Laguna Creek Diversion Retrofit Project

Public Information Meeting for the Draft Environmental Impact Report

OCTOBER 14, 2020

Slides and Project Documents at:
http://cityofsantacruz.com/waterenvdocs

CITY OF SANTA CRUZ
Water Department

How to Join the Meeting

- Zoom
  - https://zoom.us/j/94573831838
- Telephone
  - Call any of the following:
    - 1-669-900-9128
    - 1-253-215-8782
    - 1-346-248-7799
    - 1-877-853-5247 (Toll Free)
  - Meeting ID: 945 7383 1838
  - Participant ID: #
- Facebook Live
  - https://www.facebook.com/SantaCruzWaterDepartment

Meeting Agenda

- Introductions and Meeting Purpose
- CEQA Environmental Review Process
- Water System Overview
- Background and Purpose & Need
- Proposed Project Evaluated in the Draft EIR
- Draft EIR Findings
- Alternatives Considered in the Draft EIR
- How to Provide Comments

Introductions

CITY OF SANTA CRUZ
Water Department

Jessica Martinez-McKinney

DUDEK

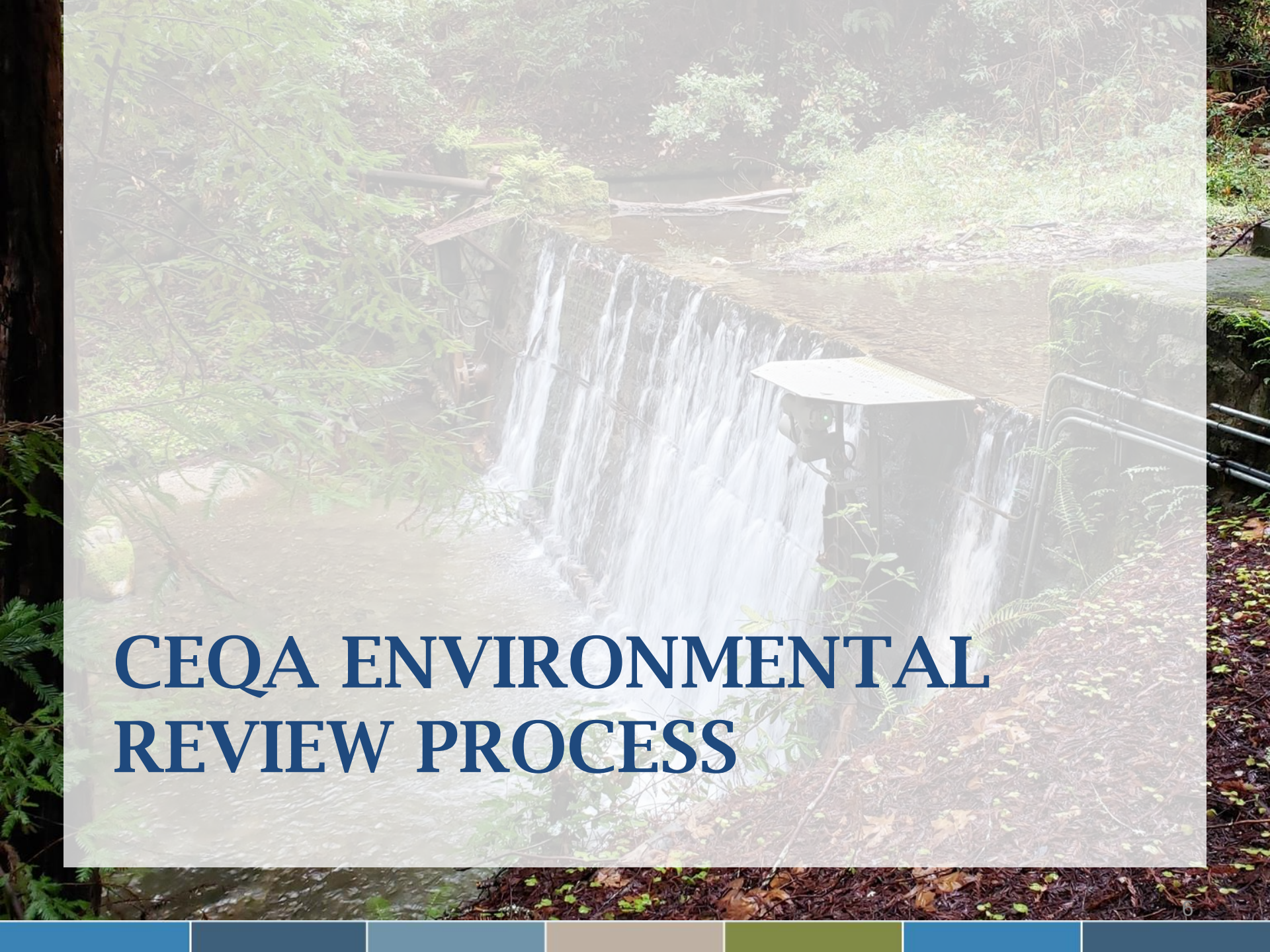
Ann Sansevero

Hannah Young

Catherine Wade

Meeting Purpose

- Inform the community and agencies about the Proposed Project
- Inform the community and agencies about the environmental review process and Draft EIR findings
- Inform the community about how to submit comments on the Draft EIR



CEQA ENVIRONMENTAL REVIEW PROCESS

California Environmental Quality Act (1970) (CEQA)

- Applies to "projects"
  - A **discretionary action** by a **public agency** which has the potential to result in a **physical change in the environment**, either **directly** or **indirectly**
- Purposes
  - Evaluate and disclose physical environmental effects of a project
  - If needed, identify mitigation measures to avoid or minimize significant environmental effects
  - Foster informed public decision making
  - Ensure transparency in governmental decision making process
  - Encourage public participation
- CEQA Lead Agency – City of Santa Cruz
  - City Council is decision-making body

EIR Process per CEQA

Notice of Preparation
March 2020

Public comment period (30 days)
Public scoping meeting
March 16 – April 15, 2020

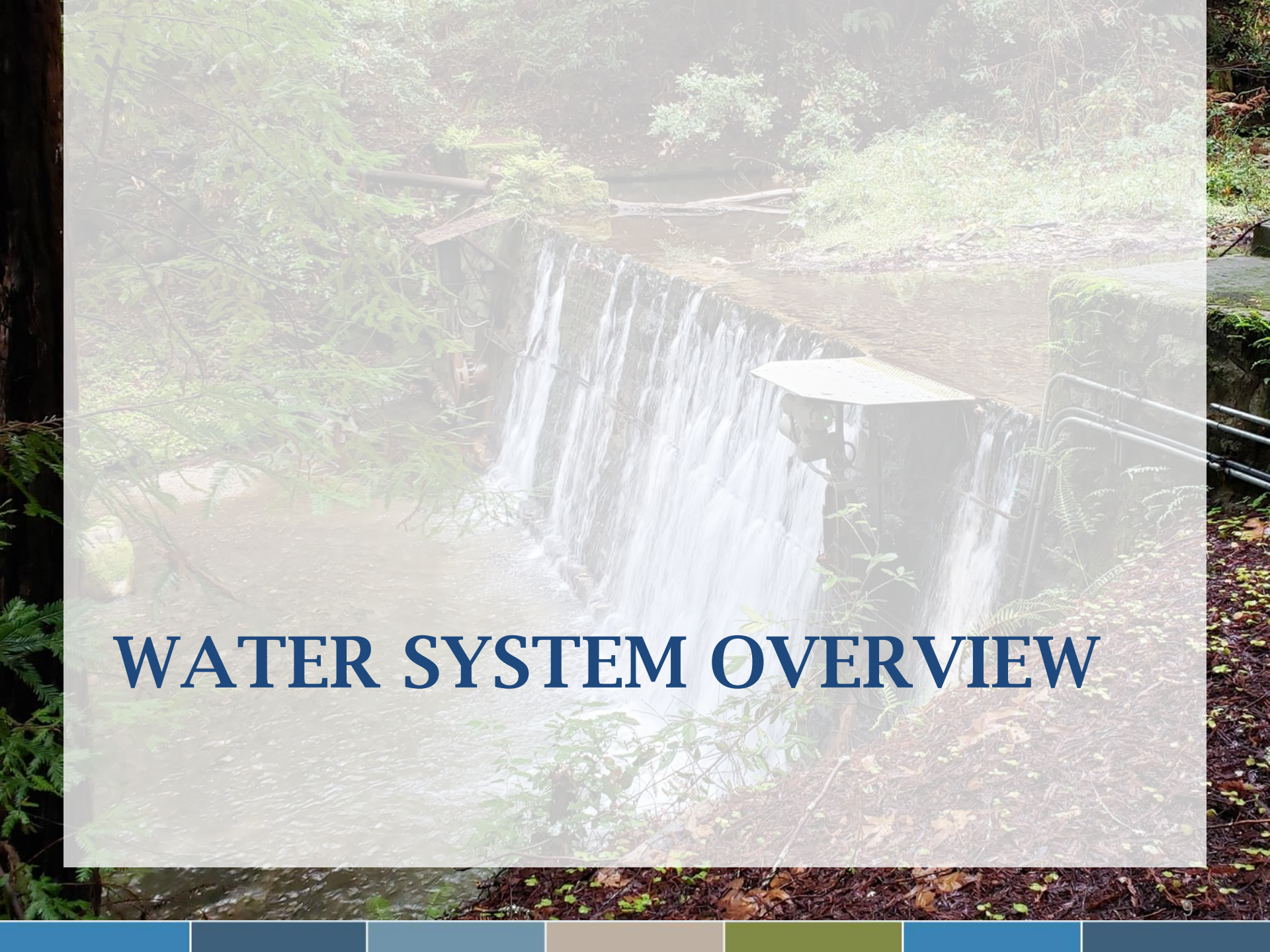
Prepare Draft EIR

Publish Draft EIR for Public Review
September 2020

Public review period (45 days)
September 18 – November 2, 2020

Prepare Final EIR including Responses to Comments on Draft EIR

Certify Final EIR, Render Decision on Project, and File Notice of Determination
Early 2021



WATER SYSTEM OVERVIEW

Water System – Areas Served

Areas Served

- City of Santa Cruz
- Parts of County
- Parts of Capitola

Population

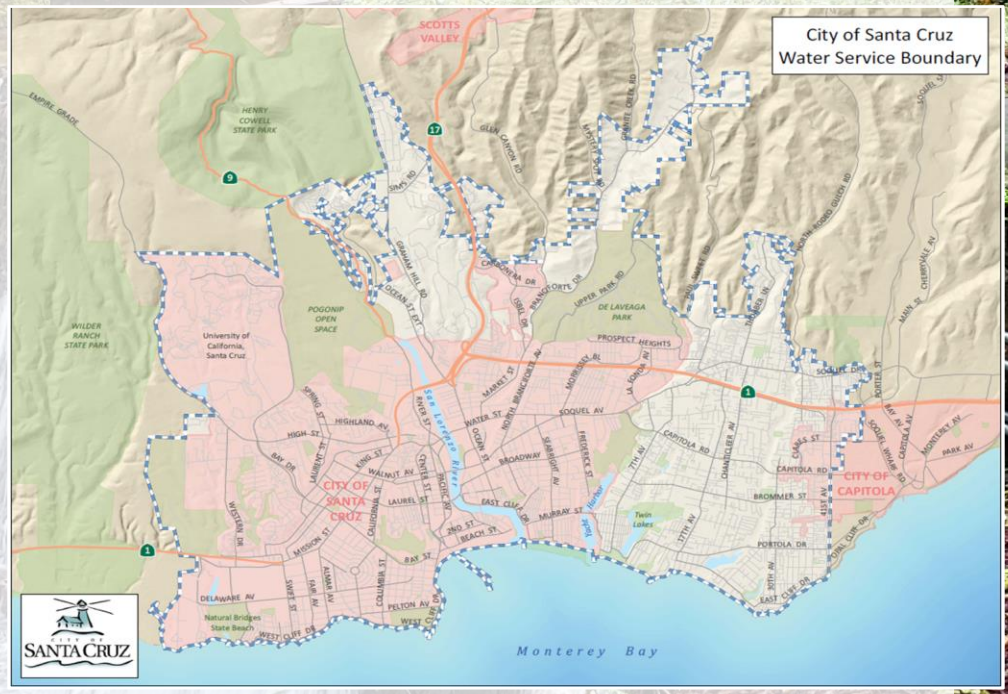
- Over 98,000 residents

Governing Body

- City Council

Average Water Production

- 5-7 million gallons per day in winter
- 7-10 million gallons per day in summer



Water System - Major Supply Facilities

Treatment Facilities

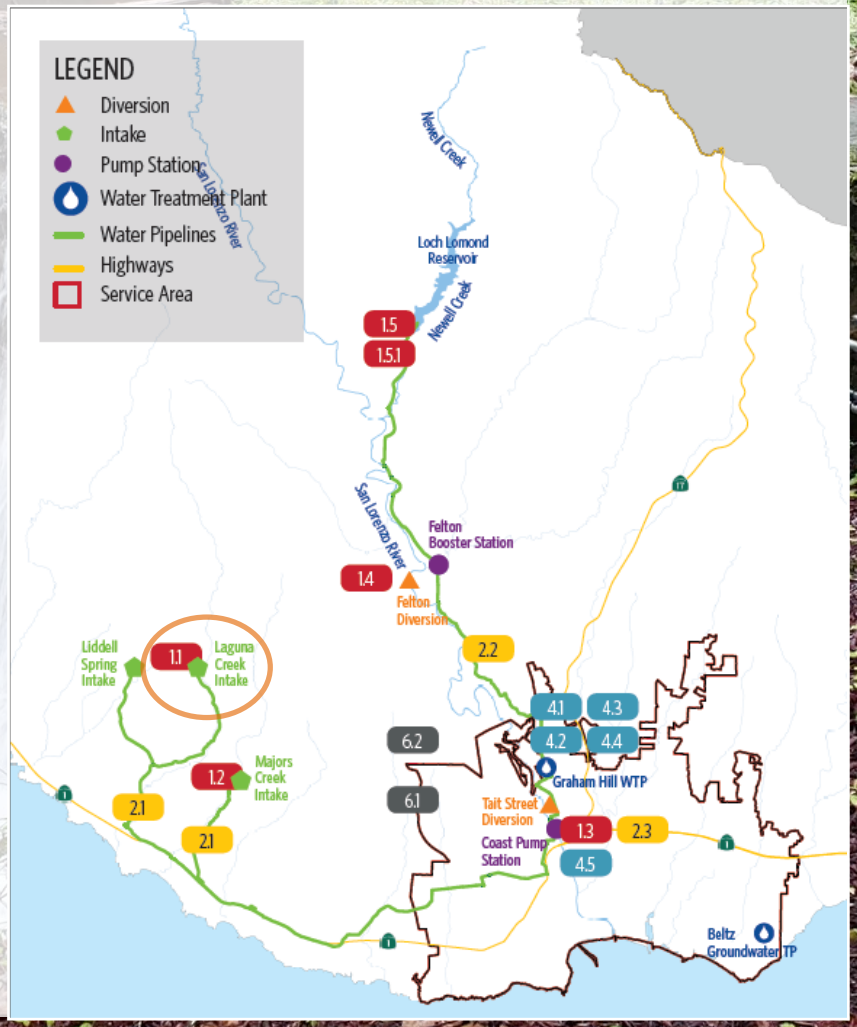
- Graham Hill Water Treatment Plant
- Beltz Wells Treatment Plants

Raw Water Conveyances

- Newell Creek Pipeline
- North Coast Pipeline

Water Sources

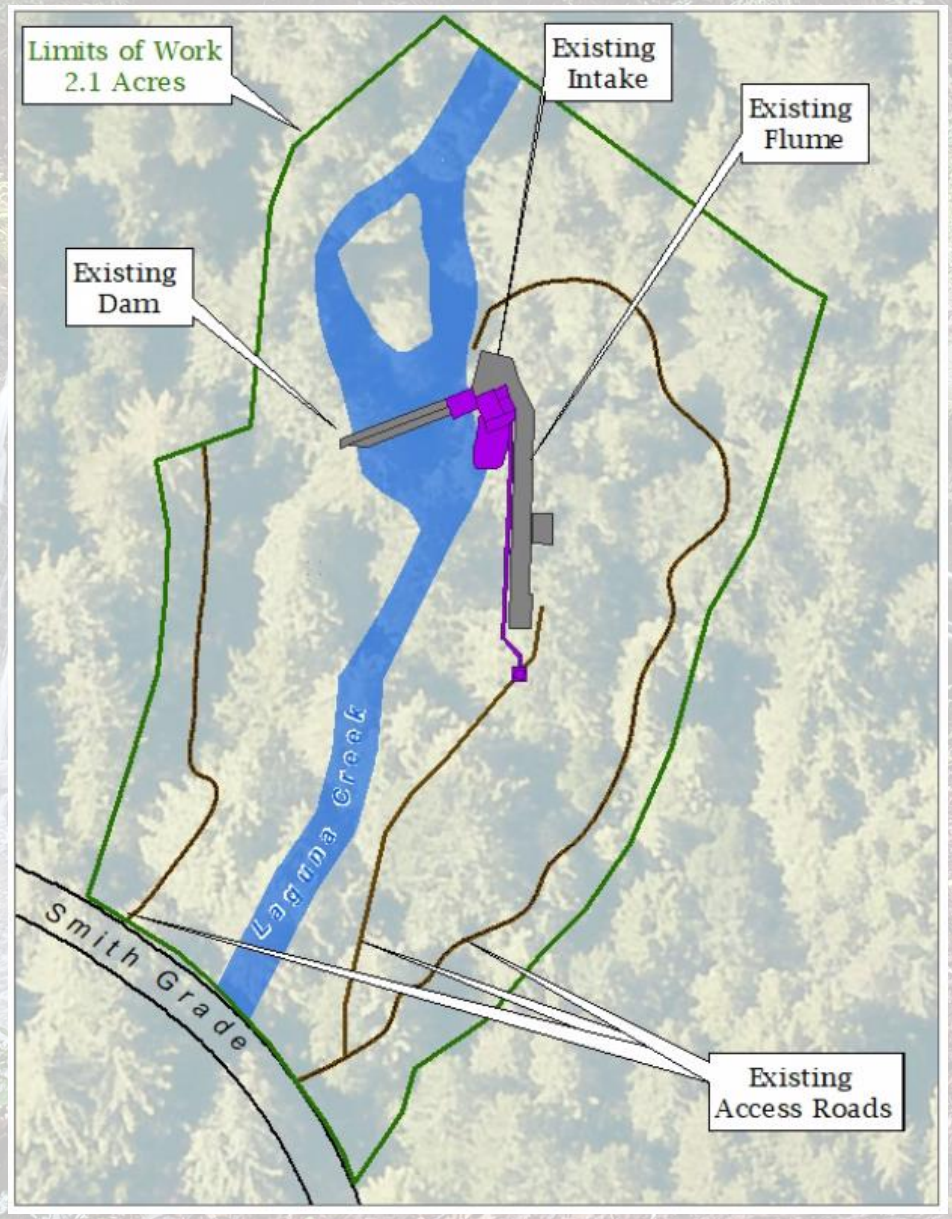
- Loch Lomond Reservoir
- San Lorenzo River
  - Felton Diversion, Tait St. Diversion, Tait St. Wells
- North Coast Intakes
  - Liddell Spring, Laguna Creek, Reggiardo Creek, Majors Creek, Beltz Wells



BACKGROUND AND PURPOSE & NEED

Project Location

- Community of Bonny Doon in unincorporated Santa Cruz County
- Located off of Smith Grade
- Accessed via existing access roads
- Just upstream of confluence with Reggiardo Creek



Laguna Creek System

- Laguna Creek is a perennial, cold water stream with populations of steelhead and resident trout; coho salmon; tidewater goby, CA Red-Legged Frog; CA newts and CA giant salamanders
- Diversion is above the limit of anadromy for steelhead and coho salmon.
- Project area vegetation is predominately redwood forest.
- Watershed vegetation is diverse including mixed deciduous forest, grassland, sandy-soil chaparral, and cultivated lands.
- Karst features formed in local marble formations create hydrologic connectivity within the watershed and with the Liddell watershed.

Source: Hagar, Bean, and Berry 2017 North Coast Streams Limit of Anadromy

Existing Facility

- 12-foot-high concrete and limestone dam
- Intake structure and debris screen
- Two debris/sediment control bypasses with pneumatically operated gate valves
- Electronic diversion control valve and control building
- 105-linear-foot flume
- Steel 14-inch pipeline

Existing Facility

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Post-CZU Fire Facility Conditions

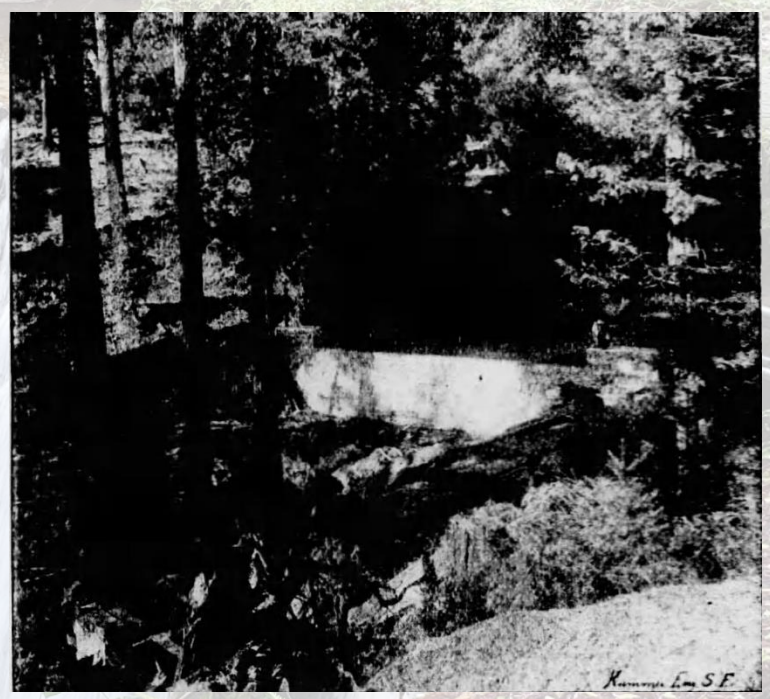
- Fire was stopped uphill of the access road on the west side of the creek
- No impact to project access roads, staging areas, diversion, flume, or control building
- ~1/3 miles upstream of intake the fire crossed on both sides of Laguna Creek and was stopped with a hand line ~3-4 feet wide
- Low-moderate burn severity around the project site

Historic Laguna Creek Dam

- In the late 1800s acute cyclical **water shortages and pollution** prompted the development of private for-profit water systems by entrepreneurs.
- **Rising costs** prompted the City to explore its own **public option**.
- After a failed attempt to purchase a private water system the **City acquired its own water rights on Laguna Creek** and construction of the dam completed in 1890

The dam across Laguna Creek just above the Henneuse place is one of the finest pieces of rubble stone work in the county and not to be excelled anywhere. The granite rocks used in its construction were taken from the bed of the creek, some of them weighing as much as two tons.
Santa Cruz Surf, 1890

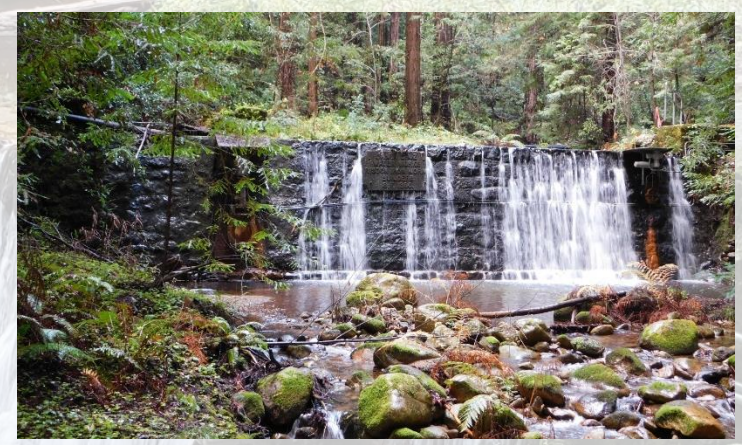
Without doubt Santa Cruz is the best watered, as well as the best lighted, town on the Pacific Coast. She owns her own water supply and electric light works. The water system especially is a matter of great local pride, and, "naturally enough, those connected with it take great pleasure in exhibiting it.
Harrison's History of Santa Cruz County, 1892



The earliest known photograph of the Laguna Creek Dam published in the *Santa Cruz Surf* in 1892

Historic Laguna Creek Dam

- Well-preserved physical example of pioneering water management infrastructure in California
- **Eligible for listing** on the National Register of Historic Places, California Register of Historical Resources, and Santa Cruz County Historic Resources Inventory
- **Considered a historic property** under Section 106 of the National Historic Preservation Act and a historical resource under CEQA
- Historic resource is the dam structure and does not include other features of the Facility



Background

- City maintains beneficial bypass flows for coho and steelhead.
- Critical asset – has best water quality of our sources.
- Other than minor improvements the diversion facility has remained unchanged for 130 years.
- As early as 1897 a buildup of sediment upstream from the dam has caused the water level to stand flush with dam crest

The crest of the Laguna Creek Dam (red arrow) submerged in impounded water and sediment (yellow arrow),

- Periodic dredging and the addition of sediment bypass valves have been added to address the sediment buildup issue.
- Regulatory needs have evolved overtime; Aged screens are not consistent with current fish protection regulations.

PROPOSED PROJECT EVALUATED IN THE DRAFT EIR

Project Objectives

LAGUNA CREEK
Sedimentation behind dam

1. **Protect a critical water supply** for the City by addressing constraints at the Facility to maintain full system functionality and minimize service interruptions.

2. **Improve environmental conditions** at both the intake with upgraded screen technology for fish protection and in downstream reaches by facilitating sediment movement to support aquatic species habitat.

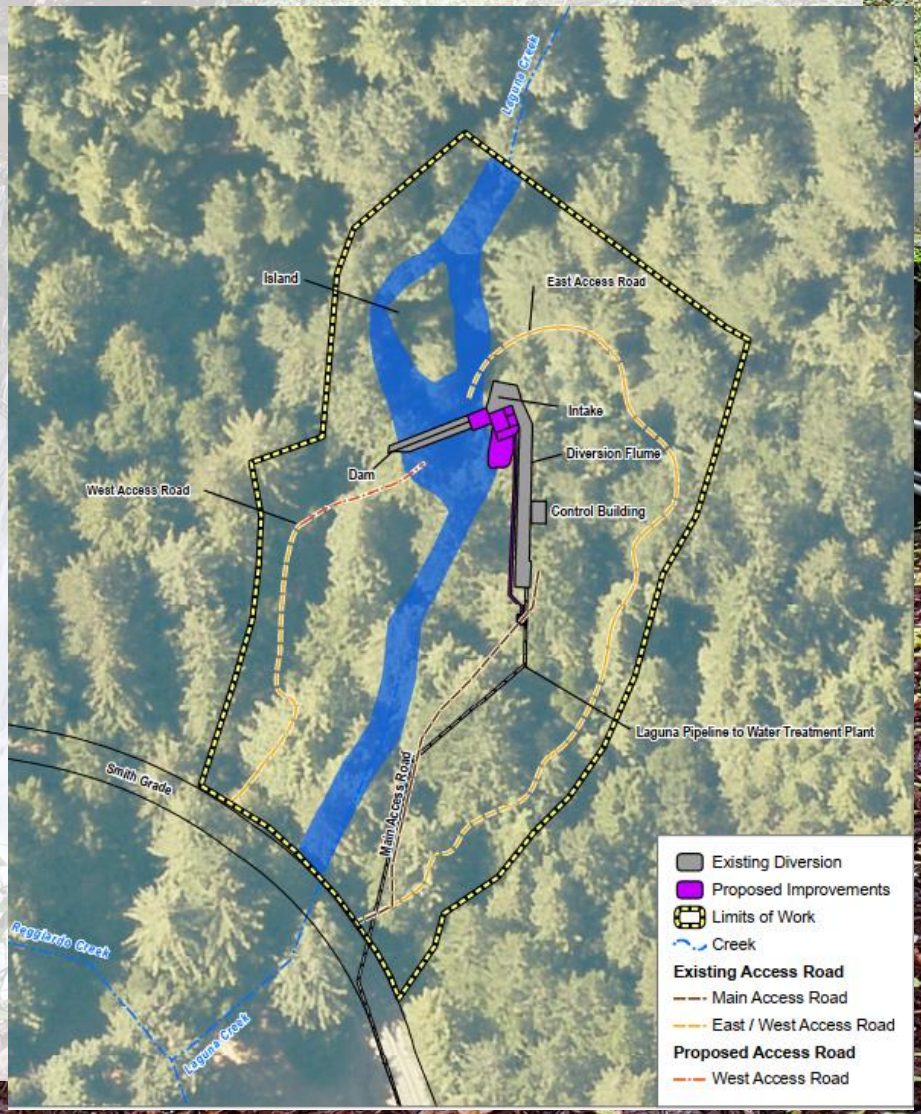
3. **Improve overall operational efficiency** by incorporating technology that allows for fine-tuned control of diversion rates to enhance the SCWD's ability to meet instream flow requirements and regulation of water levels downstream of the Facility.

4. **Improve safety and access** at the Facility to facilitate the City's ability to maintain the Facility and conduct operational activities.

5. Implement a project that is **relatively cost-effective** in terms of both capital and operation/maintenance costs.

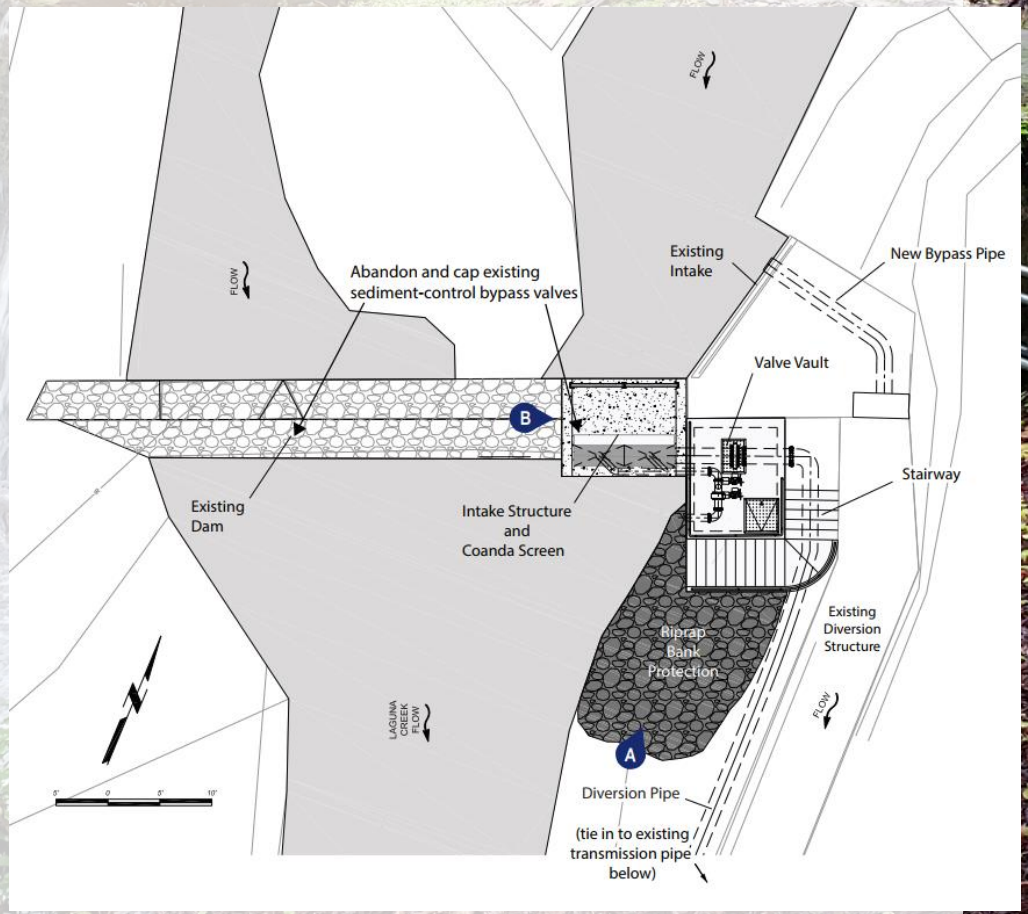
Proposed Project

- Retrofit existing Facility
- New intake and related structures



Major Project Elements

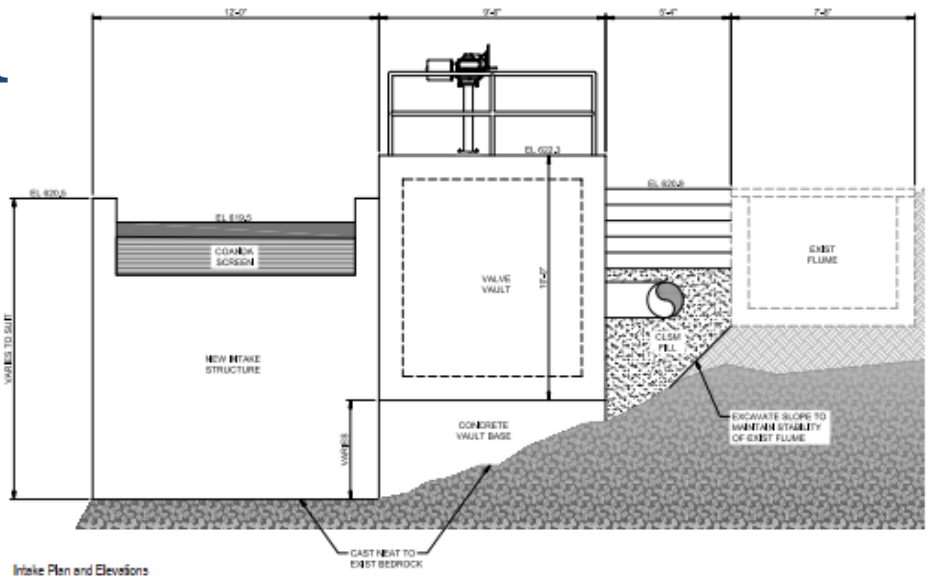
- New intake structure and screen
  - Coanda screen technology
- New appurtenances
  - Control valves, diversion, bypass piping system
- New valve control vault
- Streambank armoring
- New monitoring and control equipment
- Existing intake and sediment control bypass valves
- New access and safety provisions



Coanda Screen

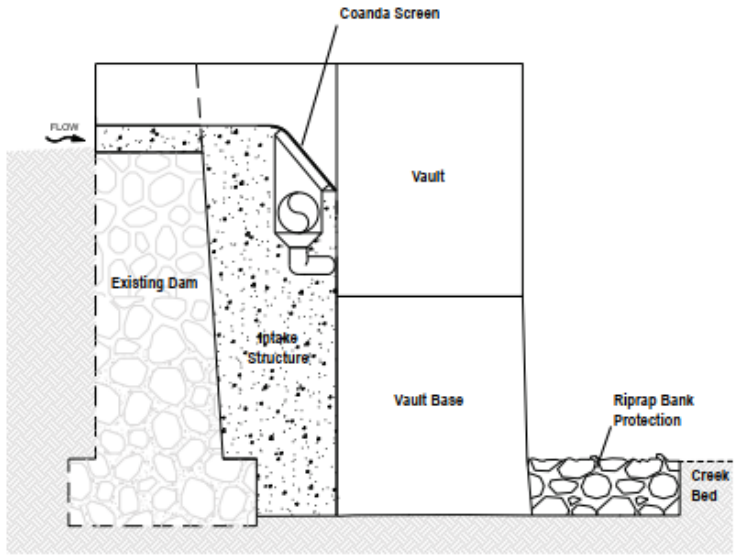
- Install a new Coanda screen intake within a recessed notch in the dam

- Benefits
  - Self-cleaning, no moving parts, no power needed, instream bypass flows easily accommodated
  - Dam always allows sediment transport
  - Provides some screening of material



Intake Plan and Elevations
from Figure 3-5

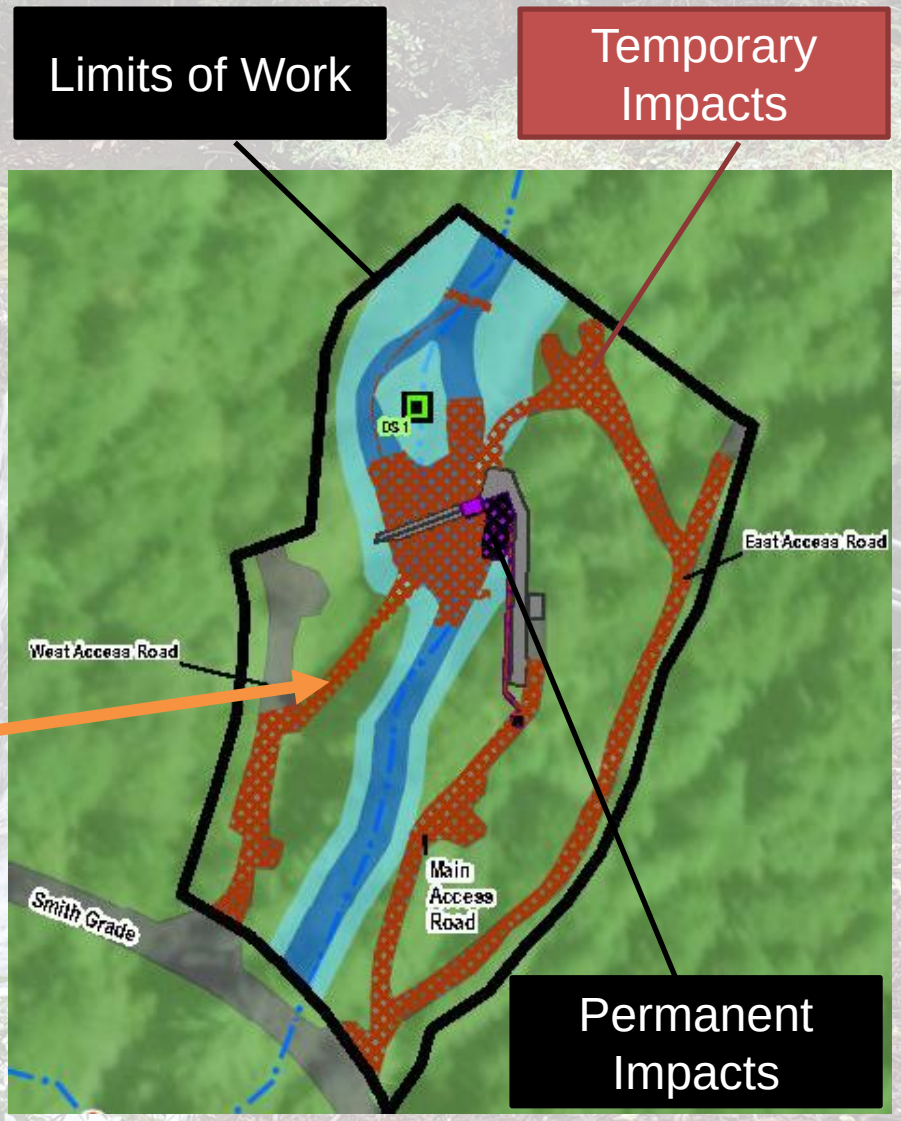
(Dimensions are approximate.)



Proposed Facility Improvements (Cross-section)
from Figure 3-5

Construction

- 2-3 months during 2021 dry season
- Activities would include
  - Construction of a temporary spur road to access creek channel
  - Construction of a cofferdam and stream flow bypass system
  - Minor grading, contouring, and streambank armoring
  - Limited tree removal



Standard Construction Practices

- Erosion Control and Air Quality Control
- Water Quality Protection
- In-Channel Work and Fish Species Protection
- General Habitat Protection
- Dewatering
- Other Practices
- Project-Specific Practices for Biological Resources
- Project-Specific Practices for Cultural Resources
- Project-Specific Practices for Wildfire Hazards

Operations and Maintenance

- Improvements
  - Sediment no longer obstruct intake and routine excavation no longer required
  - New controls for diversion rates
  - New stairs, railings, and emergency lighting to improve access and safety
- Similar to existing conditions
  - Weekly station checks
  - Biweekly raw water sampling
  - Monthly cleaning, inspections, testing, and maintenance
  - Annual inspections
  - Road maintenance every 5 years
- No change in rate of diversion or downstream flows

Permitting

- USACE Section 404 CWA
  - ESA Section 7 consultation with USFWS on CA red-legged frog
  - NHPA Section 106
- RWQCB Section 401 Water Quality Certification
- CDFW 1602 Lake or Streambed Alteration Agreement
- County of Santa Cruz
  - Coastal Development Permit
- CAL FIRE Minor Conversion Permit Exemption
- Other approvals as necessary

DRAFT EIR FINDINGS

Analysis of Construction and Operational Impacts

- The Draft EIR identified:
  - Several potentially significant impacts from construction
  - No impacts or less-than-significant impacts related to operations and maintenance

Less-than-Significant Impacts

- The Draft EIR identified less-than-significant impacts to:
  - Aesthetics
  - Agriculture and Forestry Resources
  - Air Quality
  - Biological Resources (specifically: wildlife corridors, policy conflicts)
  - Energy
  - Geology and Soils (specifically: seismic and soils hazards)
  - Greenhouse Gas Emissions
  - Hazards and Hazardous Materials
  - Hydrology and Water Quality
  - Land Use and Planning
  - Public Services
  - Transportation
  - Utilities and Service Systems
  - Wildfire
  - Cumulative Impacts

Potentially Significant Impacts

- All potentially significant impacts could be reduced to less than significant with mitigation
  - Biological Resources
  - Cultural Resources
  - Geology and Soils
  - Noise and Vibration

Mitigated Impacts – Biological Resources

- **Special-Status Species.** Potential adverse effect on special-status species during construction

- Mitigation Measures
  - MM BIO-1a: Conduct Worker Environmental Awareness Training
  - MM BIO-1b: Conduct Special-Status Amphibian Species Survey and Monitoring
  - MM BIO-1c: Conduct San Francisco Dusky-Footed Woodrat Survey and Relocation
  - MM BIO-1d: Conduct Preconstruction Nesting Bird and Roosting Bat Survey

Mitigated Impacts – Biological Resources

- **Sensitive Vegetation Communities.** Potential substantial adverse effect on the redwood forest alliance vegetation community during construction

- Mitigation Measures
  - MM BIO-2: Compensate for Impacts to Sensitive Vegetation Communities

Mitigated Impacts – Biological Resources

- **Jurisdictional Wetlands and Waters.** Potential substantial adverse effect on jurisdictional non-wetland waters during construction

- Mitigation Measures
  - MM-BIO-3: Compensate for Impacts to Jurisdictional Non-Wetland Waters

Mitigated Impacts – Cultural Resources

- **Historical Resources.** Cause a substantial adverse change in the significance of the Laguna Creek Dam, which is a historical resource, due to modifications of the Facility

- Mitigation Measures
  - MM NOI-2: Construction Vibration Effects on Historic Structures

Mitigated Impacts – Cultural Resources

- **Archaeological Resources.** Cause a substantial adverse change in the significance of an archaeological resource during construction

- Mitigation Measures
  - MM CUL-2: Unanticipated Discovery of Archaeological Resources

Mitigated Impacts – Cultural Resources

- **Human Remains.** Inadvertently disturb human remains during construction

- Mitigation Measures
  - MM CUL-3: Unanticipated Discovery of Human Remains

Mitigated Impacts – Cultural Resources

- **Tribal Cultural Resources.** Cause a substantial adverse change in the significance of a tribal cultural resource during construction

- Mitigation Measures
  - MM CUL-2: Unanticipated Discovery of Archaeological Resources
  - MM CUL-3: Unanticipated Discovery of Human Remains

Mitigated Impacts – Geology and Soils

- **Paleontological Resources.** Potentially directly or indirectly destroy a unique paleontological resource or site during construction

- Mitigation Measures
  - MM GEO-4: Paleontological Resources Impact Mitigation Program and Paleontological Monitoring

Mitigated Impacts – Noise and Vibration

- **Substantial Increase in Ambient Noise Levels.** Result in substantial temporary increase in ambient noise levels during construction

- Mitigation Measures
  - MM NOI-1: Construction Noise

Mitigated Impacts – Noise and Vibration

- **Groundborne Vibration.** Potential generation of excessive groundborne vibration or groundborne noise levels during construction

- Mitigation Measures
  - MM NOI-2: Construction Vibration Effects on Historic Structures

ALTERNATIVES CONSIDERED IN THE DRAFT EIR

Alternatives Evaluated

- Alternatives considered and eliminated from further evaluation

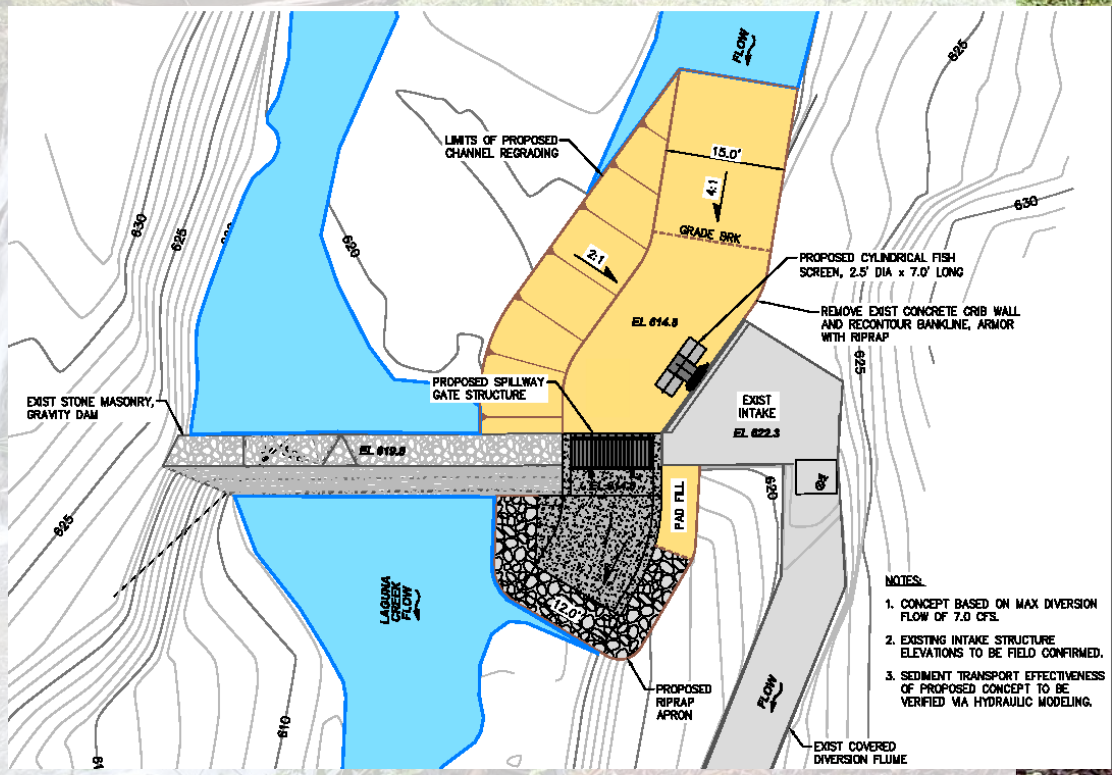
- Three alternatives evaluated in the Draft EIR:
  - No Project Alternative
  - Alternative 1: Spillway Gate and Fish Screen
  - Alternative 2: Plate Screen with Brush

No Project Alternative

- Facility would continue to operate under existing conditions through expiration of Section 1602 permit at the end of 2021
- After permit expiration, City would no longer manage sediment and intake would become blocked or creek channel would migrate away from intake, and Facility would become inoperable
- Construction-related impacts would not occur
- Loss of Facility function would cause a substantial adverse change in the dam's historical significance (significant and unavoidable impact)
- Ability to meet project objectives: Poor

Alternative 1: Spillway Gate and Fish Screen

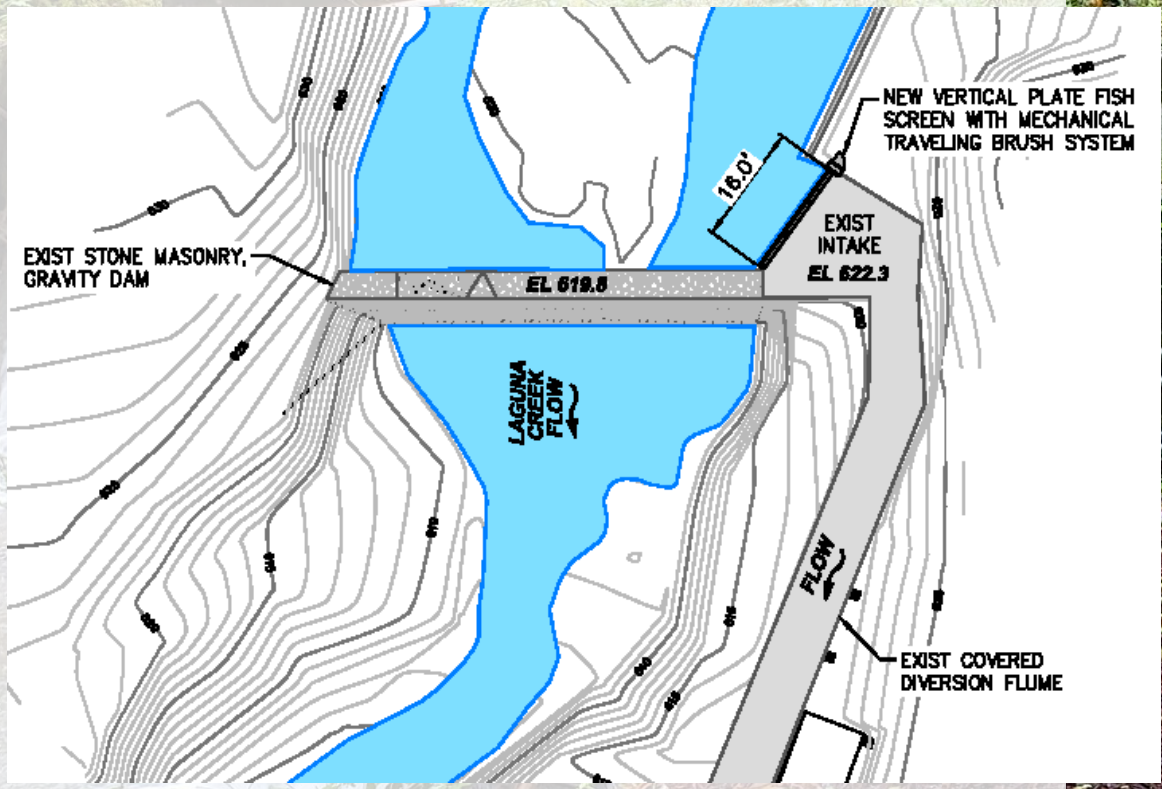
- Cylindrical fish screen at existing intake compliant with fish protection regulations
- Notch dam and install spillway gate with spillway chute
- Riprap protection along base of spillway and bank
- Longer construction duration and larger footprint resulting in greater magnitude impacts
- Substantial adverse change in the dam's historical significance (significant and unavoidable impact)
- Operation require increased maintenance/energy use



- Ability to meet project objectives: Moderate to good

Alternative 2: Plate Screen with Brush

- Replace intake screen with new vertical plate screen compliant with fish protection regulations
- Automated mechanical traveling brush system to keep screen clear of excess sediment
- Shorter construction duration and smaller footprint would result in impacts of lesser magnitude
- Diversion capability would be reduced by half
- Ability to meet project objectives: Moderate to poor



HOW TO PROVIDE COMMENTS ON THE DRAFT EIR

Draft EIR Review

- A Notice of Availability (NOA) has been released to announce that a Draft EIR has been prepared and is available for public review.

- Online review at:
  - http://www.cityofsantacruz.com/waterenvdocs
  - https://catalog.santacruzpl.org/polaris/

- Hard copy review available by appointment at:
  - City of Santa Cruz Water Department Engineering Counter (212 Locust Street, Suite C in Santa Cruz)
  - Please email waterengineering@cityofsantacruz.com or call (831) 420-5210 to schedule an appointment

How to Provide Comments

After reviewing the Draft EIR, we invite your written comments on:

- Adequacy of the document in identifying and analyzing impacts
- Ways in which significant impacts might be avoided or mitigated
- Additional specific mitigation measures or alternatives

How to Provide Comments

All written comments are requested to be received by **5:00 p.m. on Monday, November 2, 2020,** and should be sent to the following address:

Jessica Martinez-McKinney
Associate Planner II
City of Santa Cruz Water Department
212 Locust Street, Suite C
Santa Cruz, CA 95060

Email: jmartinezmckinney@cityofsantacruz.com

(subject line of emails: "Laguna Draft EIR Comments")

Project Schedule

- CEQA scoping
  - March-April 2020
  - ***Public comment period (30 days)***
- Draft EIR public review
  - September-November 2020
  - ***Public review period (45 days)***
- Final EIR
  - Early 2021
- City Council certification of EIR and consideration of project approval
  - February 2021
- Permitting and construction procurement completed
  - February 2021
- Construction
  - July-September 2021

Brief Q&A about CEQA Environmental Review Process

Please type your questions in the Q&A box

or

*to request to speak, please press "raise hand" or "*9"*

Provided by DUDEK