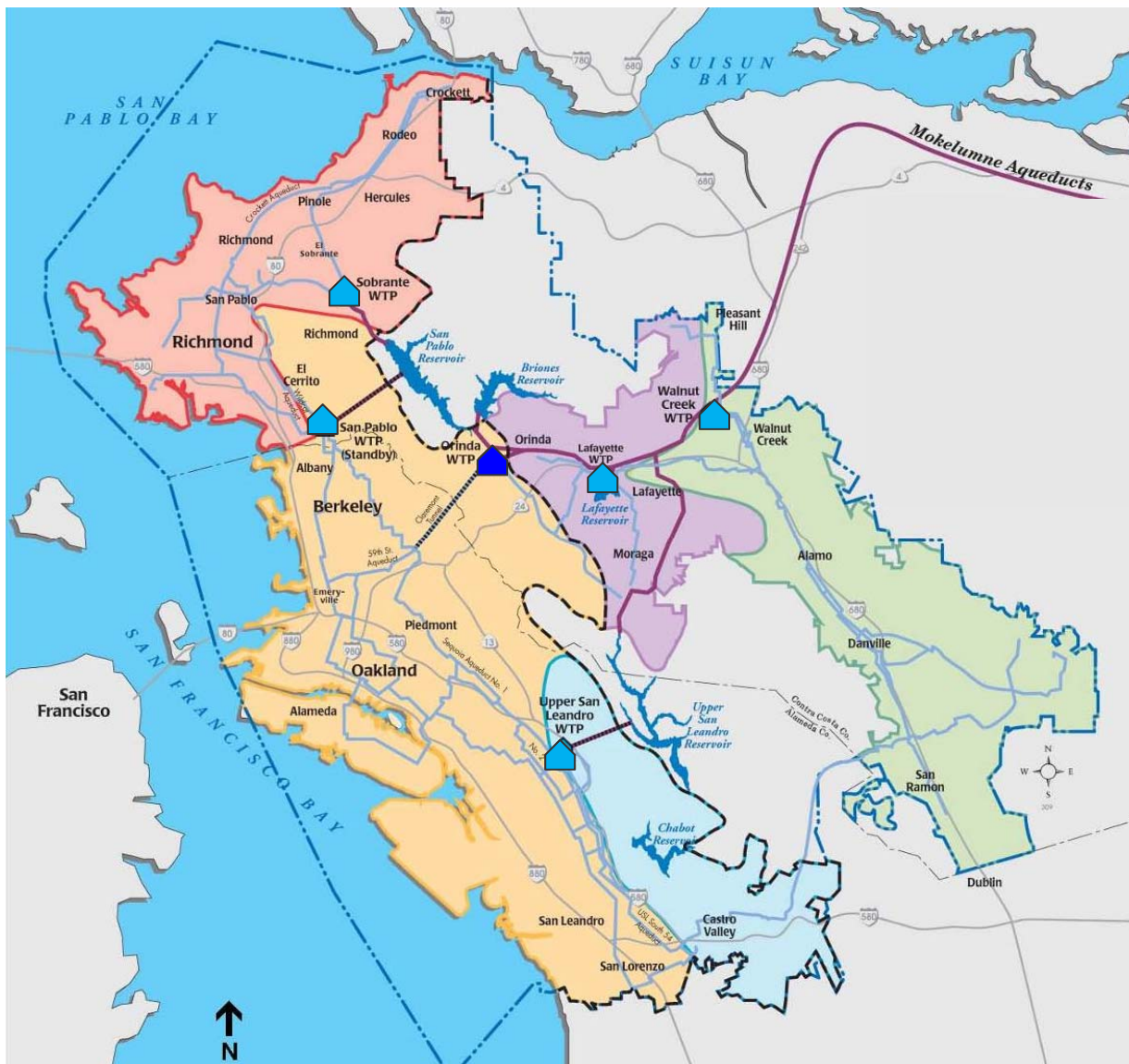


# EBMUD Water System





# EBMUD Water System



- Water Treatment Plants
- Walnut Creek: 115 MGD
  - Lafayette: 25 MGD
  - Sobrante: 40 MGD
  - Upper San Leandro: 40 MGD
  - San Pablo: 20-25 MGD
  - Orinda: 190 MGD**

# Orinda Water Treatment Plant – In Service 1935





# Orinda Water Treatment Plant

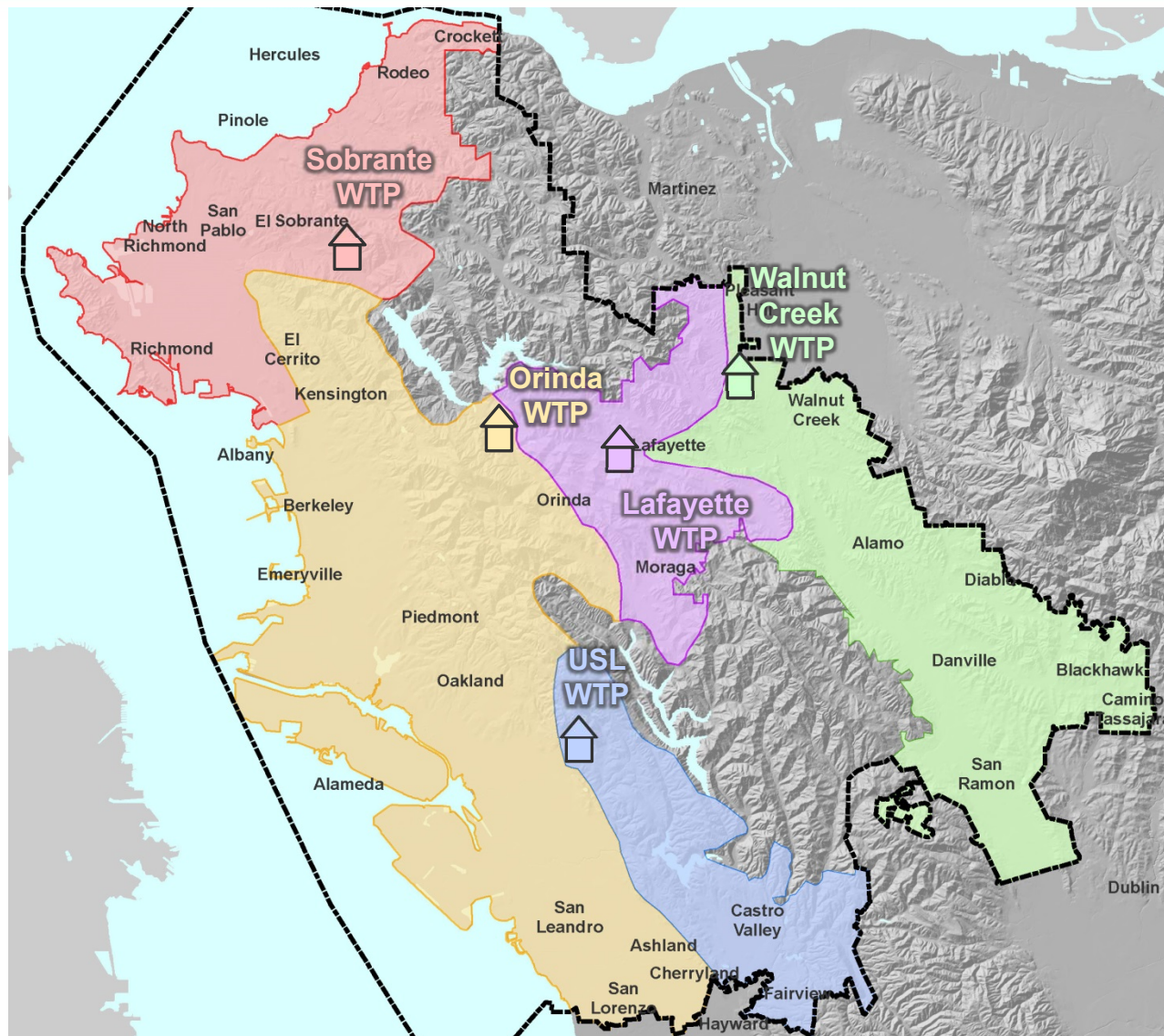


- Supplies water to both sides of the Oakland-Berkeley hills
- Operates year-round



# Water Distribution System

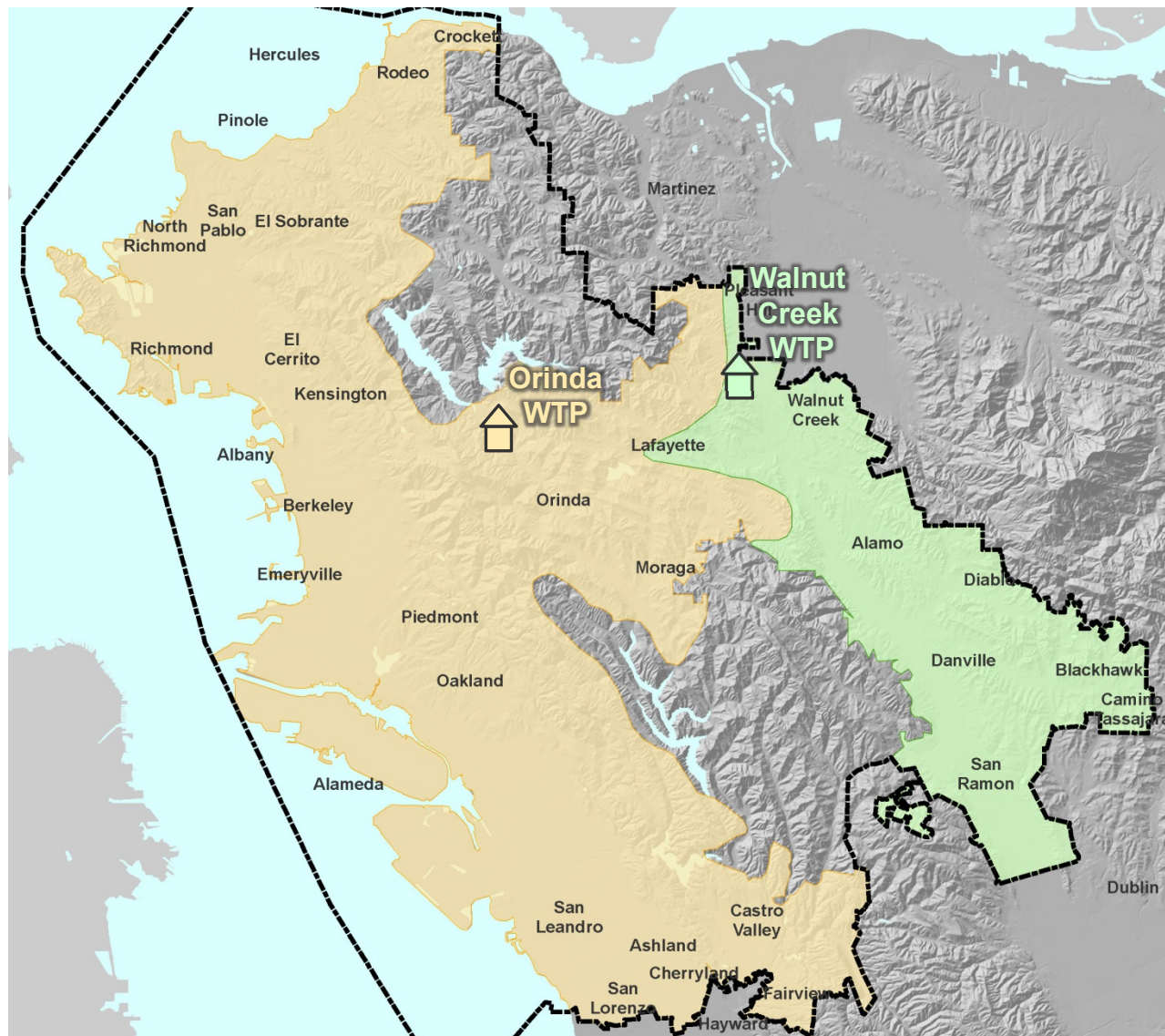
## Typical Summer Operation





# Water Distribution System

## Typical Winter Operation





# Project Purpose and Site Planning



# Project Purpose



- Improve disinfection reliability to continue to meet water quality regulations
- Better protect public health by adding a multi-barrier treatment process
- Reduce the formation of disinfection byproducts

# Project Drivers



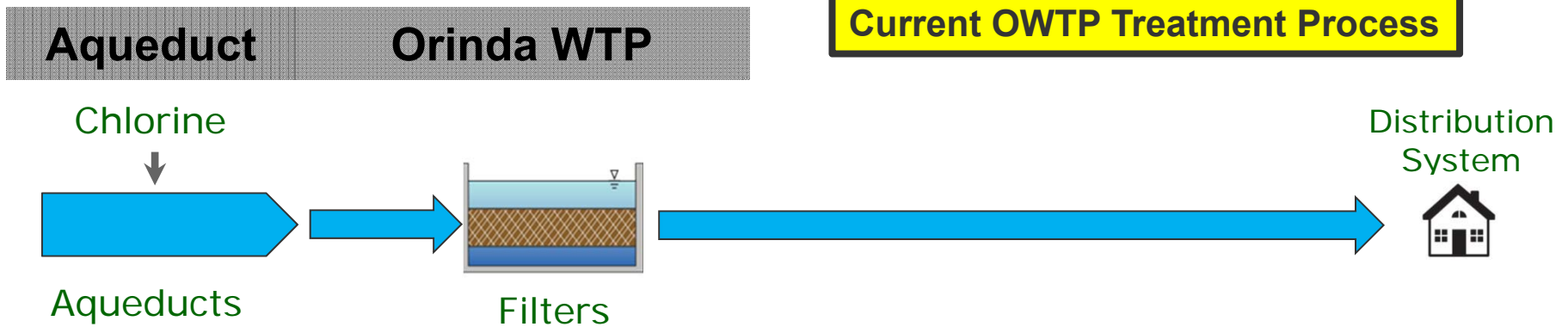
## Disinfection Byproducts

- Disinfection byproducts such as trihalomethanes (THMs) are formed when chlorine reacts with naturally-occurring organic matter in water.
- Elevated THM levels in EBMUD distribution system in the winter of 2016-2017, largely a result of the historic four-year drought.
- Immediate actions:
  - Increased sampling and system flushing
  - Adjusted water treatment operations
- Water quality tests since have shown reductions in levels of THMs
- **The Project is a long-term capital improvement to reduce the formation of disinfection byproducts.**
- **The Project will make the Orinda WTP more adaptive to changes in source water quality which we anticipate will continue due to warming climates, fires in the watershed, and future droughts.**

# Project Description: Treatment Process



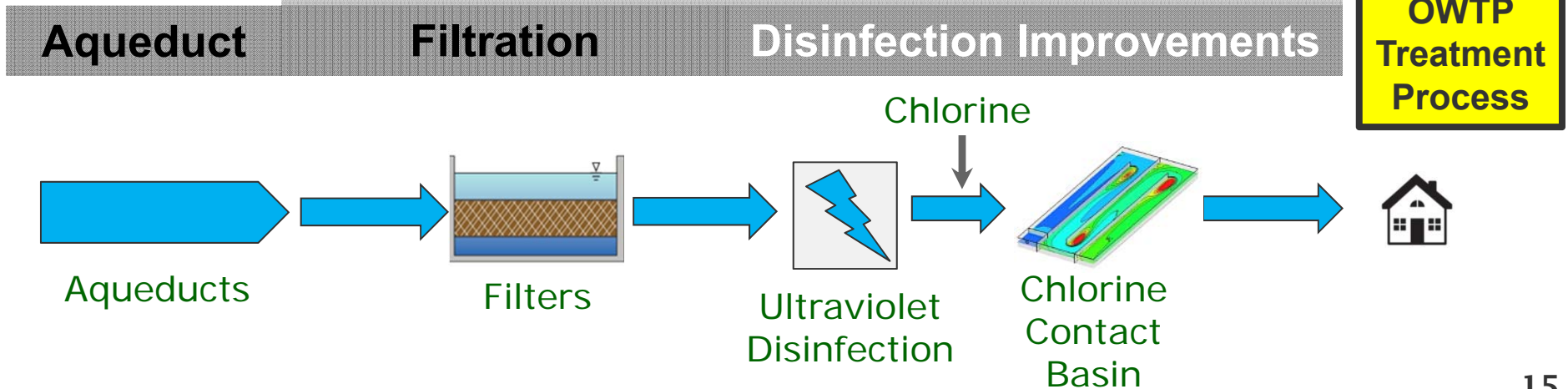
## Current OWTP Treatment Process



## Orinda WTP

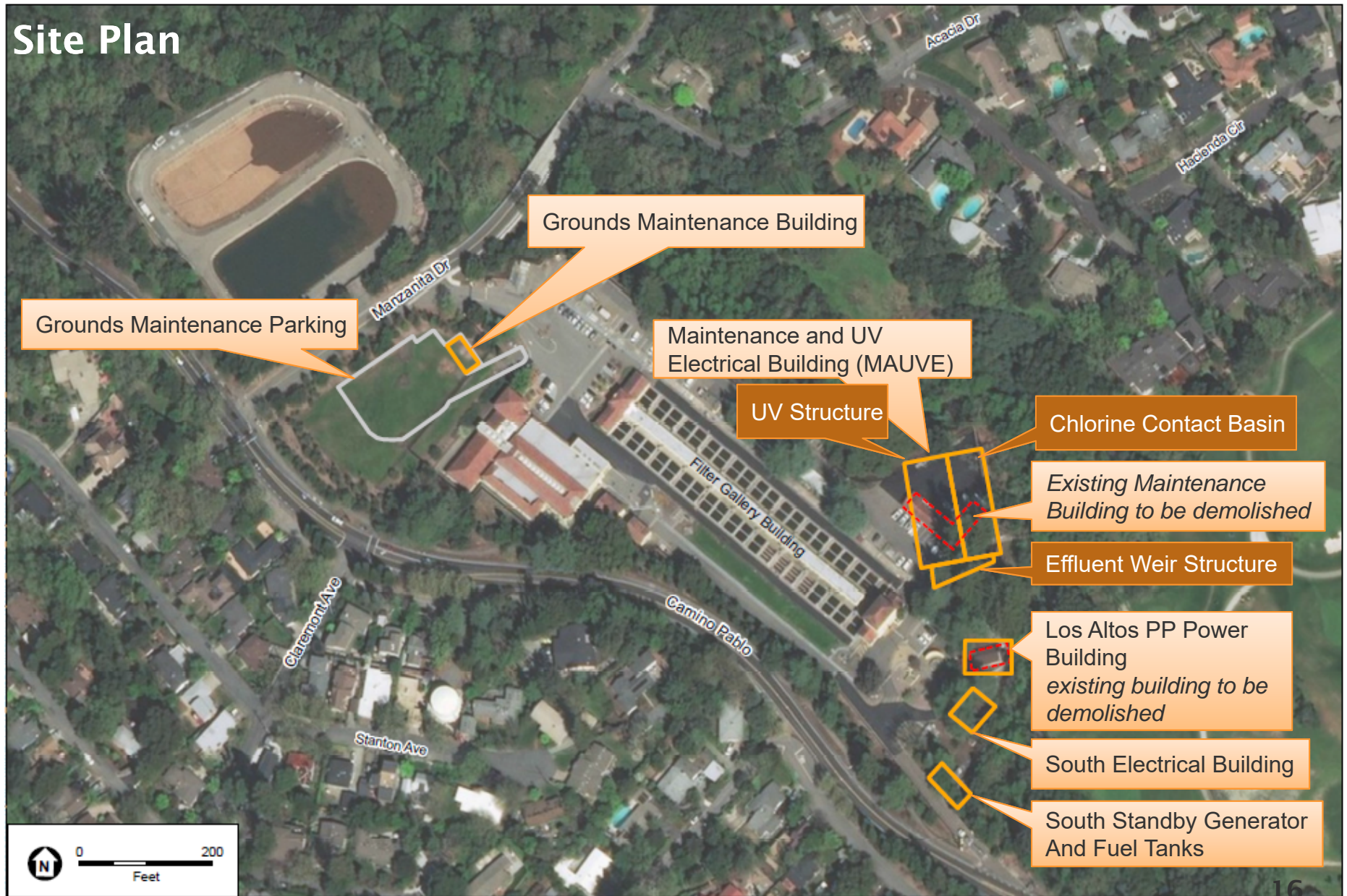
### Disinfection Improvements

## Future OWTP Treatment Process



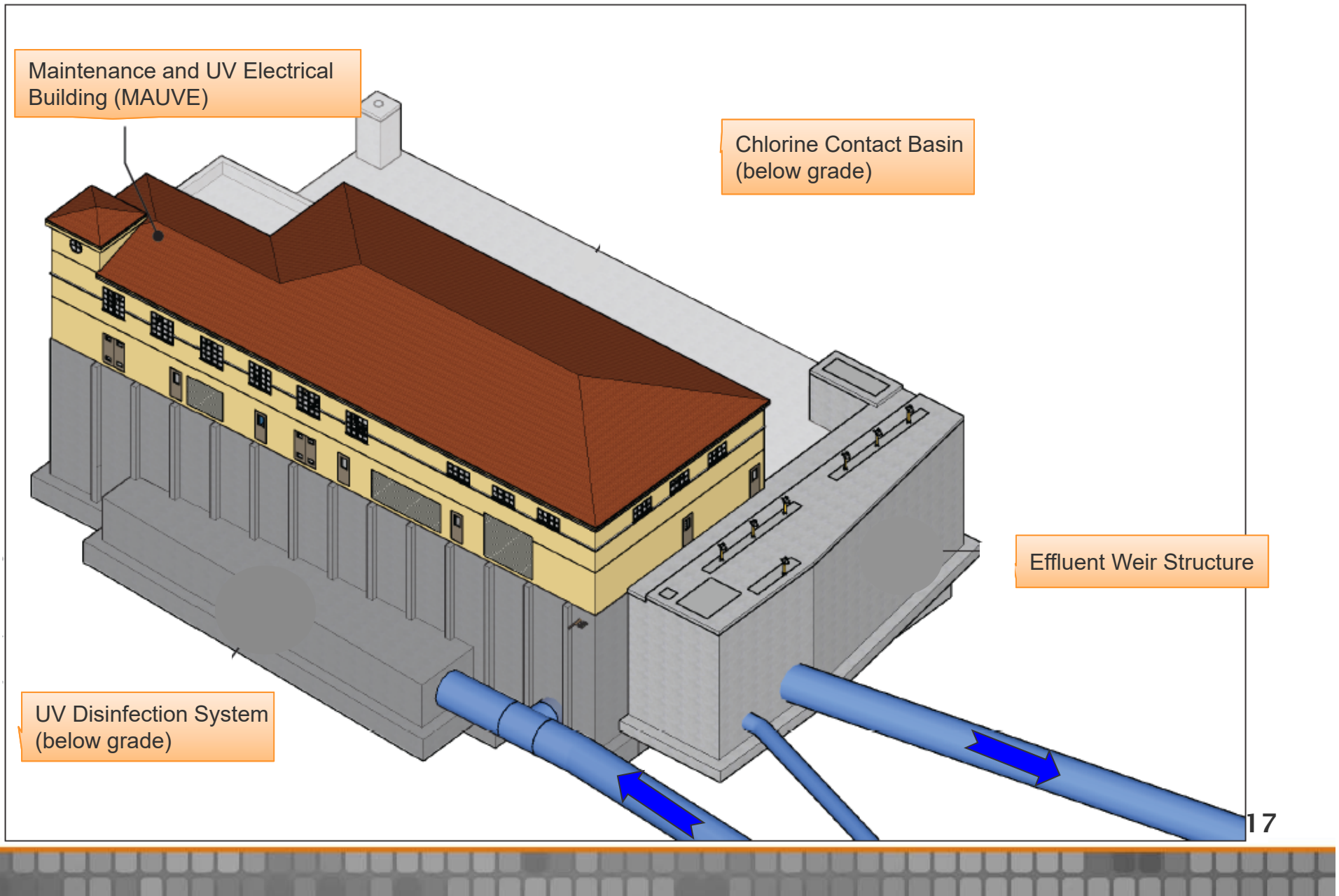


# Site Plan

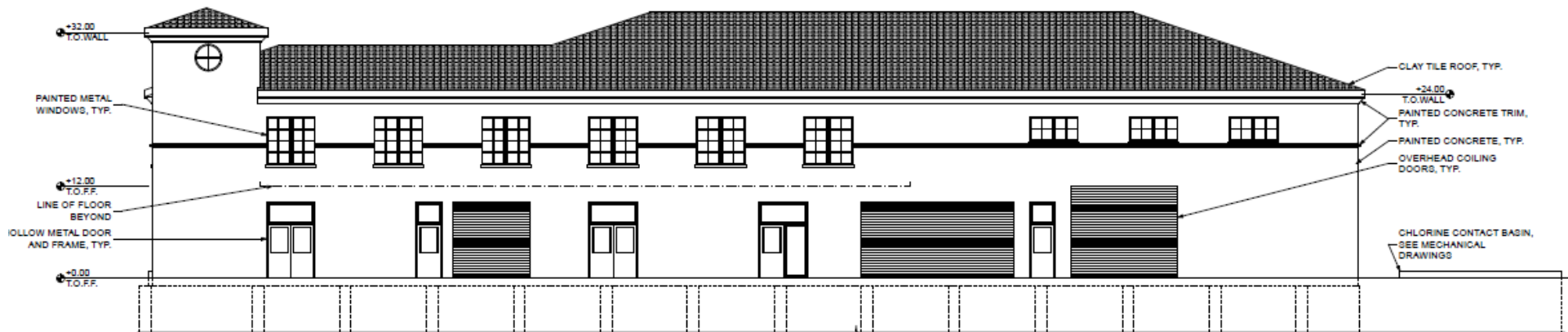




# Orinda WTP Disinfection Improvements Project



# MAUVE Building Architecture





# Other Building Architecture



# Other Building Architecture



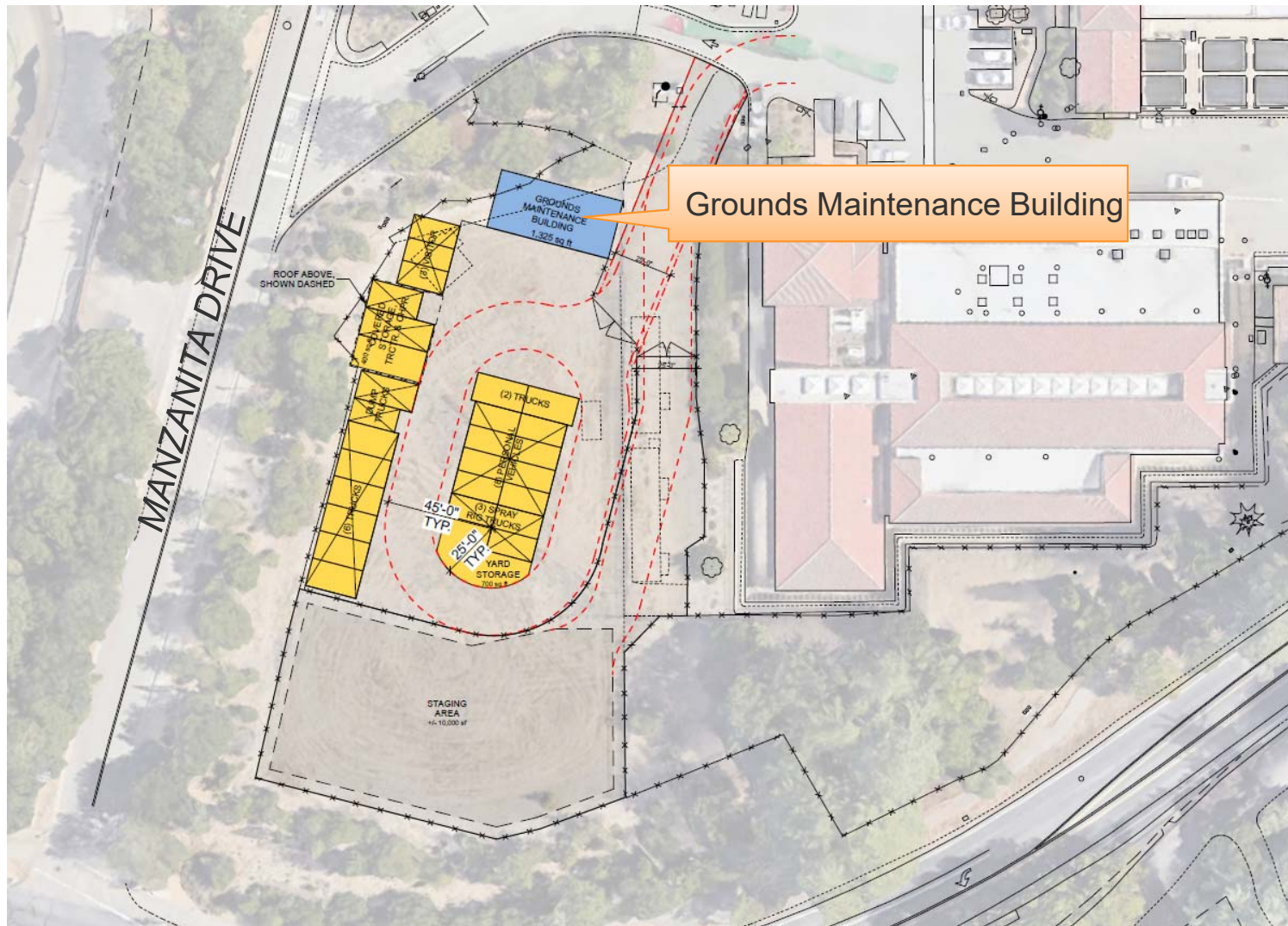


# Grounds Maintenance Building & Associated Parking





# Grounds Maintenance Building & Associated Parking



Grounds Maintenance Building



# Staging Areas During Construction



- EBMUD San Pablo Reservoir overflow parking lots may be used for temporary equipment and materials storage and worker carpool parking
- East of Manzanita Drive Bridge Area may be used for temporary construction trailers and parking
- EBMUD-owned North Orinda Sports Fields Staging Area will be used for temporary relocation of maintenance staff during construction



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# Landscaping & Visual Simulations





# PROPOSED LANDSCAPE PLAN

ORINDA WATER TREATMENT PLANT  
DISINFECTION IMPROVEMENTS PROJECT

10-2019



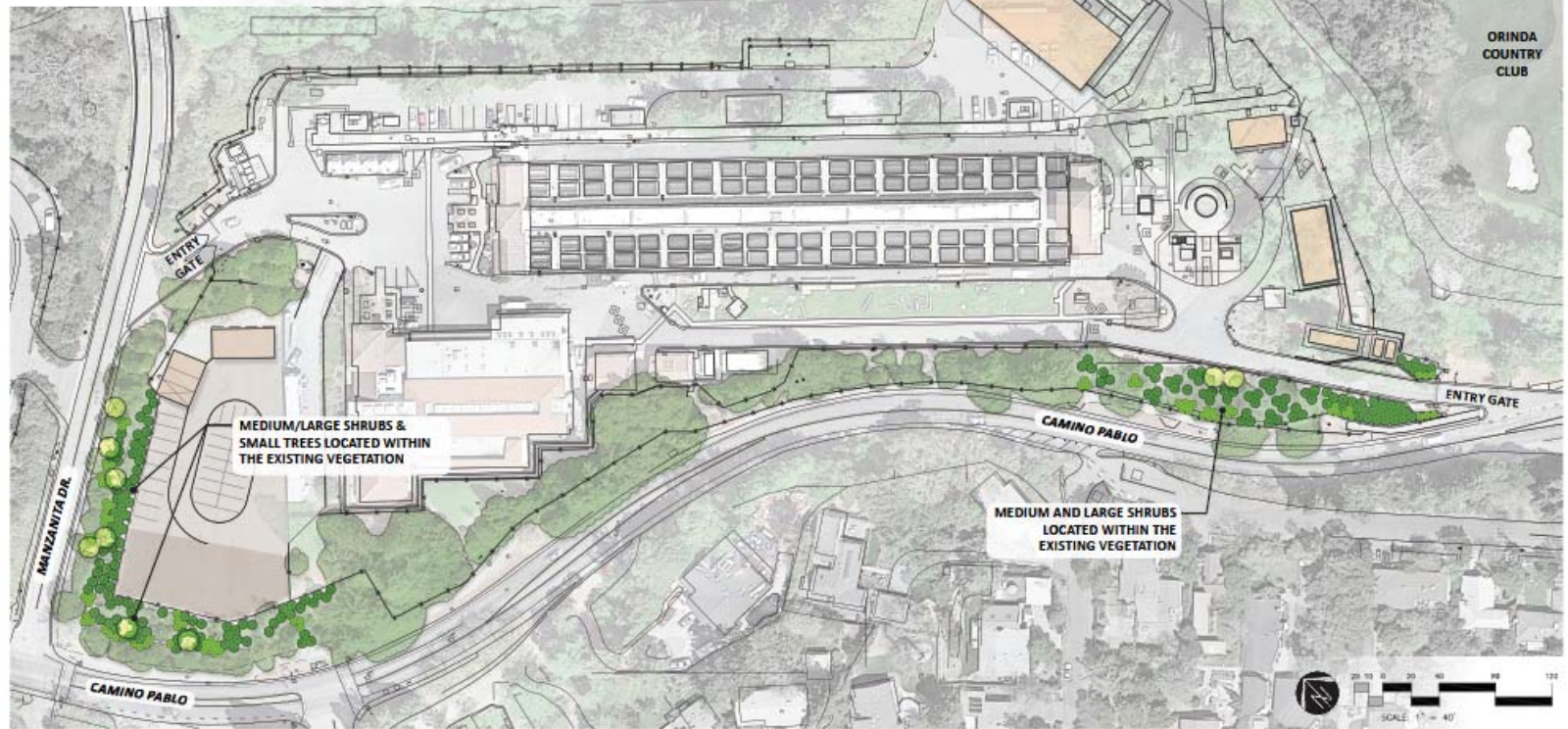
### SMALL TREES



CALIFORNIA BUCKEYE



CATALINA CHERRY



ORINDA  
COUNTRY  
CLUB



WESTERN REDBUD

### LARGE SHRUBS



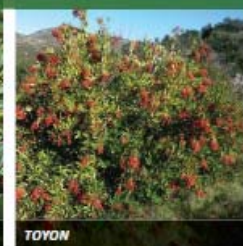
LEMONADE BERRY SUMAC



COAST SILKTASSEL



COFFEE BERRY

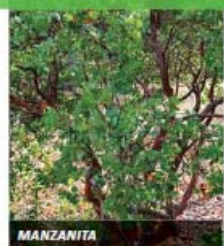


TOYON

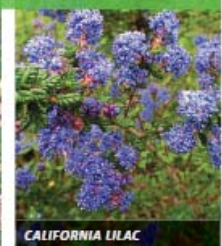
### MEDIUM SHRUBS



MOCK ORANGE



MANZANITA



CALIFORNIA LILAC



# Viewpoints Map







Existing View from Camino Pablo at Orinda WTP south entrance (VP 1)





Visual Simulation with Project  
View from Camino Pablo at Orinda WTP south entrance





Visual Simulation with Project | 5-Year Projection  
View from Camino Pablo at Orinda WTP south entrance



# Viewpoints Map







Existing View from Camino Pablo near North Lane (VP 3)





Visual Simulation with Project  
View from Camino Pablo at North Lane





Visual Simulation with Project | 5-Year Projection

View from Camino Pablo at North Lane



# Viewpoints Map







Existing View from Camino Pablo at Manzanita Drive (VP 7)





Visual Simulation with Project  
View from Camino Pablo at Manzanita Drive





Visual Simulation with Project | 5-Year Projection

View from Camino Pablo at Manzanita Drive



# Viewpoints Map







Existing View from Manzanita Drive sidewalk at Orinda WTP north entrance (VP 9)





Visual Simulation with Project  
View from Manzanita Drive at Orinda WTP north entrance



# Viewpoints Map







Existing View from Manzanita Drive near Camino Pablo (VP 13)





Visual Simulation with Project  
View from Manzanita Drive near Camino Pablo





Visual Simulation with Project | 5-Year Projection

View from Manzanita Drive near Camino Pablo





# Environmental Outreach & Next Steps



# Community Feedback



## Community Meeting #1

August 26, 2019

Orinda Masonic Lodge

- Temporary construction impacts: *duration, work hours, parking, traffic and pedestrian safety, construction noise, haul routes, air quality, odor*
- San Pablo Creek
- Cumulative Impacts
- CEQA Process
- Community Outreach



# Schedule & Next Steps



- CEQA SEIR Analysis
- Community Meetings – Early 2020
  - Morning Meeting at Wagner Ranch Elementary
  - Evening Meeting Location TBD
- Draft SEIR – Spring 2020
- Draft SEIR Public Meeting – Spring 2020



# Thank You



**Project website:  
[www.ebmud.com/orwtpimprovements](http://www.ebmud.com/orwtpimprovements)**

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