EAST BAY MUNICIPAL UTILITY DISTRICT

Semi Annual Water Quality Report

Planning Committee
April 12, 2016

Summary

- The District met all Federal water quality regulations
- The District met all State water quality regulations
- The District exceeded six of the 121 water quality goals

Water Quality Goals

- Total Coliforms
- TTHM
- HAA5
- Chlorate
- T&O Complaints
- NDMA

Water Quality Goals Exceedances

Water Quality Goal	2014	2015
Total Coliform	2	4
TTHMs	4	19
HAA5	0	8
Chlorate	6	2
T&O Complaints	0	4
NDMA	1	4
Total	13	41

Lead – Federal Actions

- Flint Water Advisory Task Force (Gov.)
- Flint Safe Drinking Water Task Force (EPA)
- Letter from EPA
  - To state governors
  - To state primacy agencies

Lead – Federal Actions

- EPA recommended sampling revisions
  - Aerators remain in place
  - No prestagnation flushing
  - Wide mouth sample bottles

Lead – Federal Action

- Letter to Primacy Agency
  - Ensure program is consistent with Federal regulations and guidance
  - Use EPA guidance for optimizing corrosion control
  - Post LCR protocols and guidance
  - Ask that water systems post inventory of lead service lines and plumbing
  - Ask that water systems post compliance sampling results

Lead – State Actions

- State request:
  - CCR Content
    - 90th percentile result
    - Number of samples collected
    - Number of samples exceeding action level
    - Invalidated samples with justification
  - Map of service area showing lead service lines
  - Inventory of lead plumbing in system
  - Educational materials

Lead – District Actions

- Staff looking into developing a lead sampling program similar to SFPUC
  - Customers can request a lead analysis on a water sample collected from their home.
  - Nominal charge
- Lead sampling
  - Test EPA “revisions” in 2016
  - Regulatory sampling 2017

- Questions

EAST BAY MUNICIPAL UTILITY DISTRICT

Semi-Annual Regulatory Compliance Update

Planning Committee

April 12, 2016

Agenda

- Enforcement actions
- Mine tailings ponds remediation
- Workplace Health and Safety
- Upcoming activities

Enforcement Review

- Strategic Plan KPI = Zero NPDES and Waste Discharge Requirement (WDR) permit Notices of Violation (NOVs) received
- FY16 – 3 NOVs to date

Notices of Violation

- June 2015 chlorine residual at Pardee Recreation Area WTP
  - Did not reach receiving waters
  - NOV received 1/22/16
  - Staff recommends pay $3,000 Mandatory Minimum Penalty

Mine Tailings Ponds

Background

- First discovered in 2005
- Upper Pond straddles EBMUD/BLM property
  - Highest concentration of mine tailings
- Lower/Middle ponds on EBMUD property
  - Low threat

Upper Pond Interim Stabilization

- Poison Lake Site Before Seeding

- Current Condition After Seeding

Current Conditions

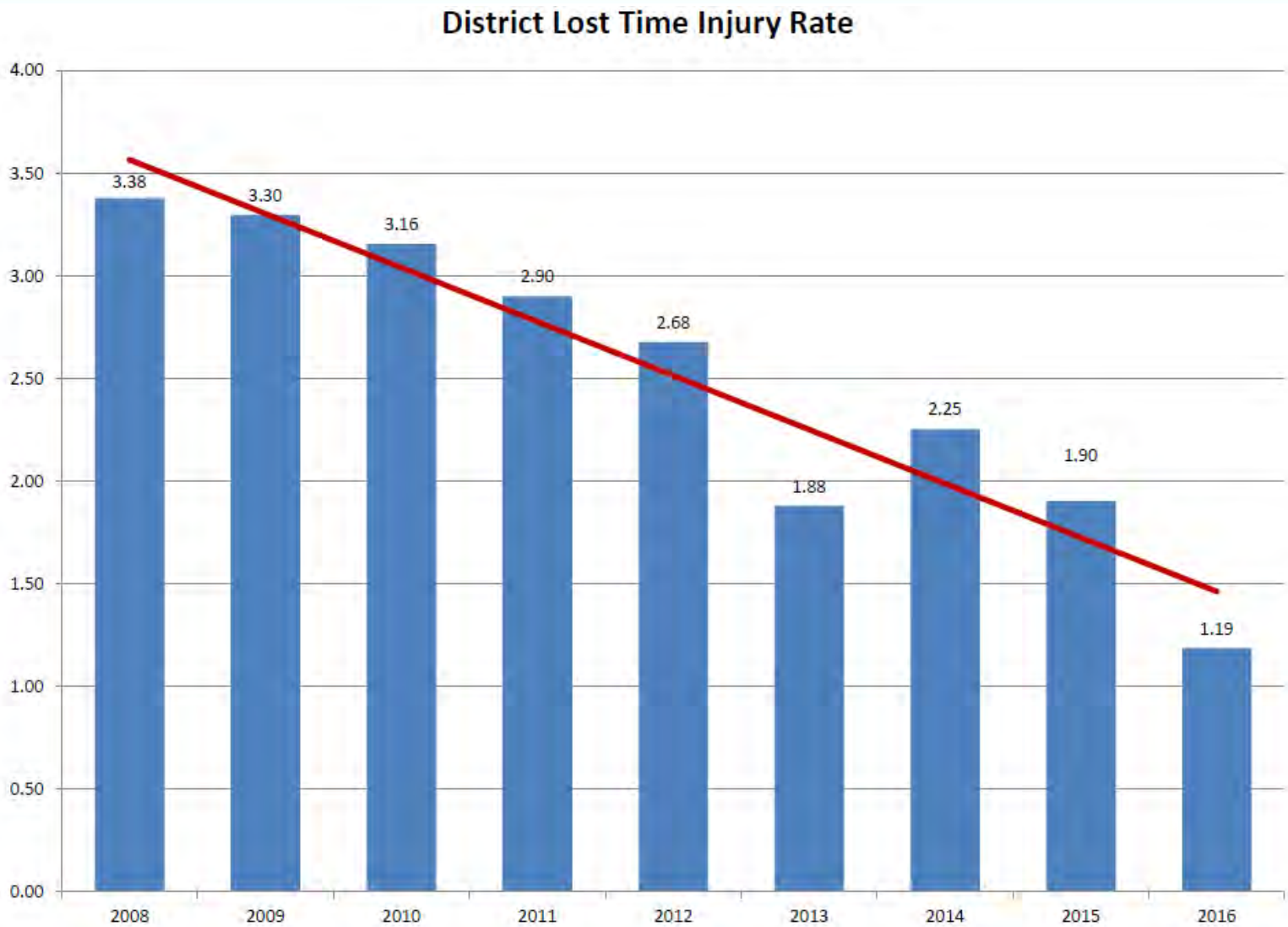
- Middle Pond Vegetative Cover

- Lower Pond Vegetative Cover

Mine Tailings Impoundments

- Original recommended alternative was consolidate/cap waste in Upper Pond and improve drainage
  - $2 to 3 million capital cost
- Focused risk assessment on water quality
  - $800,000 capital cost
- CV RWQCB agreed with approach

Lost Time Injury Rate



Upcoming Activities

- BLM to secure funding for mine tailings pond remediation
- Negotiate cost sharing with BLM
- Continue outreach on NPDES permit for drinking water discharges
- Monitor Penn Mine landfill for water intrusion

EAST BAY MUNICIPAL UTILITY DISTRICT

Alameda Point JPA

Planning Committee
April 12, 2016

Overview

- JPA background
- Challenges
- Proposed changes to the JPA
- Next Steps

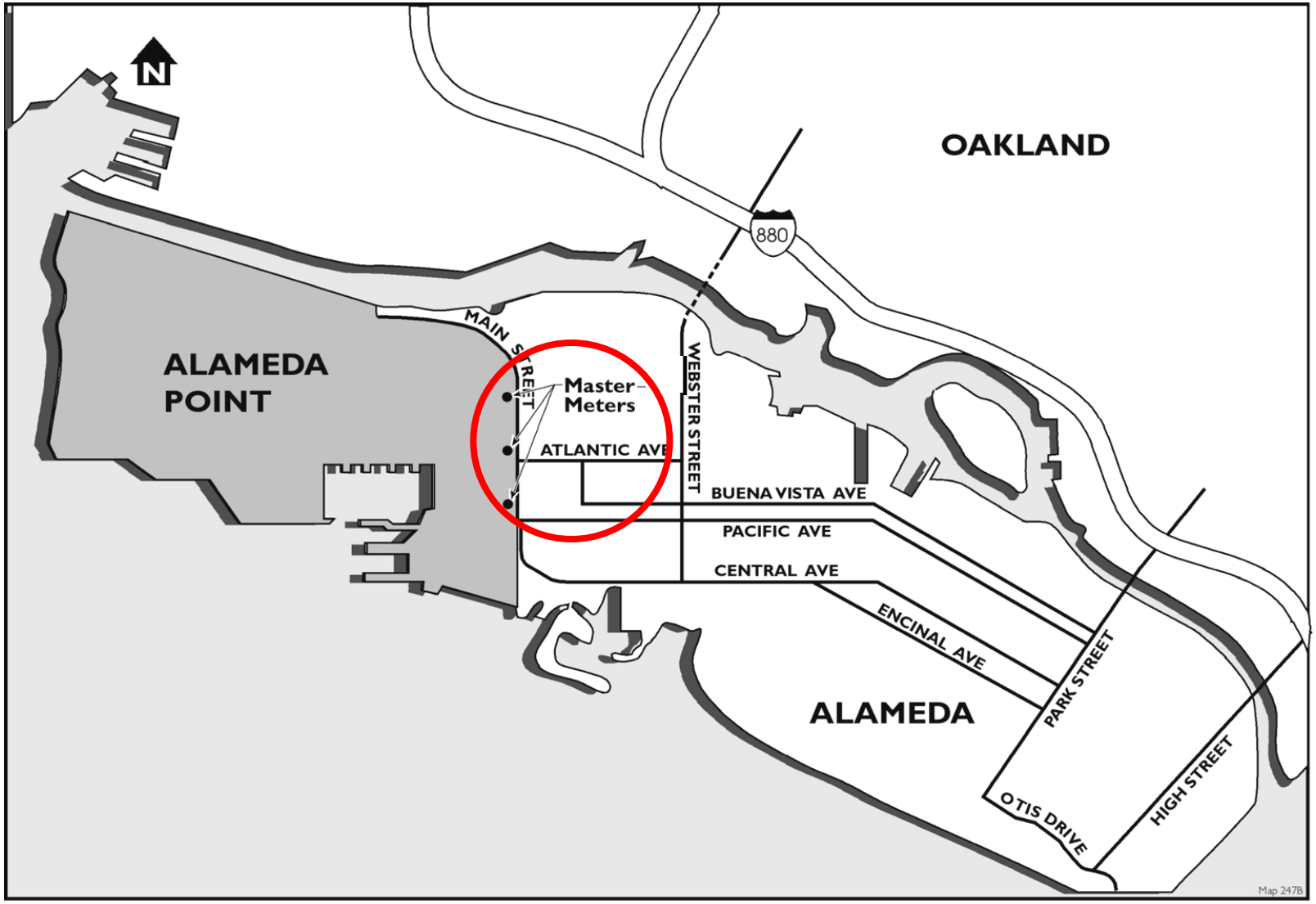
Background
Alameda Point

- Constructed by the U.S. Navy for their Naval Air Station
- Water infrastructure does not meet District standards and is not well documented
- City developing site since 1998
- Alameda Point served by three master meters

Background
JPA

- District and City entered into first JPA in 1997
- District provides basic operations and maintenance under the JPA
- 1998 Engineering Study identified changes to transfer the water system to the District
- NAVY schedule of environmental remediation extended through 2016 JPA amended and extended six times
- JPA expires September 30, 2016

Alameda Point



Drivers for JPA Amendment

- Operation and administrative challenges
- Regulatory requirements
- Development requirements
- Maintenance costs

Operation and Administrative Challenges

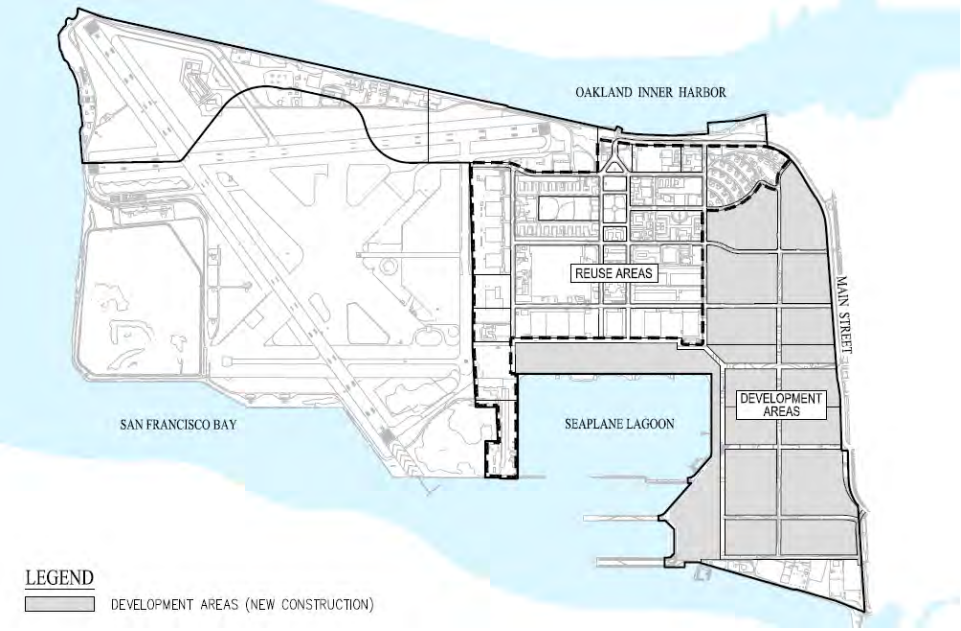
- Providing up-to-date records on occupancy changes
- Incomplete drawings and maps making maintenance difficult
- Decommissioning existing fire-fighting water system
- Installing required backflow devices
- Updating status of environmental remediation

Regulatory Requirements

- Wastewater control ordinance
  - Historically paid residential treatment fees
  - Wastewater capacity fees
  - Comply with reporting for strength and volume of wastewater discharges
- Private sewer lateral ordinance
  - Reduce inflow and infiltration
  - Rehabilitation of existing sewer mains and laterals
- NPDES permit
  - District will comply with BMPs
  - Alameda will make required regulatory reporting

Development Requirements

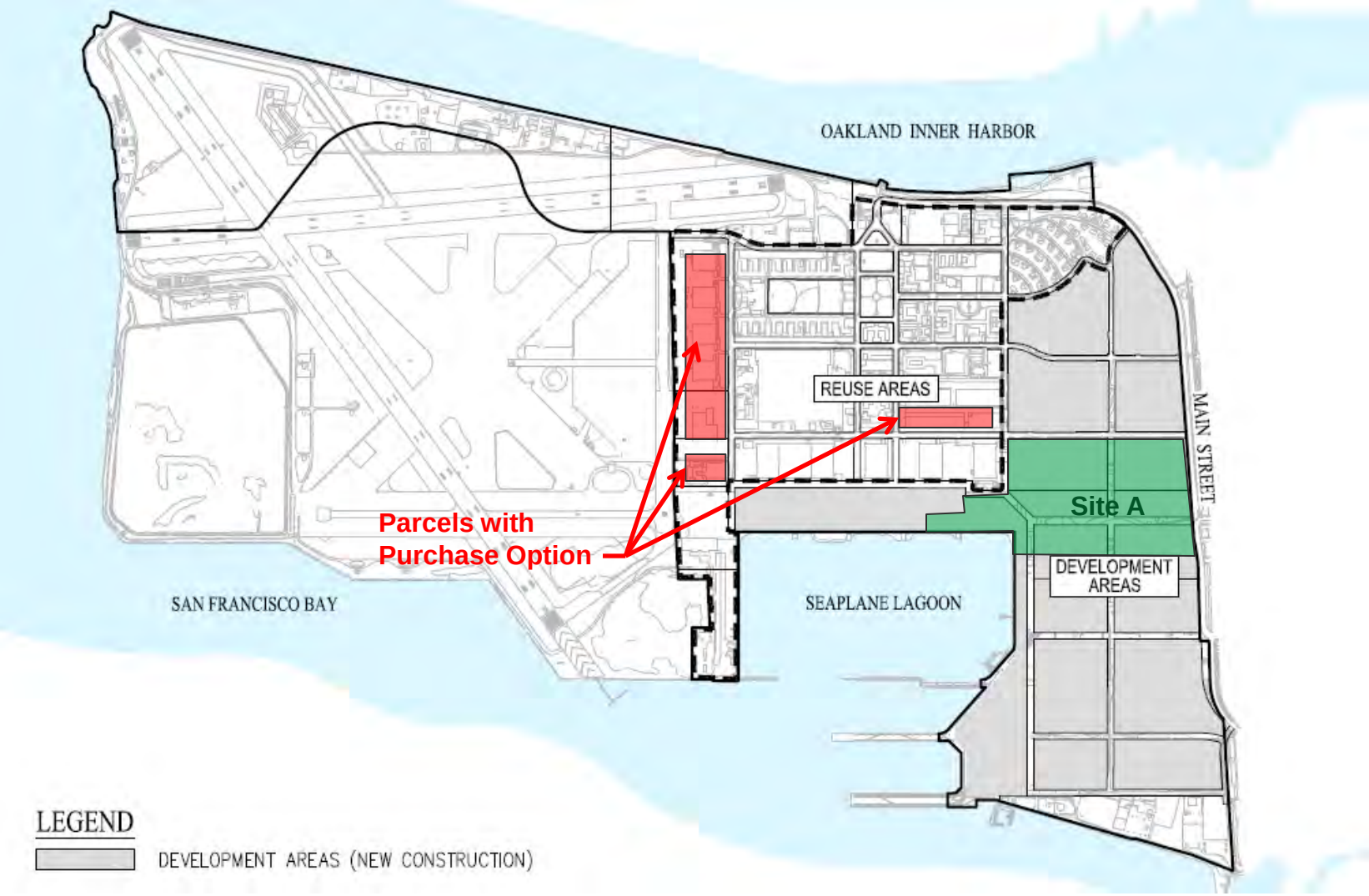
- Combination of new development and reuse areas
- New development
  - Residential
  - Commercial
- Reuse areas
  - Existing structures preserved and adaptively reused



Proposed City Development Strategies

- New development areas
  - New mixed-use structures served by new infrastructure
  - Abandon existing private system within new development areas
- Reuse areas
  - Structures preserved and adaptively reused
  - Long term leases, some with option to purchase ("Island Parcels")
  - City establishing CIP to fund new infrastructure through land sale ($1 million/acre)
  - City plans to serve new and existing tenants through the existing private infrastructure

Development Scenario



Applicable District Regulations

- Section 19 – Use and Resale of Water
  - Prohibits more than one premises to be served from a single meter and providing water received from the District to another premises
  - New owner must establish water service with the District
- Section 4 – Main Extensions
  - Requires the extension of a water main if a property's principal frontage does not front an existing District water main
  - New owner must establish frontage with a District water main to receive water service

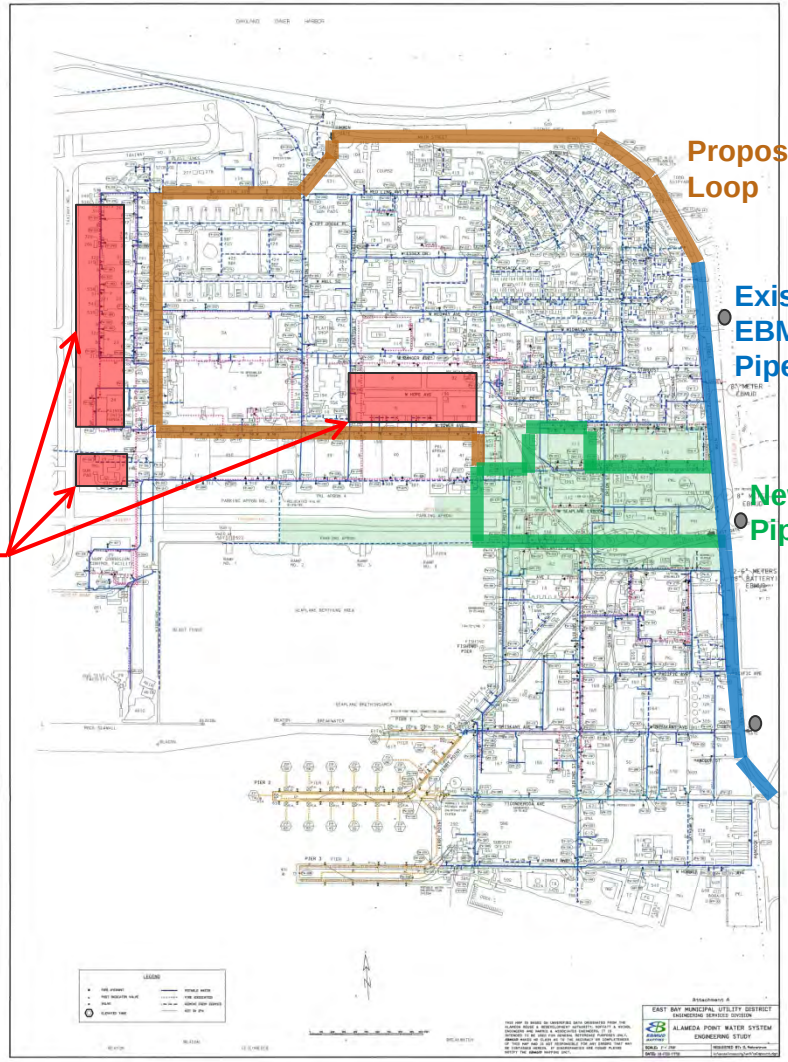
Challenges with "Island Parcels"

- Water quality
- Operations and maintenance of water system
- Presence of multiple water systems within the same right-of-way

Development Recommendations

- Require City to
  - Provide upfront capital cost to install a new looped system
  - Remove old water infrastructure and move services to the new pipeline
  - Complete a cross connection study of the existing potable and fire-fighting systems

Proposed Loop and New Site A Pipelines



Proposed Changes to JPA

- Reference applicable regulations
- Requires timely tenant information
- Increases cost caps
- Contains specific development requirements
- Specifies biannual remediation updates
- Requires annual meetings to track progress
- Update milestones

Next Steps

- Schedule initial negotiations with the City in late April
- Complete JPA amendment by September 30, 2016

EAST BAY MUNICIPAL UTILITY DISTRICT

Current East Bay Watershed Land Issues

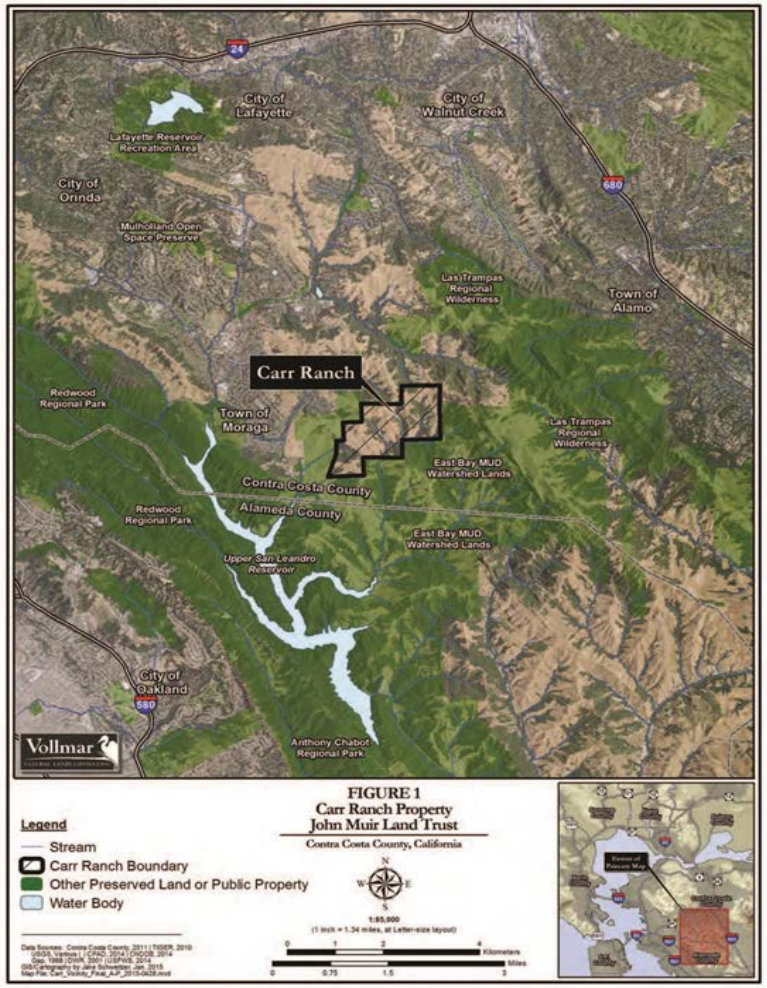
April 12, 2016

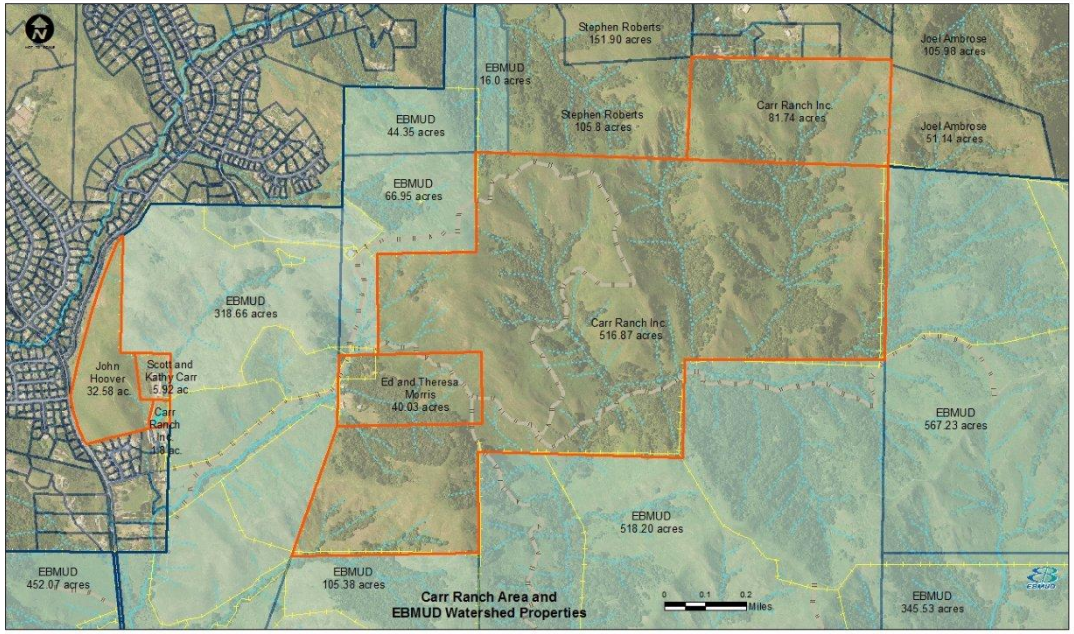
Planning Committee Meeting

Carr Ranch

- 604 acre parcel in the USL Watershed
- High priority purchase based on protection of water quality and biodiversity
- One of the most remote and protected areas of our watershed
- Muir Heritage Land Trust (MHLT) currently holds purchase option
- Staff pursuing ownership alternatives with MHLT with action to occur later this year
- Fund through other watershed land and/or credit sales

Carr Ranch Property

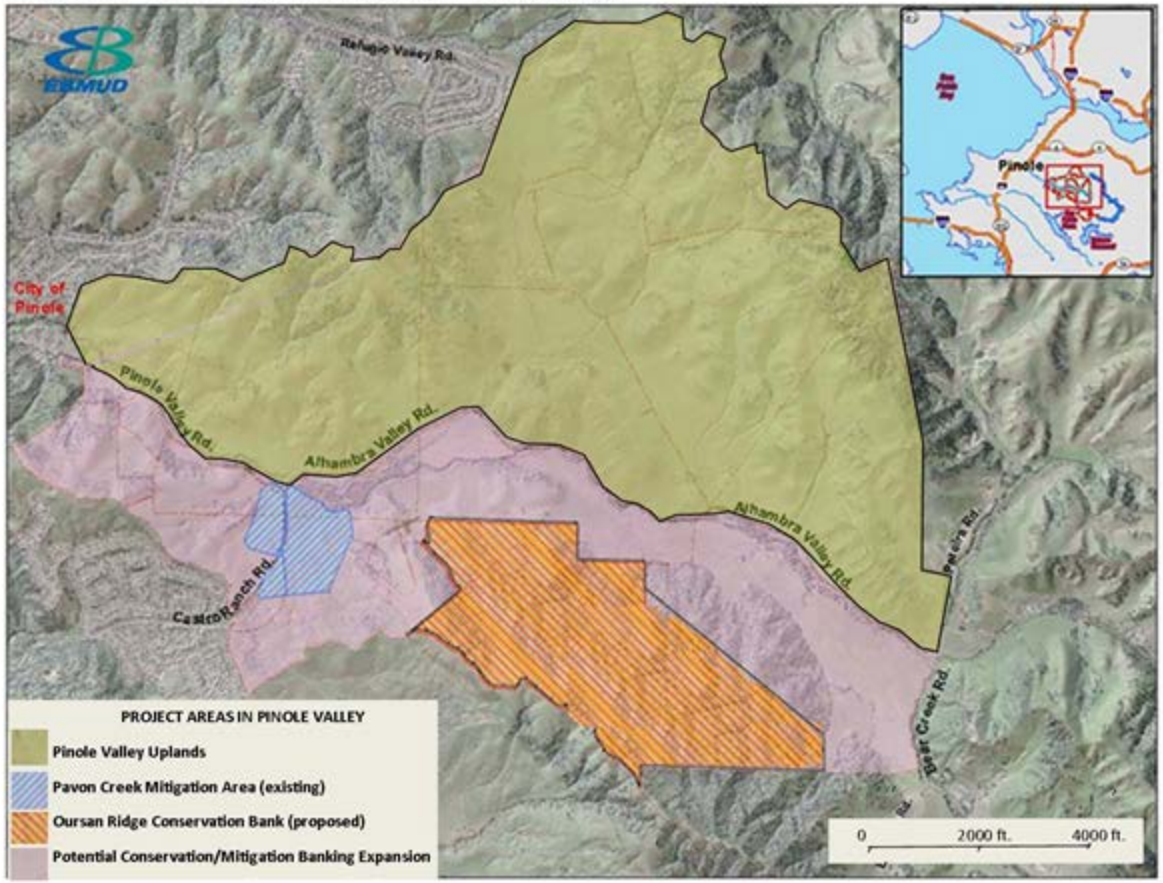




Carr Ranch Property

EBMUD-Owned Property in Pinole Valley

FIGURE 2: EBMUD-Owned Property in Pinole Valley



Pinole Valley Uplands

- EBMUD owns approximately 3,700 acres in Pinole Valley, about 1/3 of total watershed
- Approximately 2,000 acres in north area of Pinole Valley of interest to East Bay Regional Park District (EBRPD)
- This area does not include current mitigation areas or the proposed Oursan Ridge Conservation Bank
- Staff to explore purchase option with EBRPD in near future

Pinole Valley Uplands

Oursan Ridge Conservation Bank

- Five-year effort with Resource Agencies
- 470 acres of Pinole Valley to be under permanent conservation easement to protect California red-legged frog and Alameda Whipsnake
- Development costs approximately $1-1.5 million
- Reviewer projected at $6 – 8 million
- More detailed briefing at May 10, 2016 Planning Committee meeting

Oursan Ridge Conservation Bank

EAST BAY MUNICIPAL UTILITY DISTRICT

2015 Mokelumne River Salmon Return Update

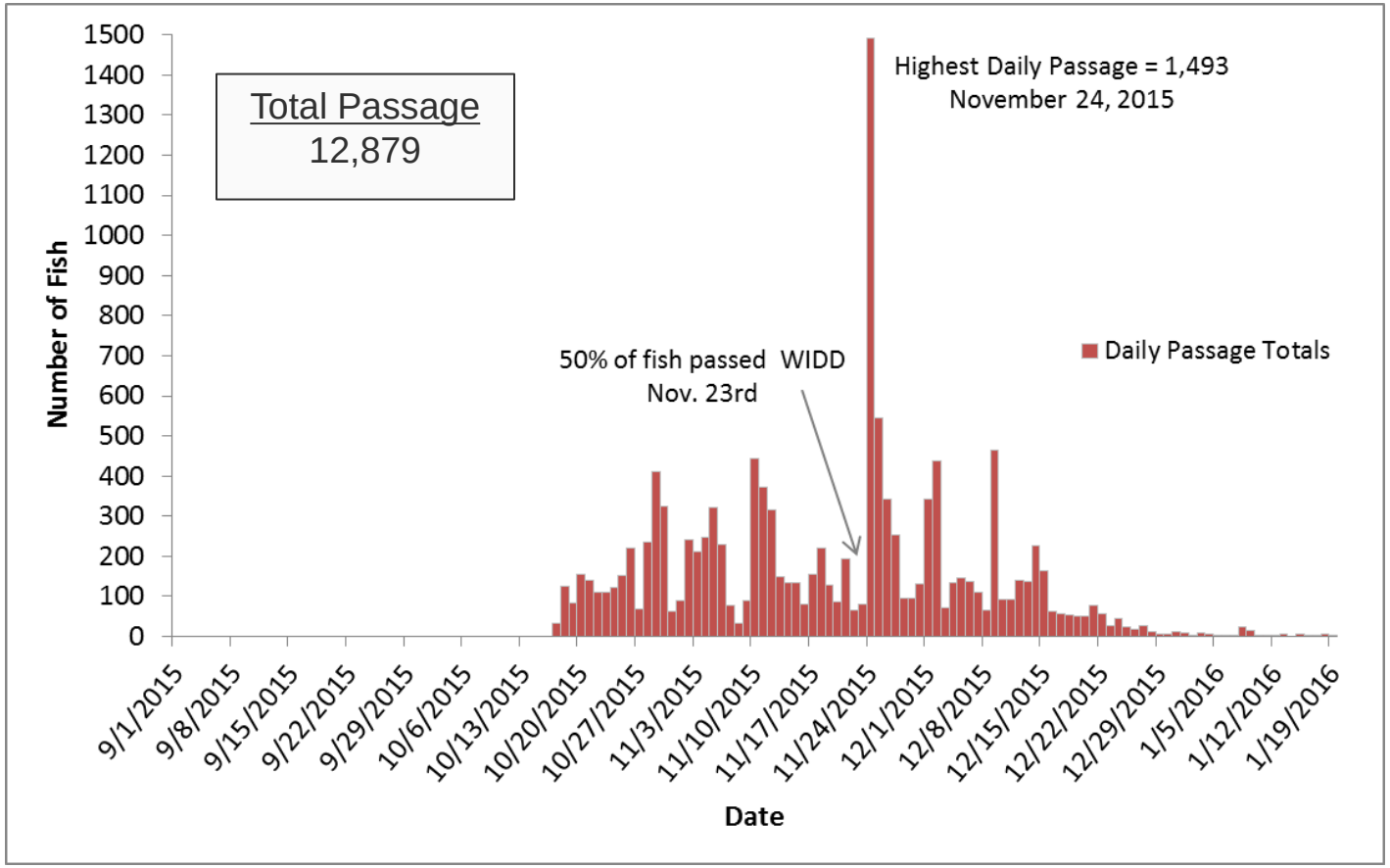
April 12, 2016

Planning Committee Meeting

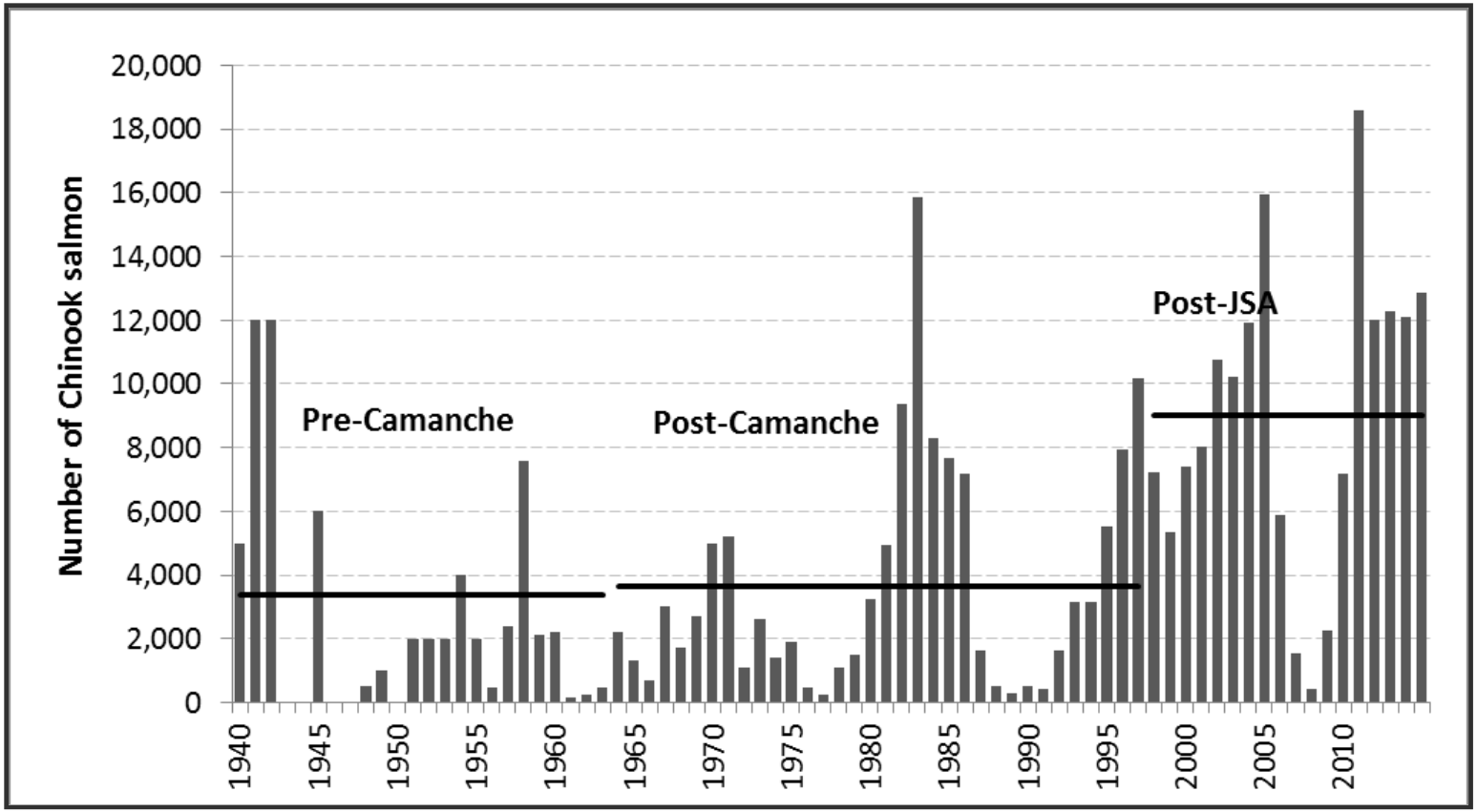
Overview

- 2015 Salmon Returns
- Drought Management Actions
- Central Valley Salmon
- Ocean Recoveries
- Special Project Updates

2015 Salmon Count

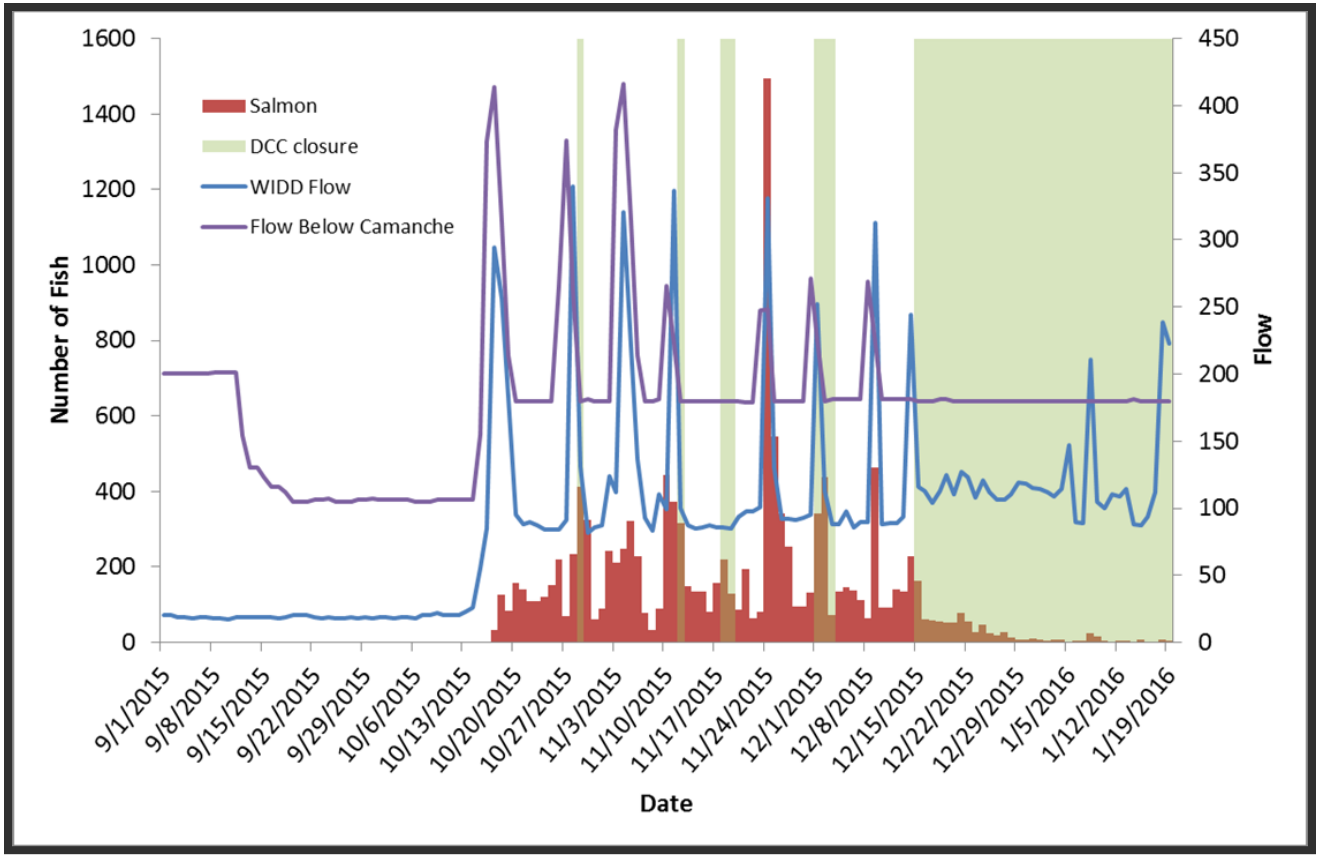


Historical Salmon Count



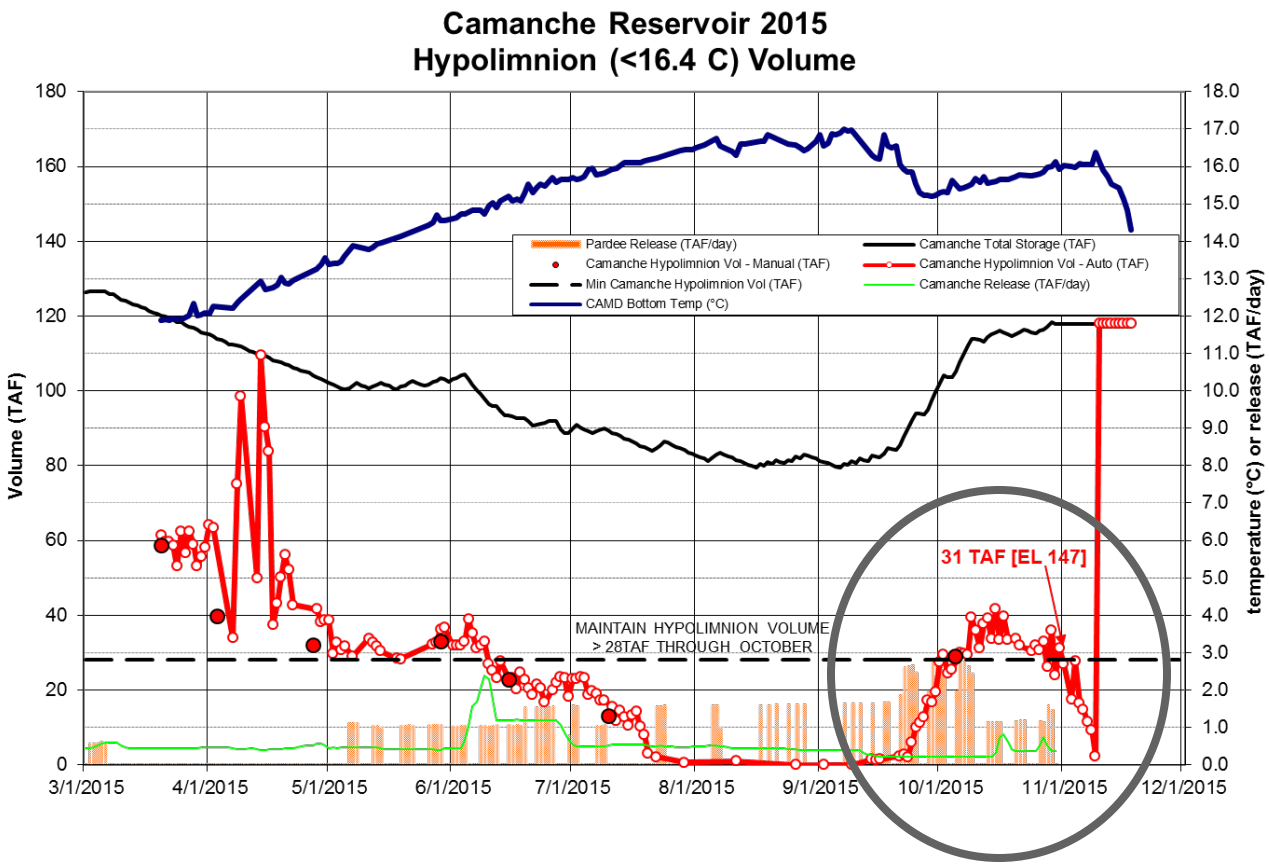
Drought Actions: Pulse Flows

- Delayed pulse flows for cooler river temperatures
- Saved Gainshare water for spring pulse to aid juveniles



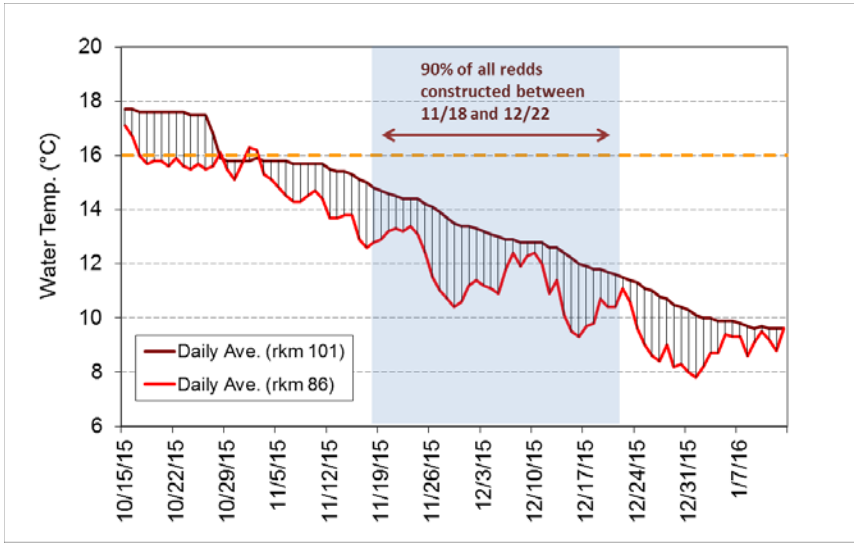
Drought Actions: Temperature Management

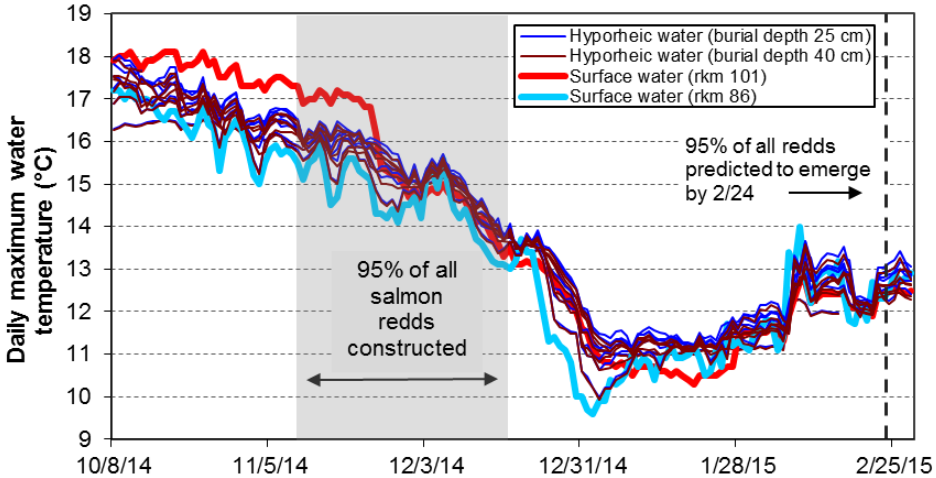
- Ensure adequate cold water supplies using reservoir operations



Drought Actions: Habitat Restoration

- Clean gravel helps moderate temperatures for better spawning and incubation success





Drought Actions: Trap and Haul Wild Juvenile Salmon

- Trap wild juveniles and truck downstream to improve survival
- >28,000 were released into net pens in the Delta on outgoing tides

Mokelumne Compared to other Central Valley Rivers

River System	Long Term Average Natural Flow (AF)	Long Term Escapement	2015 Escapement (preliminary)	2015 as % of Long Term Average
Sacramento	8,530,000	120,781	56,807	47%
Feather	4,520,000	53,984	40,862	76%
Yuba	2,340,000	14,015	6,507	46%
American	2,700,000	47,592	25,548	54%
Stanislaus	1,150,000	4,791	5,863	122%
Tuolumne	1,910,000	9,159	102	1%
Merced	990,000	3,625	1,865	51%
Mokelumne	740,000	4,734	12,879	272%

Ocean Fisheries

EBMUD

Hatchery Contribution to 2015 CA Ocean Fisheries

Hatchery Chinook Stock	Recreational (69%) N=3,099 CWTs	Commercial (55%) N=7,401 CWTs
San Joaquin River Fall	**18%**	**16%**
Sacramento River Fall	**76%**	**73%**
Specific Sac Trib Contributions		
Feather	*48%*	*55%*
Coleman	*17%*	*10%*
Nimbus	*11%*	*7%*

Recreational Contribution

Mokelumne River Fishery

San Joaquin Fall-Run Chinook Salmon (SJRFC)

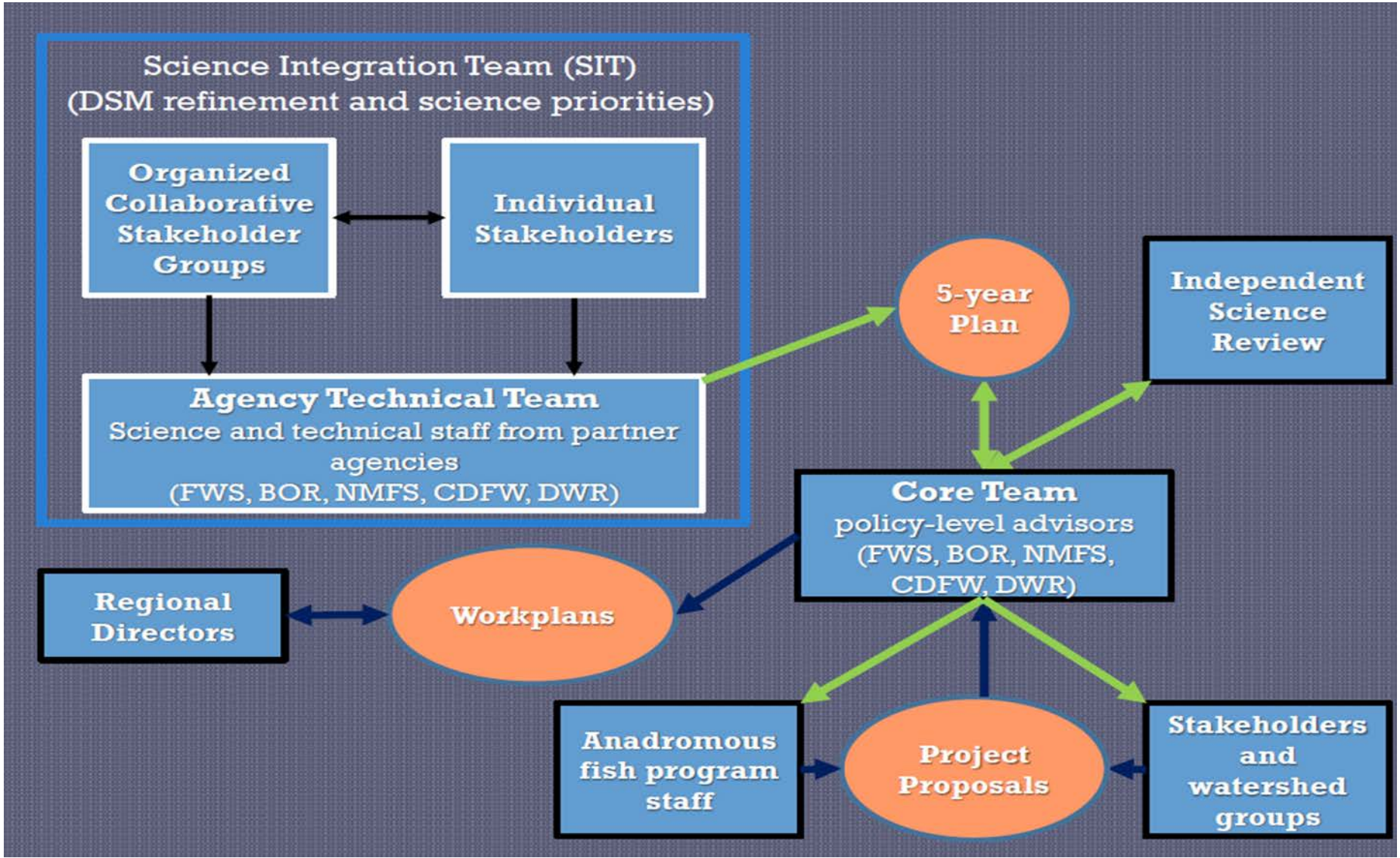
- ***Effort:*** 29,002 angler hours
- ***Trips:*** 4,723 angler trips
- ***Harvest:*** 1,281 salmon*
- ***Harvest rate:*** 4 salmon per 100 angler hours
- ***Additional Harvest*:*** 3,127 salmon harvested out of basin

Barge Study

Preliminary Results Year 1
2-YR old fish

Method	Moke Recoveries	Nimbus Recoveries	Feather Recoveries
In-River	**2**	**0**	**0**
Trucked	**15**	**12**	**1**
Barged	**113**	**37**	**2**

CVPIA Science Integration Team



CVPIA SIT Mokelumne Priorities for 2017 funding

Steelhead: understanding the dynamics between resident and anadromous forms and how hatchery stocks influence wild stocks

Fall-run Chinook:

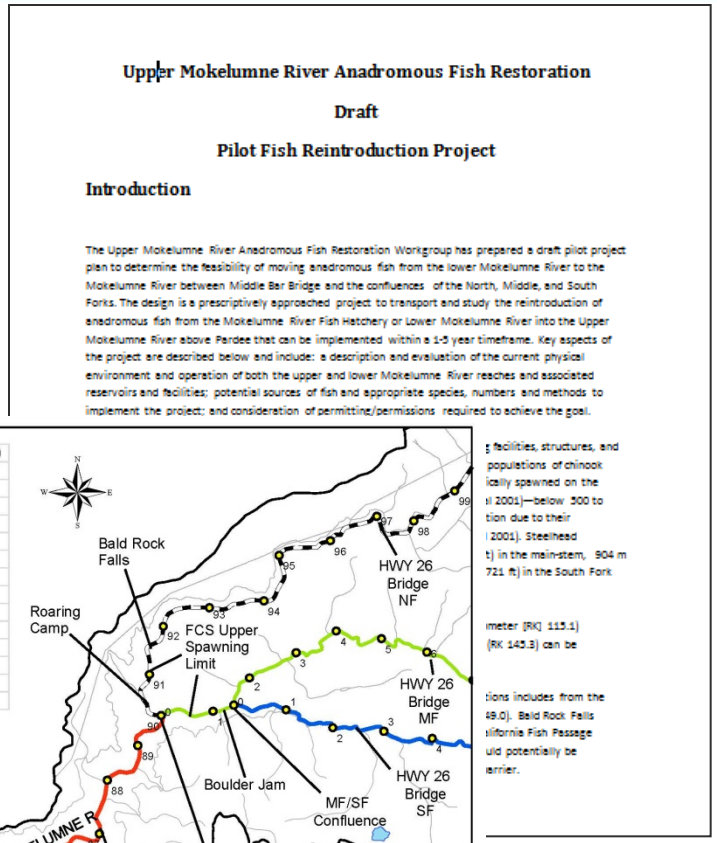
- Improve Juvenile Rearing Habitat ****
- Reduce Diversions and Juvenile Entrainment *****
- Reduce Predator Encounters ****
- Improve Water Temperatures during Juvenile Rearing
- Augment Flows during Juvenile Rearing

Upper Mokelumne Fish Passage

Grass roots pilot project to move fish upstream

Evaluate available habitat

Investigate pathology issues



Upper Mokelumne River Anadromous Fish Restoration

Draft

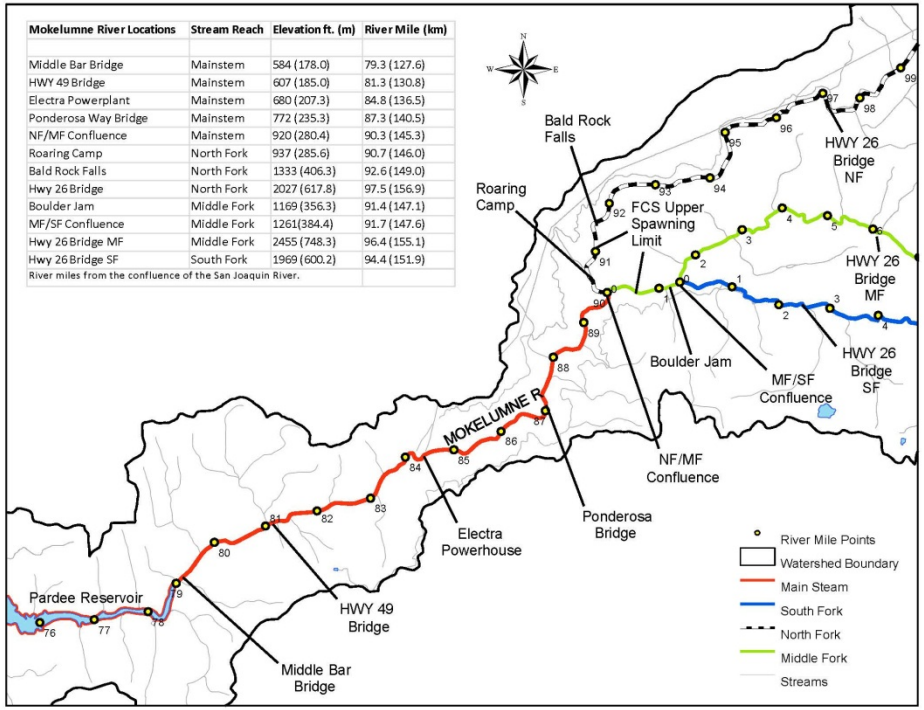
Pilot Fish Reintroduction Project

Introduction

The Upper Mokelumne River Anadromous Fish Restoration Workgroup has prepared a draft pilot project plan to determine the feasibility of moving anadromous fish from the lower Mokelumne River to the Mokelumne River between Middle Bar Bridge and the confluences of the North, Middle, and South Forks. The design is a prescriptively approached project to transport and study the reintroduction of anadromous fish from the Mokelumne River Fish Hatchery or Lower Mokelumne River into the Upper Mokelumne River above Pardee that can be implemented within a 1-5 year timeframe. Key aspects of the project are described below and include: a description and evaluation of the current physical environment and operation of both the upper and lower Mokelumne River reaches and associated reservoirs and facilities; potential sources of fish and appropriate species, numbers and methods to implement the project; and consideration of permitting/permissions required to achieve the goal.

Mokelumne River Locations	Stream Reach	Elevation ft. (m)	River Mile (km)
Middle Bar Bridge	Mainstem	584 (178.0)	79.3 (127.6)
HWY 49 Bridge	Mainstem	607 (185.0)	81.3 (130.8)
Electra Powerplant	Mainstem	680 (207.3)	84.8 (136.5)
Ponderosa Way Bridge	Mainstem	772 (235.3)	87.3 (140.5)
NF/MF Confluence	Mainstem	920 (280.4)	90.3 (145.3)
Roaring Camp	North Fork	937 (285.6)	90.7 (146.0)
Bald Rock Falls	North Fork	1333 (406.3)	92.6 (149.0)
Hwy 26 Bridge	North Fork	2027 (617.8)	97.5 (156.9)
Boulder Jam	Middle Fork	1169 (356.3)	91.4 (147.1)
MF/SF Confluence	Middle Fork	1261(384.4)	91.7 (147.6)
Hwy 26 Bridge MF	Middle Fork	2455 (748.3)	96.4 (155.1)
Hwy 26 Bridge SF	South Fork	1969 (600.2)	94.4 (151.9)

River miles from the confluence of the San Joaquin River.



Conclusions

- Mokelumne Salmon Returns remain high with 5 years of >12,000 adults

- We continue to innovate creative solutions in drought years to improve conditions for fish

- Our contributions to the Ocean Commercial and Recreational fisheries remain high

- We are concerned and actively considering how to manage returns from drought years over the next five years and securing funding to help boost juvenile survival into the future

- Looking to the future – barging through the Delta and Upper Mokelumne for additional habitat resources

Questions

EAST BAY MUNICIPAL UTILITY DISTRICT

WOH Northern Pipelines Project Update

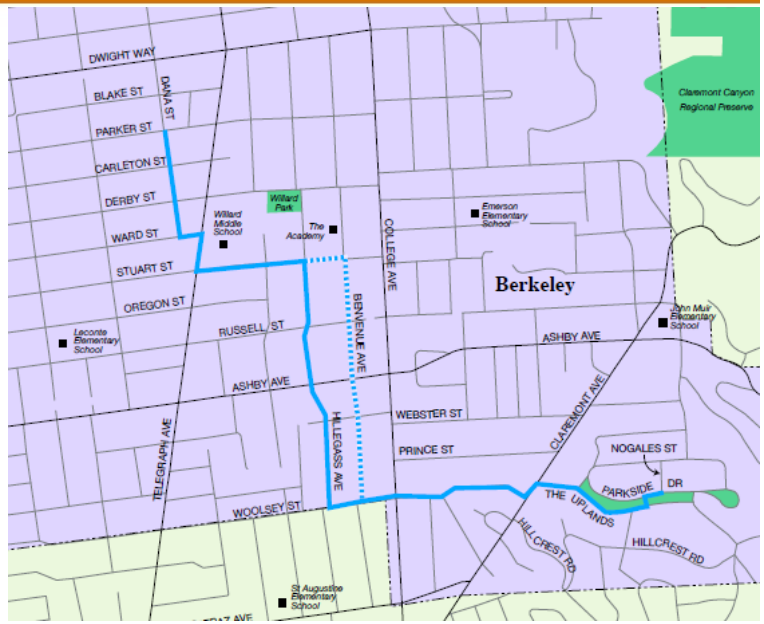
(Wildcat Pipeline, Berkeley)

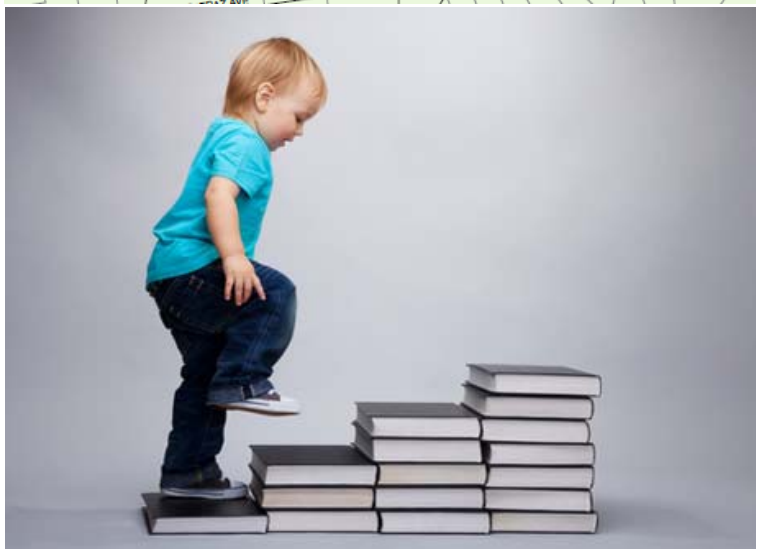
Planning Committee Meeting

April 12, 2016

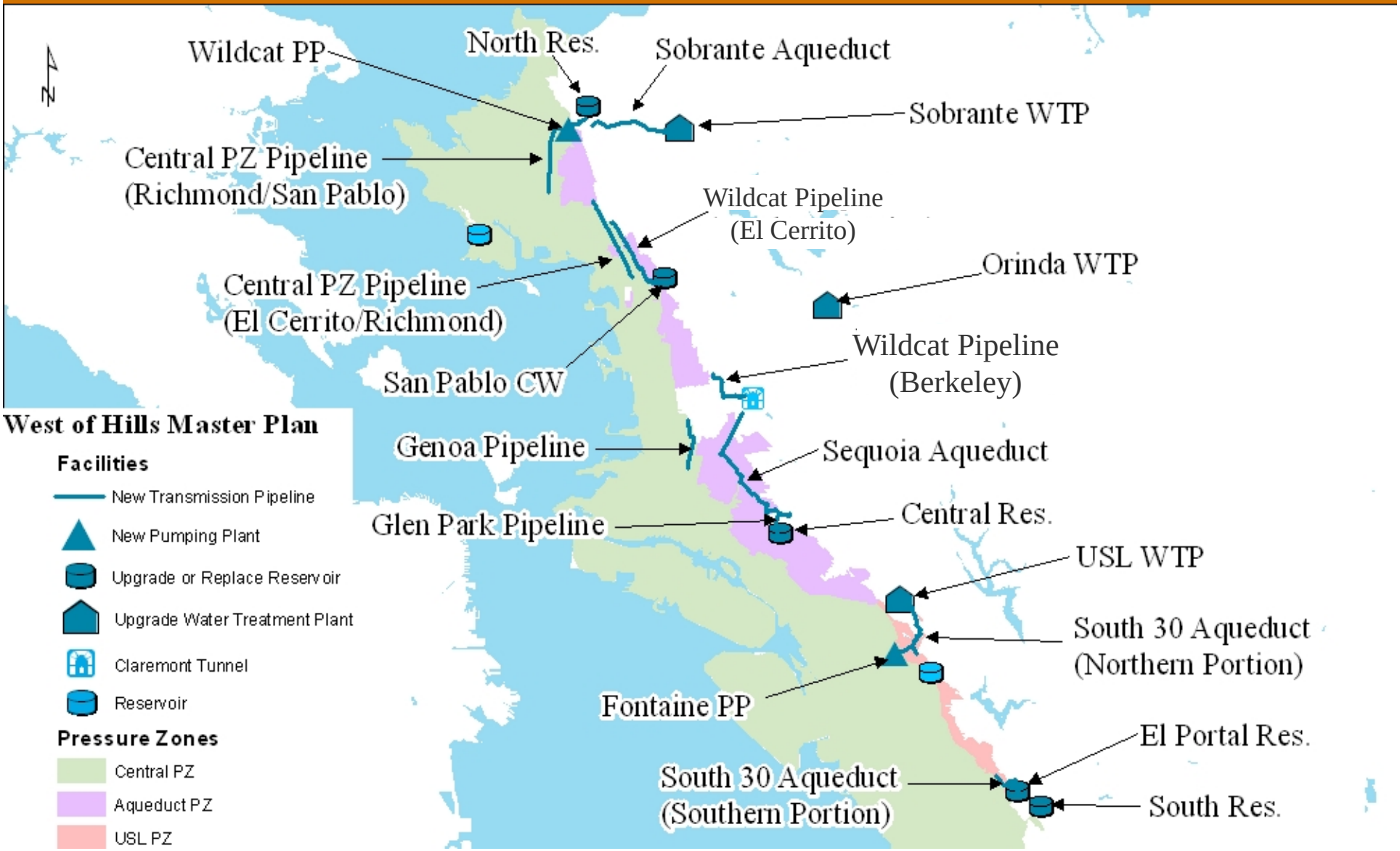
Overview

- Background
- Project changes
- Next steps

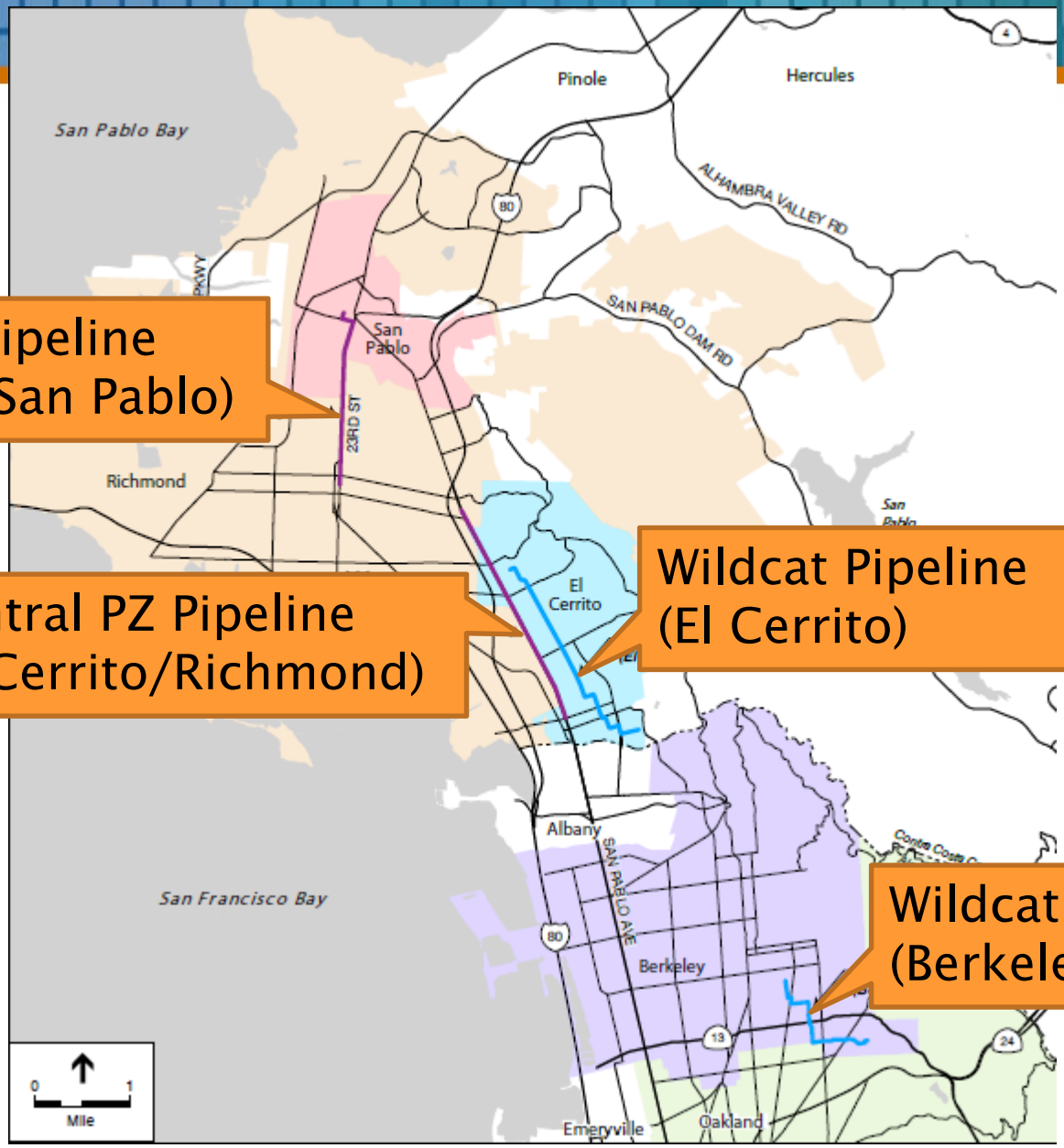




West of Hills (WOH) Master Plan



WOH Northern Pipelines EIR



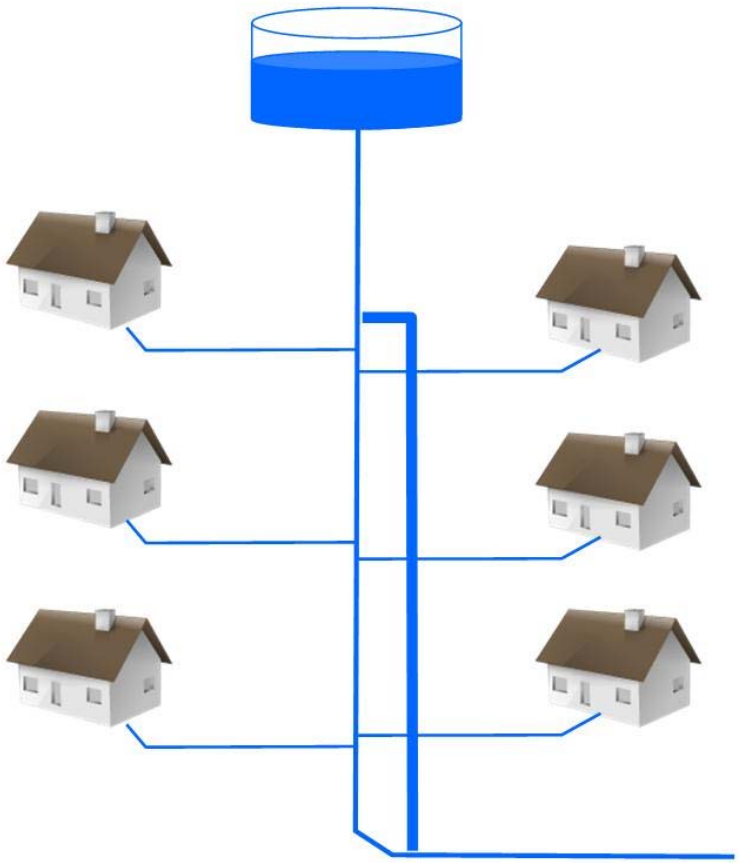
Central PZ Pipeline (Richmond/San Pablo)

Central PZ Pipeline (El Cerrito/Richmond)

Wildcat Pipeline (El Cerrito)

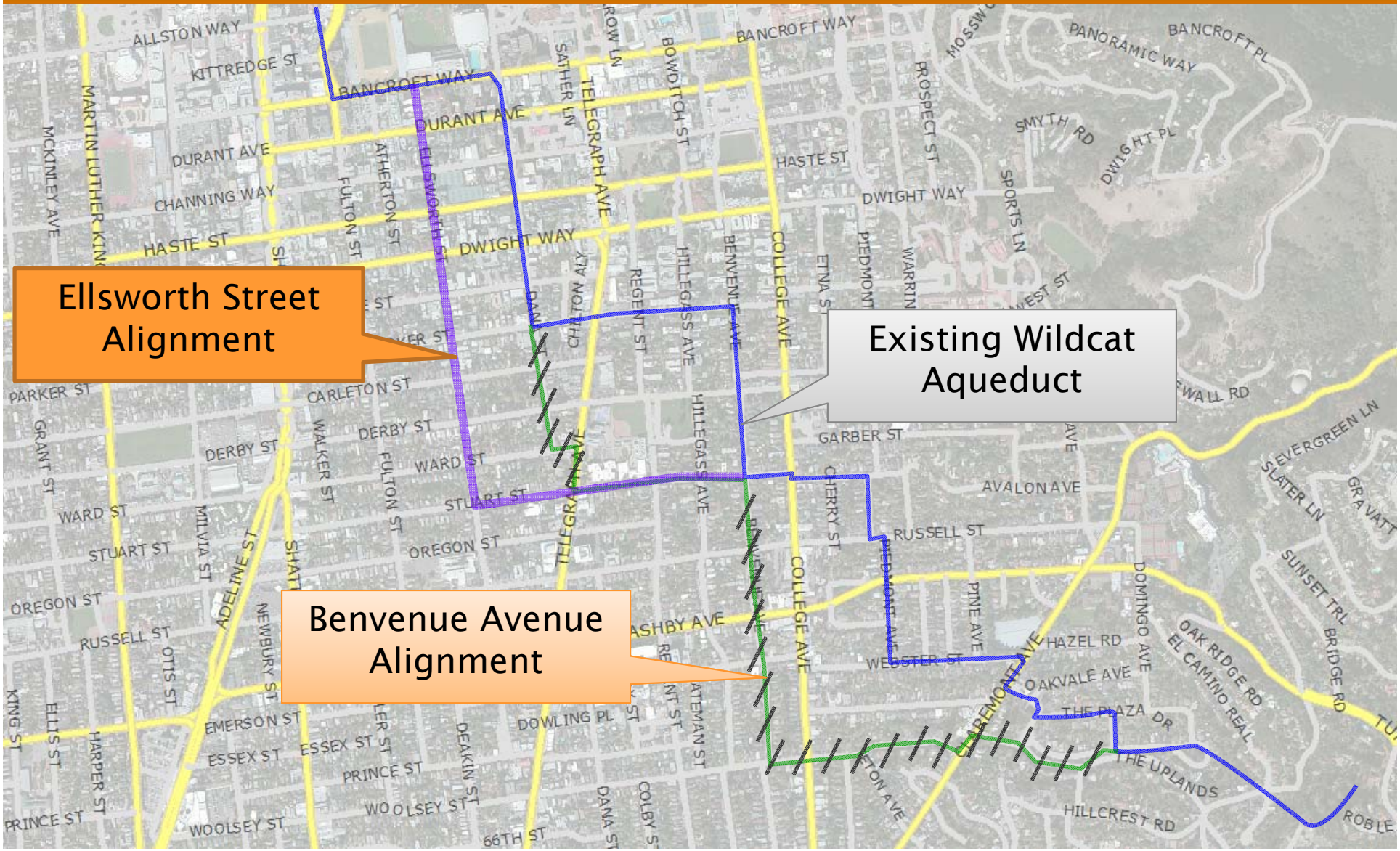
Wildcat Pipeline (Berkeley)

Project Need



- Correct Existing Transmission Deficiencies
- Allow Reservoirs to Cycle and Reduce Water Age
- Meet Future Demands

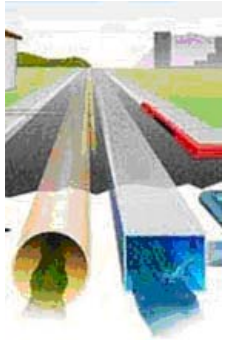
Wildcat Pipeline (Berkeley)



Benvenue Alignment Challenges

50 more bends and offsets to avoid conflicting utilities

More tree removal required due to utility conflicts



Crosses regional access route Ashby Ave/SR 13

25 ft deep tunneling required to go under Harwood Creek Culvert

Ellsworth Alignment Advantages

- Remove 1 to 3 trees (instead of 9 trees)

- Avoid night work on Ashby Ave and at connections

- Reduced length (0.5 mi) means less neighborhood disturbance
- About $5 million cost savings potential

EIR Addendum: No New Significant Impacts

- **Visual Quality**
- Air Quality
- Biological Resources
- Cultural Resources
- Energy Conservation
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- **Noise**
- Recreation
- **Traffic and Transportation**

Next Steps

<u>EIR Addendum:</u>
Completed April 2016

<u>Public Info Meetings:</u>
April 19 and 27, 2016

<u>Construction:</u>
Summer 2017 to late 2018

EAST BAY MUNICIPAL UTILITY DISTRICT

AC Transit
Bus Rapid Transit (BRT) Project

Planning Committee Meeting

April 12, 2016

EBMUD AC TRANSIT

Presentation Outline

- AC Transit BRT Project Background
- EBMUD Requirements & Impacts
- Timeline and Coordination Efforts
- Next Steps

BRT Project Background

EBMUD

EAST BAY BRT

PROJECT OVERVIEW

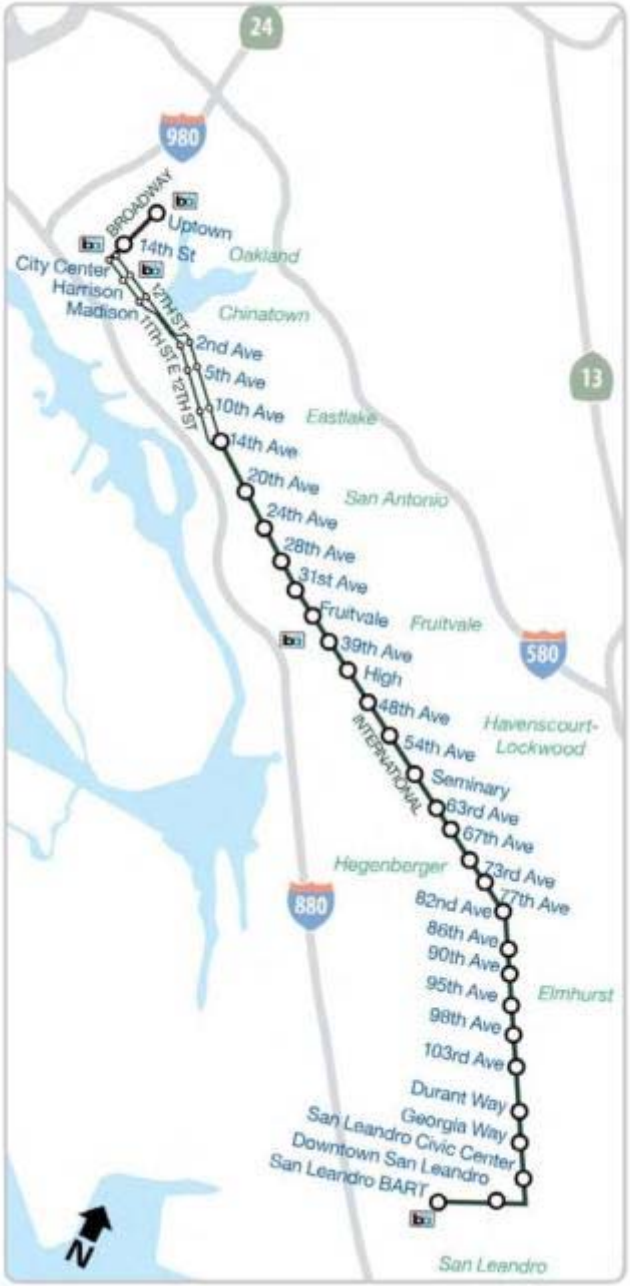
AC TRANSIT

East Bay Bus Rapid Transit

AC Transit's East Bay Bus Rapid Transit (BRT) project will provide fast, frequent and reliable transit service between 20th Street in downtown Oakland and San Leandro BART, primarily along International Boulevard and E. 14th Street.

By coming every 5 minutes for much of the day, BRT will bring better transit to one of the East Bay's most diverse corridors through a combination of dedicated transit lanes, level boarding, pre-payment, and other features that have led this technology to be described as "light rail on wheels." BRT is also the backbone of the community-envisioned International Boulevard Transit Oriented Development (TOD) Plan and will be the catalyst to attract additional investment and revitalize the corridor. Approved in 2012 and fully funded, the $178 million total investment ($174 million FTA Small Starts project and $4 million in related projects) will enhance regional connectivity, upgrade the streetscape, construct new stations, add landscaping, create construction and transit career opportunities, and attract thousands of new riders when service begins in late 2017.

The East Bay BRT project is substantially funded by these grant programs: Federal Transit Administration Small Starts, Federal Highway Administration CMAQ, Alameda County Transportation Commission Measure B, Metropolitan Transportation Commission/Bay Area Toll Authority Regional Measure 2 Bridge Tolls, State of California STIP and Prop 1B Infrastructure Bonds, and Bay Area Air Quality Management District Transportation Fund for Clean Air.



BRT Project Background

BRT Project

Bid Package 1

Utility Agreement
- January 2014

First Amendment
- September 2014

8 Pipe Relocation Sites
- Bus Stations
- Bulb Outs

Completed Nov 2015

Bid Package 2

No EBMUD Work

Bid Package 3

6 Pipe Relocation Sites

Starting May 2016
Completion in Nov 2017

BRT BP1 Project Timeline

June 2007
Draft EIR
Review Memo

Jan 2014
Utility Agreement
No. 1908.12

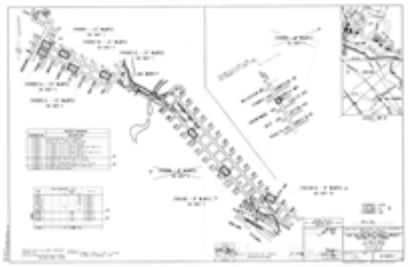
Sept 2014
First Amendment
UA No. 1908.12

2007 2013 2014 2015 2016

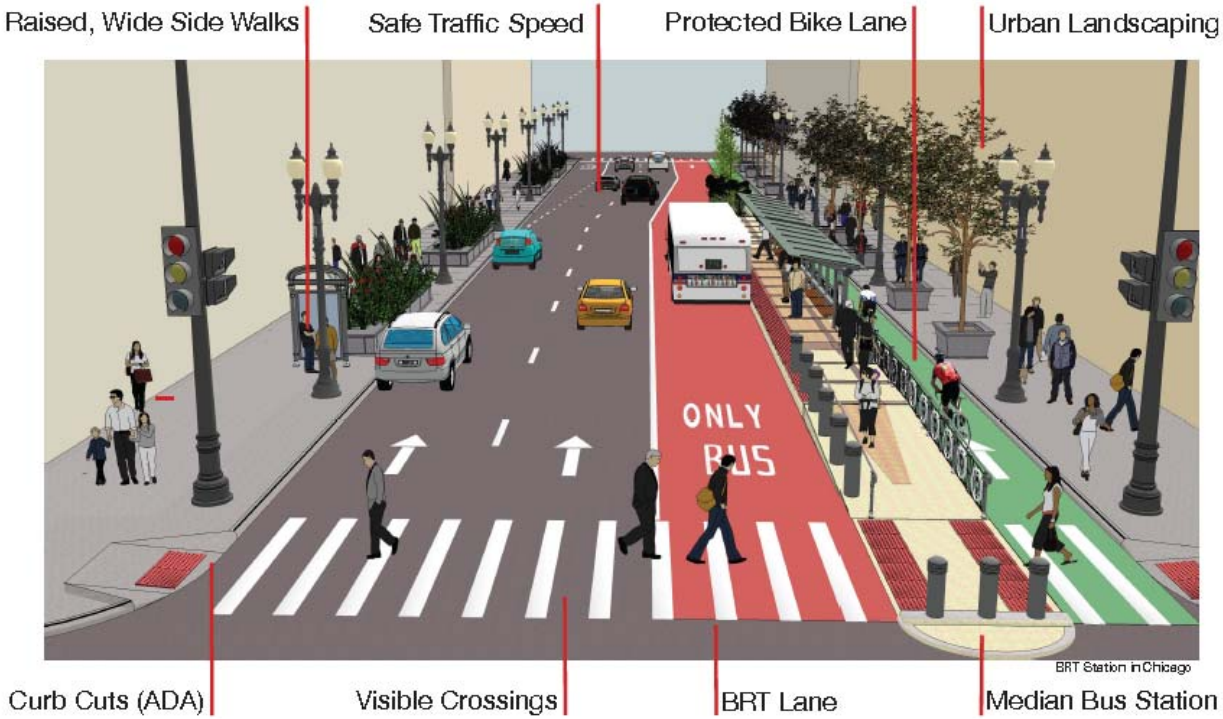
Oct 2013
Notice to Owner

Sept 2014
Notice to Owner
Revision 1

June to Nov
2015
BP1
Construction



Project Elements Included in UA



Bus Stations

Bulb Outs

Project Elements Missing from UA

Deep Pavement Reconstruction

19 to 31 inches

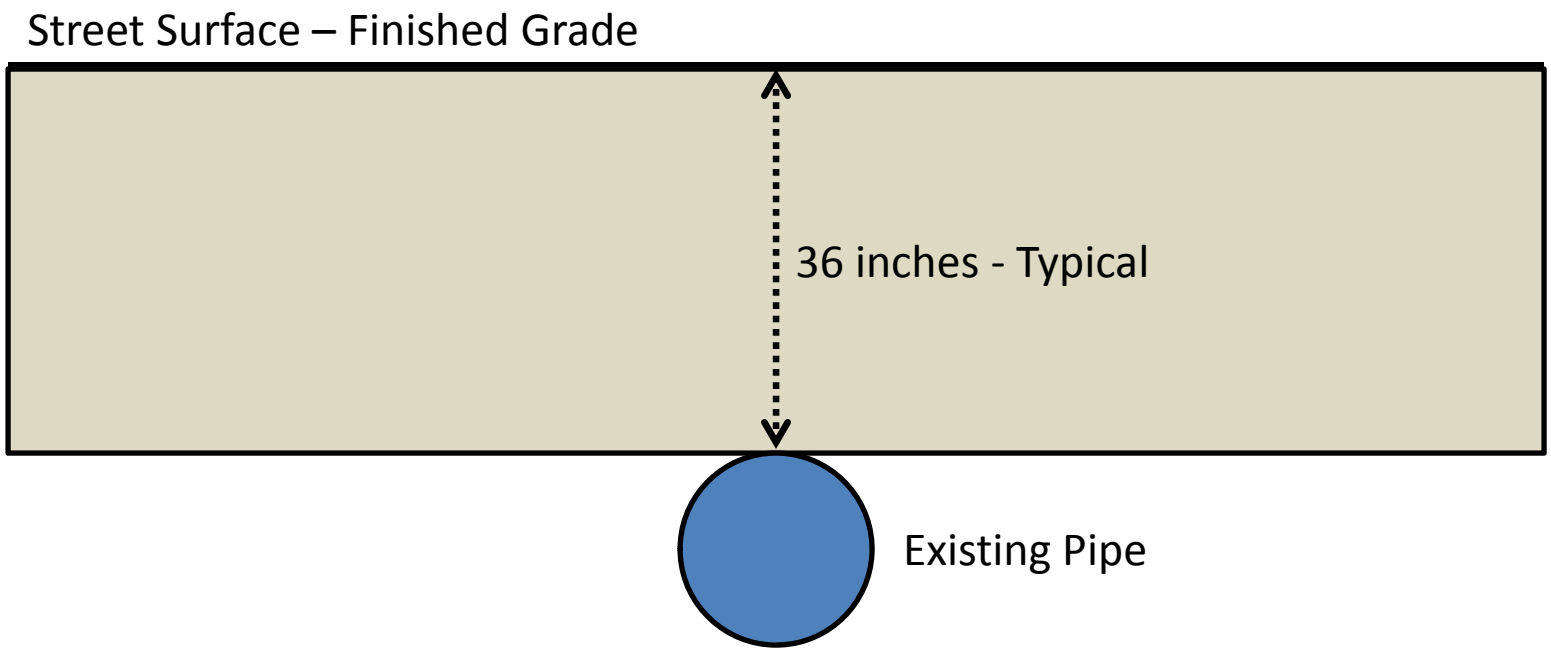
Mill & Overlay

2 inches

EBMUD Requirements

ENGINEERING STANDARD PRACTICE	ESP	512.1
SUBJECT:	EFFECTIVE	09 OCT 06
WATER MAIN AND SERVICES DESIGN CRITERIA	SUPERSEDES	15 AUG 00

3. Cover over the top of pipe shall be not less than 36 inches to finished grade and 24 inches to pavement subgrade, and shall not be less than 42 inches in unimproved areas where final street grade has not been established. Pipelines 16 inches and larger shall have 42 inches minimum cover in all areas.

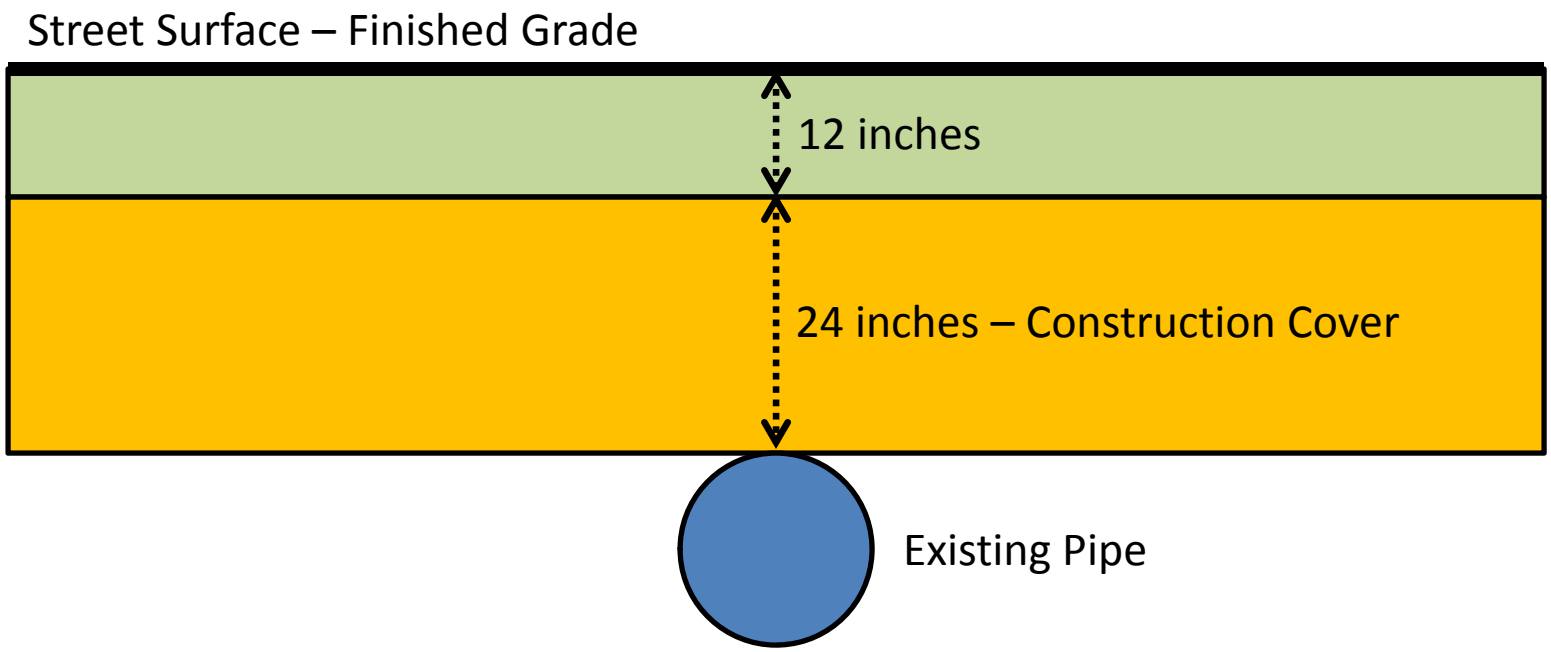


Pavement Section

EBMUD Requirements

ENGINEERING STANDARD PRACTICE	ESP	512.1
SUBJECT:	EFFECTIVE	09 OCT 06
WATER MAIN AND SERVICES DESIGN CRITERIA	SUPERSEDES	15 AUG 00

3. Cover over the top of pipe shall be not less than 36 inches to finished grade and 24 inches to pavement subgrade, and shall not be less than 42 inches in unimproved areas where final street grade has not been established. Pipelines 16 inches and larger shall have 42 inches minimum cover in all areas.

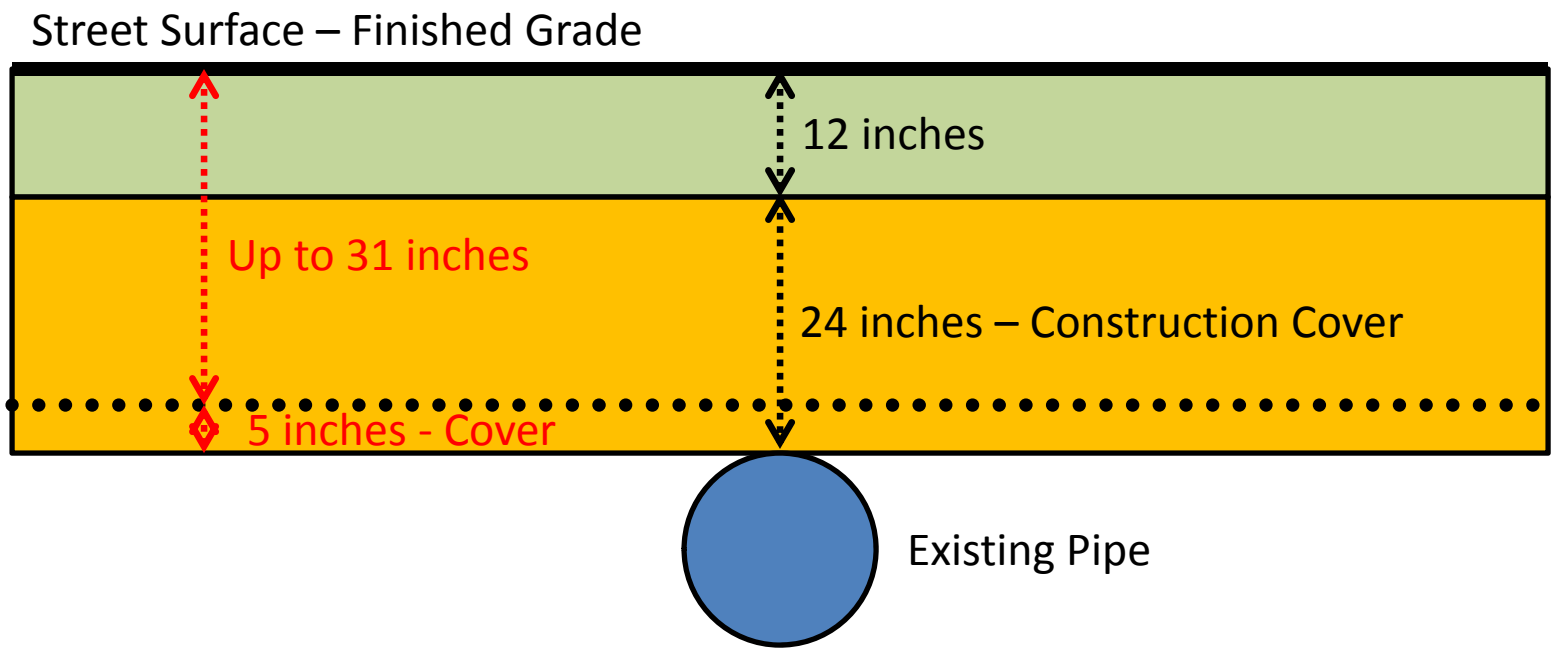


Pavement Section

EBMUD Requirements

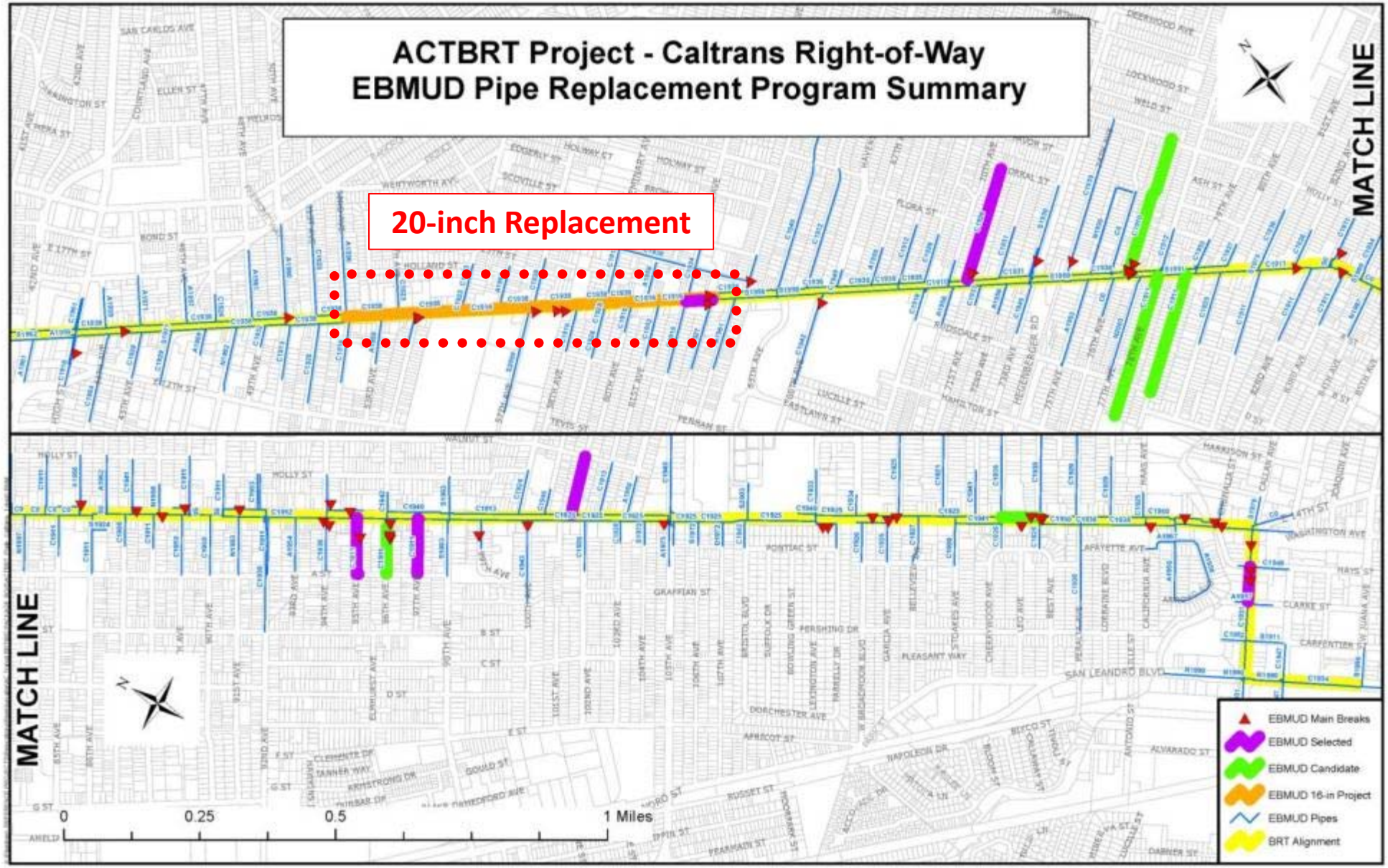
ENGINEERING STANDARD PRACTICE	ESP	512.1
SUBJECT:	EFFECTIVE	09 OCT 06
WATER MAIN AND SERVICES DESIGN CRITERIA	SUPERSEDES	15 AUG 00

3. Cover over the top of pipe shall be not less than 36 inches to finished grade and 24 inches to pavement subgrade, and shall not be less than 42 inches in unimproved areas where final street grade has not been established. Pipelines 16 inches and larger shall have 42 inches minimum cover in all areas.



Pavement Section

EBMUD Requirements



EBMUD Requirements

Typical Relocation Steps – Small Projects

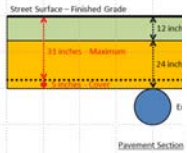
Action	Time [months]
Review Survey Data and Planning	1
Drafting	2
Design	2
Prepare Construction Documents	2
Advertise and Award	3
Construction	3
Complete Design and Construction	***13 months***

Timeline and Coordination Efforts

June 2007
Draft EIR
Review Memo

Jan 2014
Utility Agreement
No. 1908.12

Sept 2014
First Amendment
UA No. 1908.12



July 2015
Pavement
Depth

Dec 2015
10.4 Miles
of Pipe
Relocations
Identified

O.C. Jones & Sons, Inc.
General Engineering Contractor

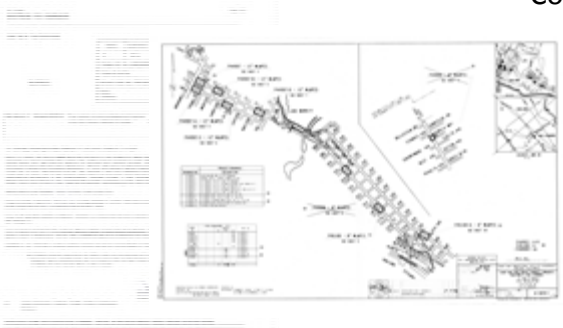
April 2016
NTP

2007 2013 2014 2015 2016 2017

Oct 2013
Notice to Owner

Sept 2014
Notice to Owner
Revision 1

June to Nov
2015
BP1
Construction



March 2016
AC Transit
Awarded
Contractor

May 2016
Construction
Begins

Next Steps

- Negotiating with City of Oakland & Caltrans:
  - ↓ *Pavement depth to allow for 24 inches*
  - *Propose 12 to 14-inch pavement depth*
- November 2017 FTA Grant Deadline

- Scheduled 20-inch Pipe Replacement
  - *Start August 2016*
  - *Finish February 2017*
- Develop New Utility Agreement with AC Transit

Questions?

Pipeline Infrastructure Division

Distribution Systems Engineering

Roberts McMullin