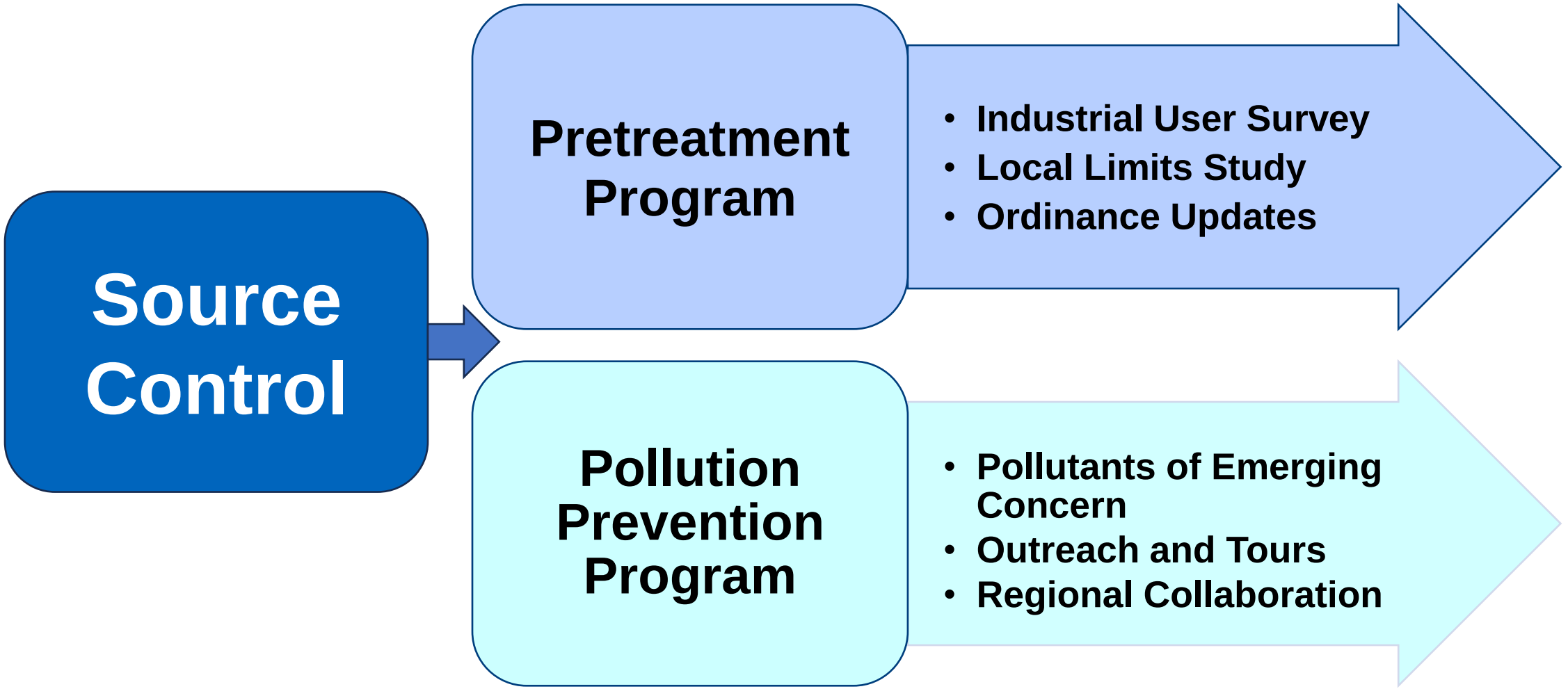
Pretreatment and Pollution Prevention Program Update

Planning Committee

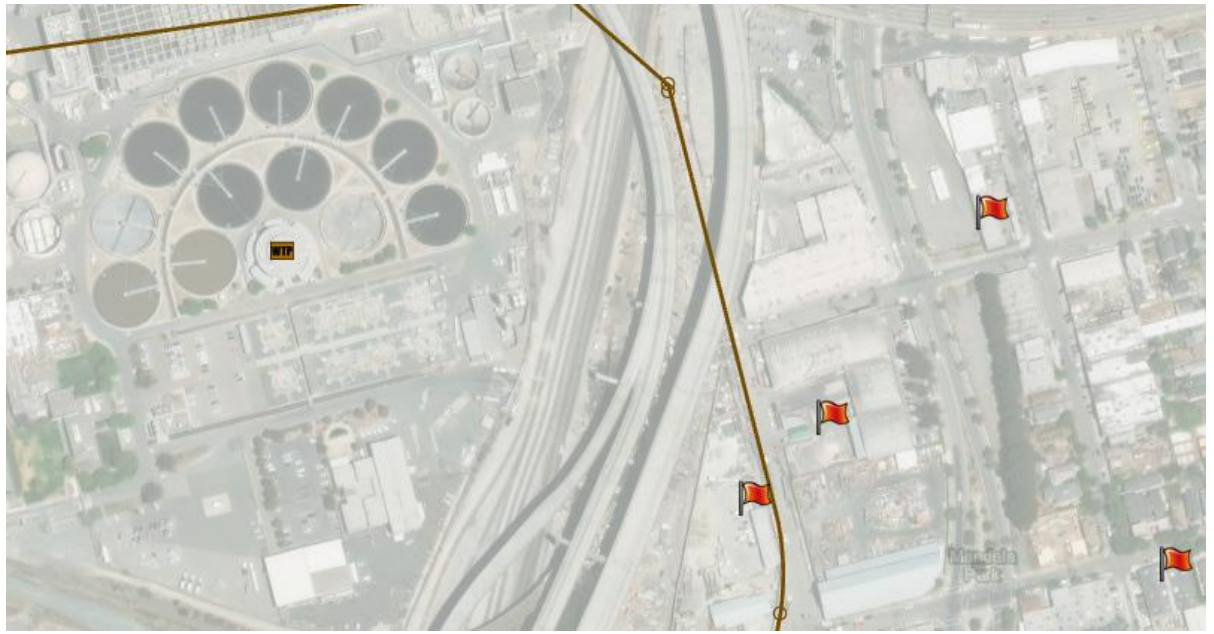
April 9, 2024

Agenda


Source Control
Pretreatment Program
• Industrial User Survey
• Local Limits Study
• Ordinance Updates
Pollution Prevention Program
• Pollutants of Emerging Concern
• Outreach and Tours
• Regional Collaboration

Industrial User (IU) Survey

IU Survey +
Influent monitoring



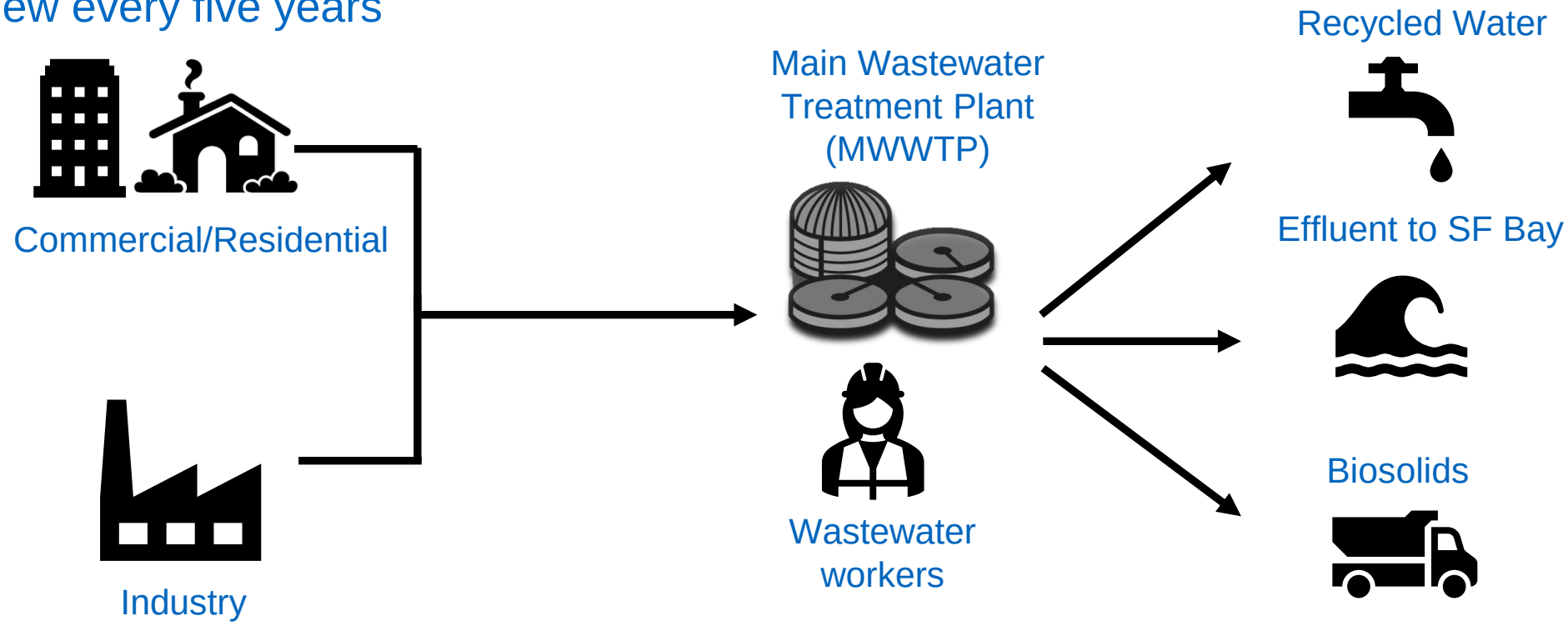
Aerial image of Main Wastewater Treatment Plant with nearby industrial businesses

KEY TAKEAWAY

The Industrial User Survey is a tool for identifying and educating industrial dischargers in the service area.

Local Limits

Review every five years

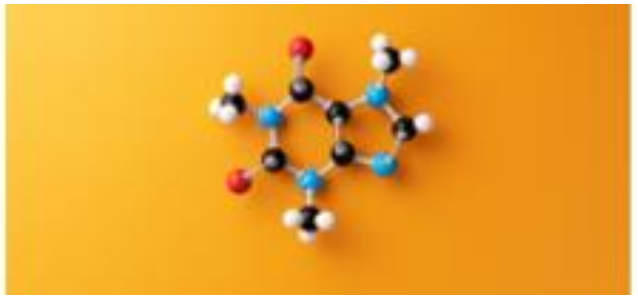


KEY TAKEAWAY

Local limits help protect the MWWTP, its workers, and the MWWTP's products for beneficial reuse.

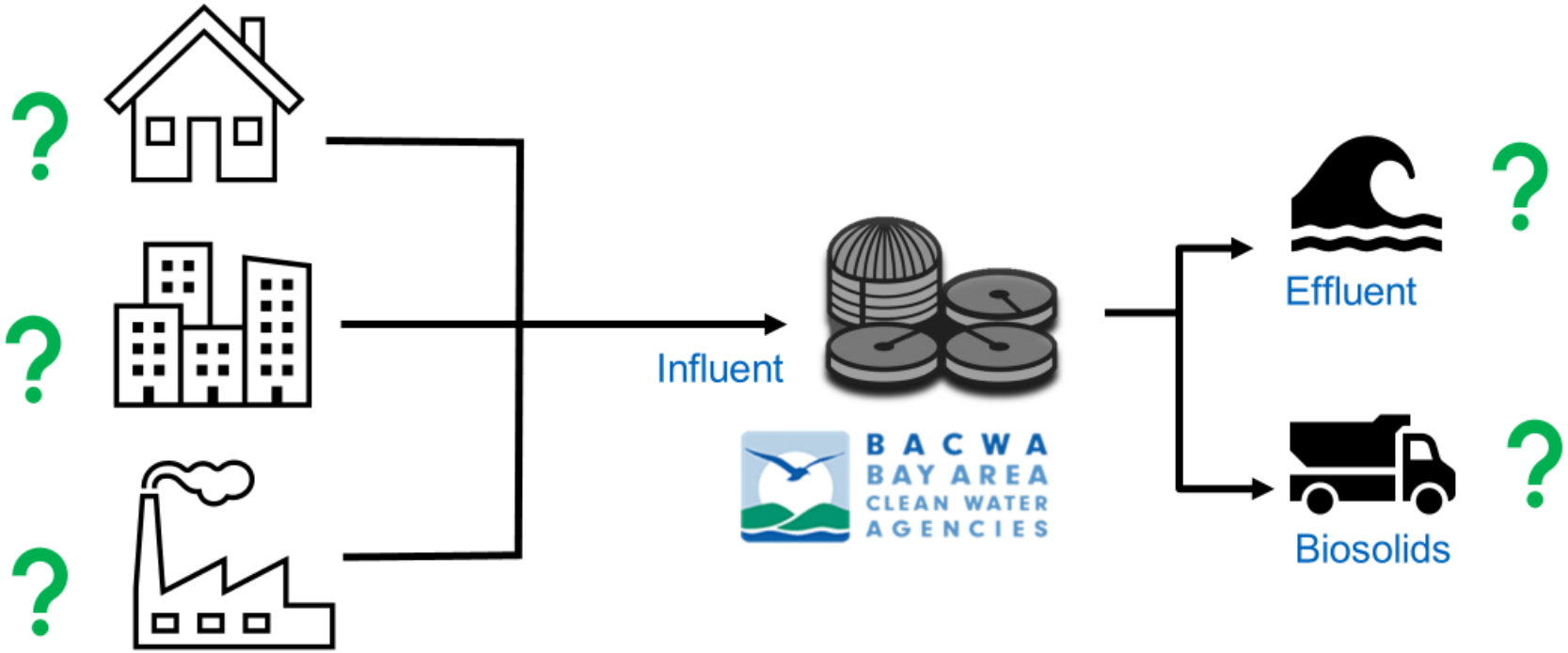
Local Limits Updates

Animal/vegetable vs. mineral



Expanded list of target chemical compounds

PFAS Regional Study: Phases I & II



KEY TAKEAWAY

PFAS were universally detected in the influent, effluent, and biosolids of Bay Area municipal wastewater. Residential areas contribute PFAS in concentrations similar to plant influent.

PFAS = Per- and Polyfluorinated Substances

Pollution Prevention

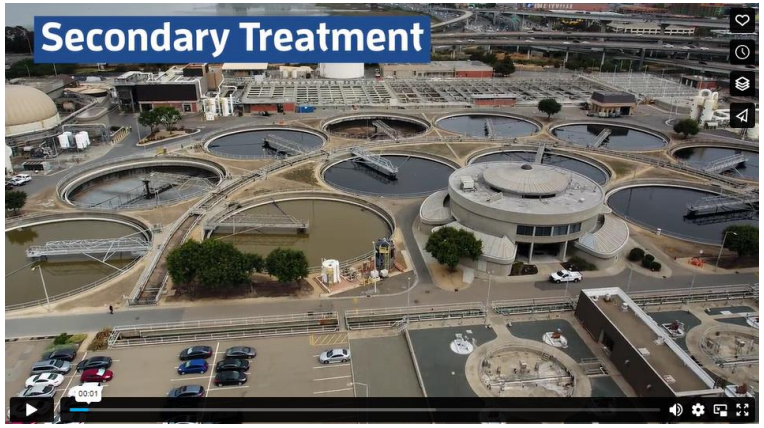
- Seek out alternatives to products that contain PFAS
- Support public policy to address PFAS at the source

Pollution Prevention: Treatment Plant Tours

Image of tour group posing

Image of treatment plant with kiosk

Screenshot of a virtual tour



Screenshot of a treatment video

Pollution Prevention: Regional Collaboration

Image of pee, poop, and toilet paper from BAPPG outreach video

Image of BAPPG outreach don't flush medication

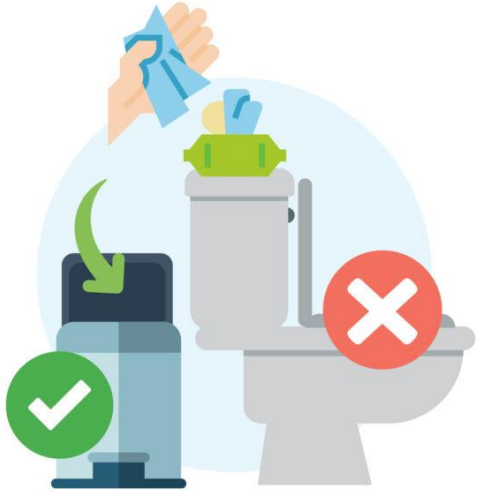


Image of BAPPG outreach don't flush trash

Next Steps

- Continue IU monitoring
- Complete proposed Ordinance revisions
- Outreach to customers to reduce pollutants
- Continue influent wastewater monitoring

Questions?

FLOWING
INTO
THE
FUTURE

Los Vaqueros Reservoir Expansion Project Updates

Planning Committee

April 9, 2024

Agenda

- Background
- EBMUD Need for Water and Supply Portfolio
- Project Unit Costs
- Next Steps

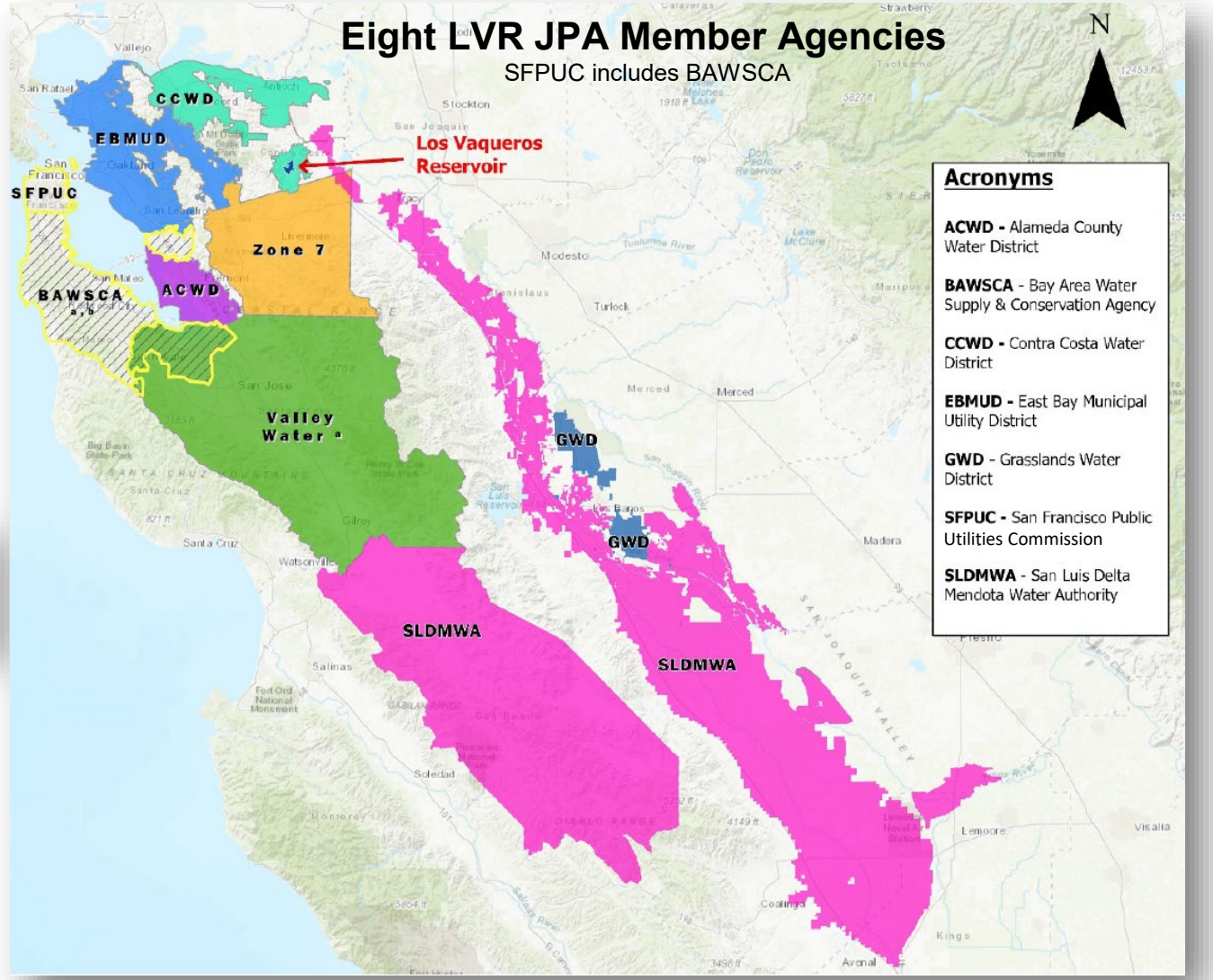
Los Vaqueros Reservoir

Background

Los Vaqueros Reservoir Expansion Project: Increase capacity from 160 TAF to 275 TAF

Project Benefits

- WATER FOR REFUGES
- WATER FOR PARTNERS
- REGIONAL INTEGRATION
- WATER QUALITY
- RECREATION



JPA: Joint Powers Authority
LVR: Los Vaqueros Reservoir
TAF: thousand acre-feet

Key Issues to Determine EBMUD's Participation

- Unit cost evaluation
- Structure of the Project agreements
- Resolving points on agreements
- Sources of water supply

EBMUD Water Supply Portfolio

	Normal Year	Dry Year 1	Dry Year 2	Dry Year 3	Drought Availability or Response
Mokelumne River	•	•	•	•	Reduced flows
Local Runoff	•	•	•	•	Reduced runoff
Conservation Programs	•	•	•	•	Increased conservation
Recycled Water	•	•	•	•	Reduced availability in some areas
Voluntary/Mandatory Rationing	--	•	•	•	Increased rationing
CVP Supplies	--	•	•	•	Less available in severe droughts
Need for Water in 2050 (EBMUD 2020 UWMP)	--	0 TAF	0 TAF	75–84 TAF	
Water Transfers	--	•	•	•	Variable availability and cost
LVR Expansion (evaluating)	--	--	--	•	Accessible during severe drought
SJC Groundwater Banking (piloting)	--	--	--	•	Accessible during severe drought

Included in Need for Water Analysis

Supplemental water supplies beyond CVP and water transfers are needed as a drought deepens.

Every dry year if available (if needed)

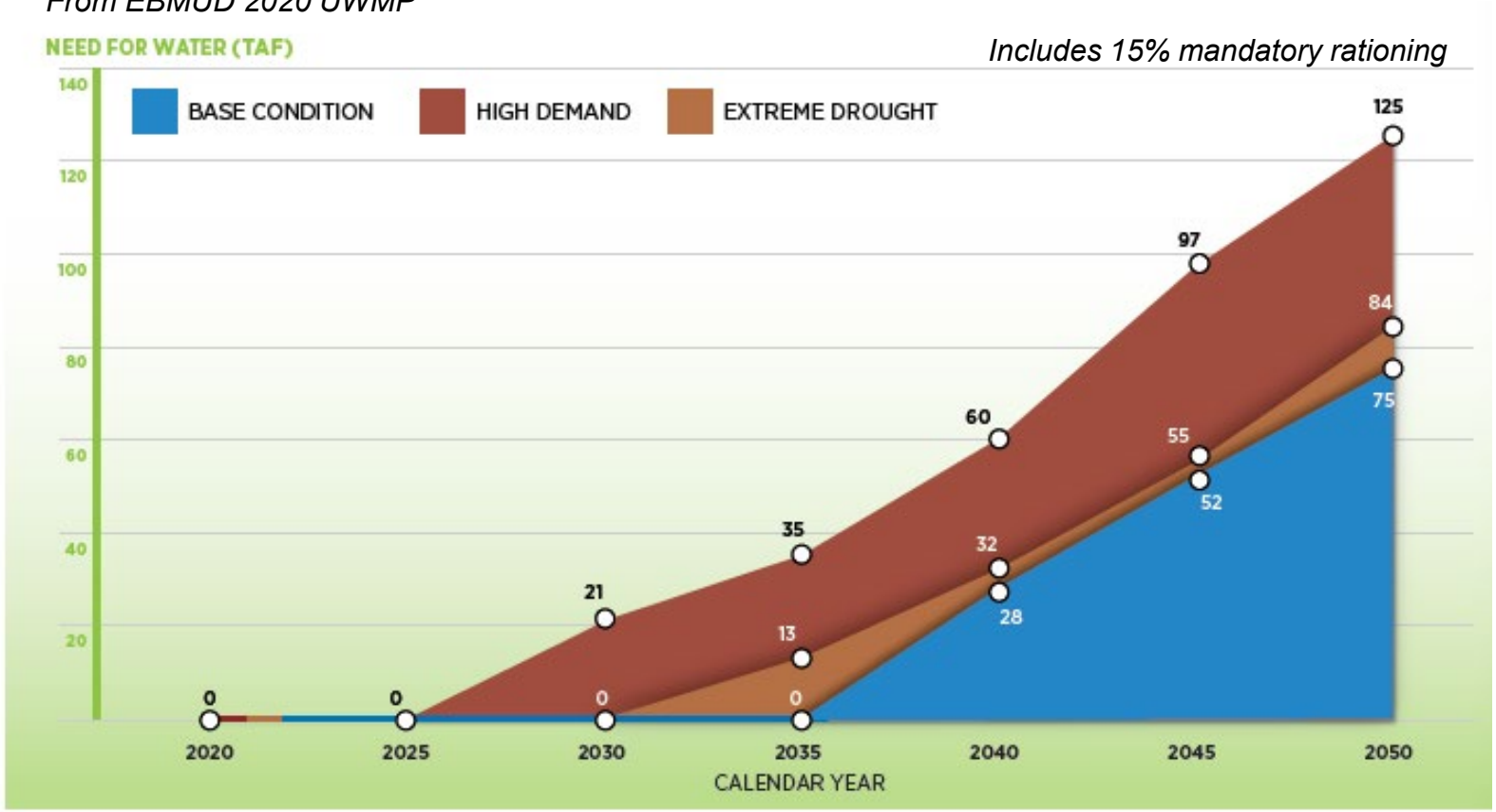
Every dry year if available (if needed)

Third dry year only

UWMP: Urban Water Management Plan

EBMUD Need for Water in Third Year of Drought

From EBMUD 2020 UWMP



Need for water analysis is based on EBMUD's 2050 Demand Study and accounts for conservation, water recycling, rationing, and CVP supplies. Supply from water transfers is not included. Future water transfers goal is up to 50 TAF.

- Previous need for water analysis from 2020 UWMP assumed a level of projected demand increase
- Actual demand is lower than previously projected, so high demand scenario is not likely
- Re-evaluate the amount of supplemental supply needed: water recycling, water transfers, and regional projects

Unit Cost Assumptions

LVR Expansion

- Capital cost estimate from 2023 is $1.52 billion
- JPA's proposed cost allocation methodology is used to estimate EBMUD's allocation
- CCWD's proposed O&M usage fees are used
- Includes EBMUD's Freeport O&M costs for a CVP exchange with CCWD when EBMUD requests stored water from LVR
- Two potential water sources: Mokelumne River water and SMUD CVP Assignment

CVP: Central Valley Project
O&M: Operations and Maintenance
SMUD: Sacramento Municipal Utility District

Unit Costs

LVR Expansion

Water Source	Draft Unit Costs ($/AF) 2023 dollars	Draft Unit Costs, LVR Dam Costs Double ($/AF) 2023 dollars
Mokelumne River Water	$3,500 - $6,000	$5,100 – $8,700
SMUD CVP Assignment	$4,500 - $7,000	$6,000 – $9,400

- Range of unit costs assumes a drought use frequency of 1 in 15 years to 1 in 8 years that is based on past hydrology
- For 30 TAF of storage, EBMUD's capital cost allocation is about $190 million after State funding

Unit Costs

SJC Groundwater Banking

Drought Use Frequency	Draft Concept Unit Cost ($/AF) 2023 dollars
3 out of 10 years (WSMP 2040)	$1,100
1 out of 8 years	$2,000
1 out of 15 years	$3,200

- Capital and O&M costs have a high degree of uncertainty since they are based on a concept developed over 15 years ago
- Pilot project to be completed on April 30
- Updated SJC Groundwater Banking Project concept is being developed over the next year

SJC: San Joaquin County

Unit Costs

Recycled Water

Recycled Water Projects (non-potable)	Dry Year Unit Cost ($/AF) 2023 dollars
Current (DERWA Phases 1&2, East Bayshore Phase I, RARE, North Richmond)	$3,250
Future (DERWA Phases 3–5, East Bayshore Phase 2, Chevron expansion, Phillips 66 Refinery)	$9,300

Recycled water use provides recycled water credits during non-drought years that allow EBMUD to transfer surplus Mokelumne River water for storage projects.

- Assumes drought yield benefit of 3 years out of 10
- Current projects are based on actual O&M costs
- Future projects are based on estimated capital and O&M costs from the 2019 Recycled Water Strategic Plan

Unit Costs

CVP Supplies and Water Transfers

Water Supply	Unit Cost ($/AF) 2023 dollars
CVP Supply	$775
Short-term and long-term water transfers	$1,500

- Based on actual costs for water supply and Freeport O&M
- Includes estimates of treatment and distribution pumping costs

Next Steps

- Continue to update EBMUD unit cost evaluation for LVR Expansion as additional information is obtained and outstanding issues such as allocation of Project costs and State grant funding are addressed
- Continue to negotiate Project agreements and resolve key issues necessary to determine participation
- Continue to explore SMUD CVP Assignment and recycled water credits as sources of water supplies
- Updates to the Committee and Board over next 3 months prior to deciding on participation

Questions?

FLOWING INTO THE FUTURE

Annual Watershed and Recreation Report - 2023

Planning Committee

April 9, 2024

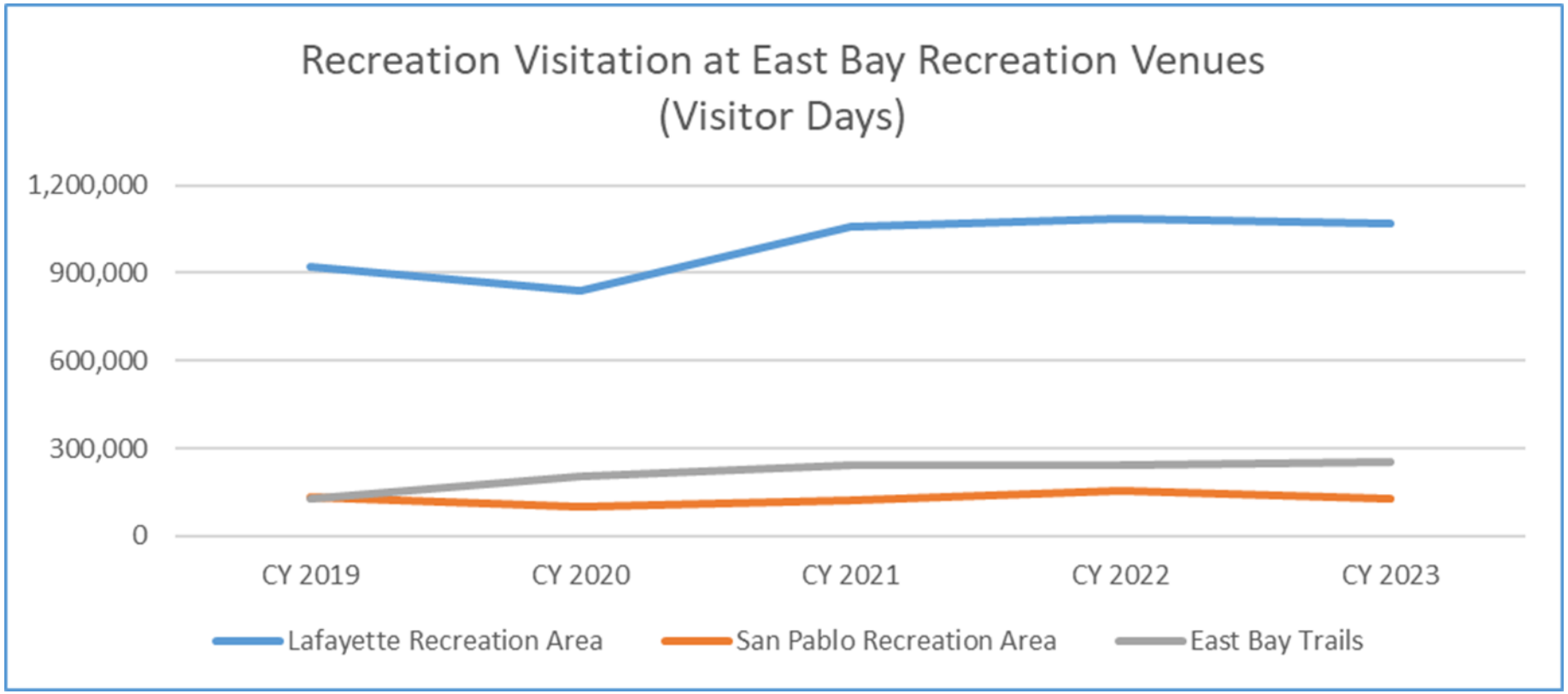
Agenda

- Trail Permits for low-income visitors
- East Bay and Mokelumne recreation programs
- Major activities and initiatives in 2023
- Anticipated 2024 activities

East Bay Watershed Recreation

- Lafayette and San Pablo Reservoir Recreation Areas: Fishing, boating, biking, and walking
- Watershed Trail System: 90 miles of trails for hiking, horseback riding and limited mountain biking
- Over 1 million visitors annually

East Bay Watershed Recreation Visitation



San Pablo Fuel Management

San Pablo Pine tree removal project - log deck burning

Illegal Roadside Dumping

San Pablo Dam Road – Roadside dumping clean-up

Watershed Water Walks

Upper San Leandro Dam Water Walk

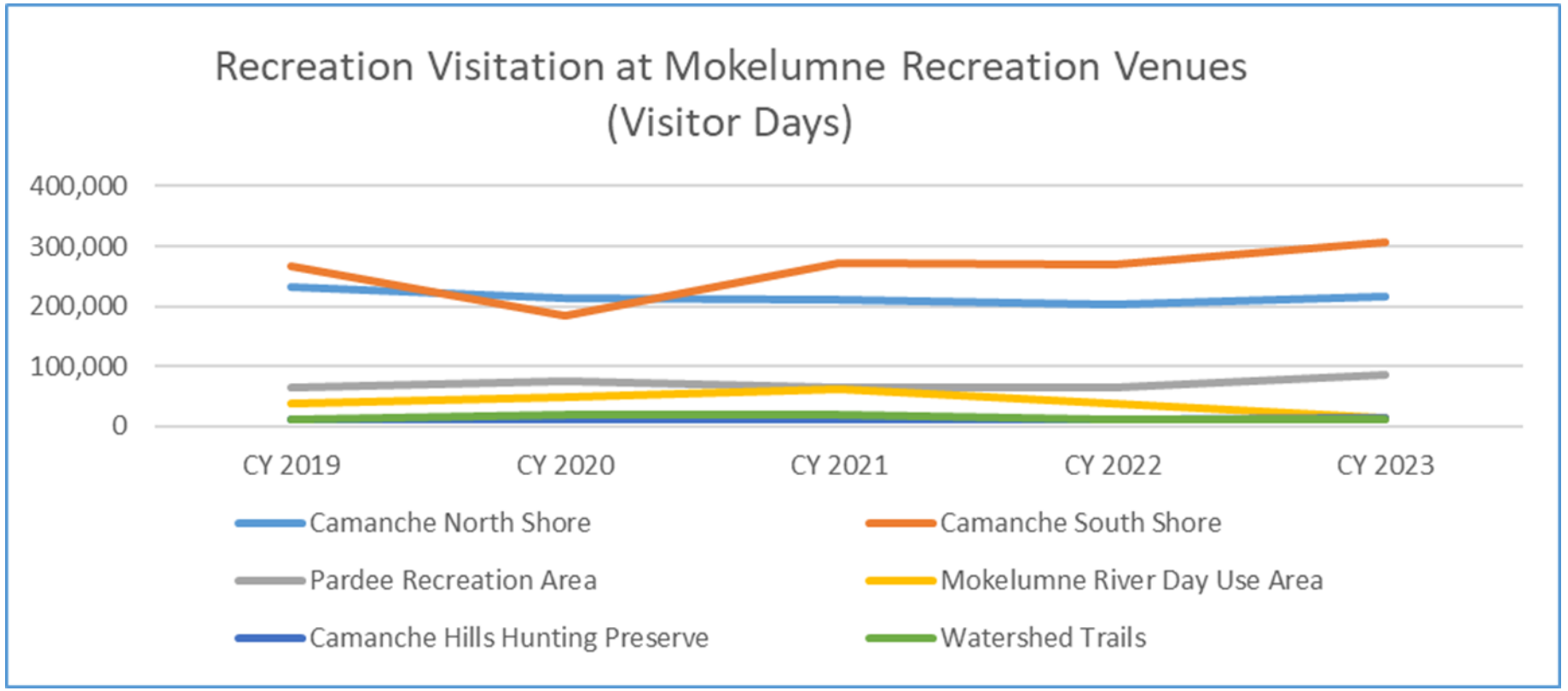
Trail Permits for Low-Income Visitors

- Pilot to improve trail access to low-income customers
- In July 2023, staff implemented a self-certified, low-income waiver for one-year permits
- Staff will continue to implement approaches to remove barriers to under-represented communities

Mokelumne Watershed Recreation

- Four developed Recreation Areas plus over 35 miles of trails
- More than 600,000 visitors in a typical year
- Implementing Mokelumne Watershed Recreation Management Plan

Mokelumne Recreation Visitation



Mokelumne River Day Use Area

Mokelumne River Day Use Area,
San Joaquin Co.
High Flows below Camanche
Dam March 2023

Camanche Kid's Fishing Day

Trout Pond, Camanche South Shore Recreation Area - April 2023

Watershed Storm Damage Repair

Middle Bar, Pardee Watershed Road Repair
October 2023

John Bull Prescribed Burn

Vegetation Management Burn, Pardee Watershed
June 2023

Questions?

Sunrise at San Pablo Reservoir