

**\*Handout 2.9-A**  
**11/09/2021**



# **Delta Conveyance Project Update**

## **Valley Water Board Meeting | Item 2.9**

**Graham Bradner, DCA Executive Director**

**Carrie Buckman, DWR Environmental Manager**

*November 9, 2021*

[WWW.WATER.CA.GOV/DELTA CONVEYANCE](http://WWW.WATER.CA.GOV/DELTA CONVEYANCE) | [DCDCA.ORG](http://DCDCA.ORG)



**DCA**

# Agenda

- 1. DCP Introduction**
- 2. DCA Engineering Update**
- 3. DWR Planning Update**



# New Normal Reinforces Need to Modernize Delta Conveyance



- Less snow and more rain expected over shorter and less predictable durations
- Frequent drought and flood cycles expected
- Our goal: capture water when it is available to potentially store for later use and drought
- Adding diversions—creating flexibility—promotes a more resilient and flexible State Water Project in the face of unstable future conditions



# Time to Modernize Now - Risks are Mounting

## Purpose

- Modernize the aging SWP infrastructure in the Delta to restore and protect the reliability of SWP water deliveries in a cost-effective manner, consistent with the State's Water Resilience Portfolio.

## Objectives

- **Address** sea level rise and climate change
- **Minimize** water supply disruption due to seismic risk
- **Protect** water supply reliability
- **Provide** operational flexibility to improve aquatic conditions



GRAHAM BRADNER, DCA EXECUTIVE DIRECTOR

# DCA Engineering Update



# Delta Conveyance – Engineering Summary

## Three Alignments

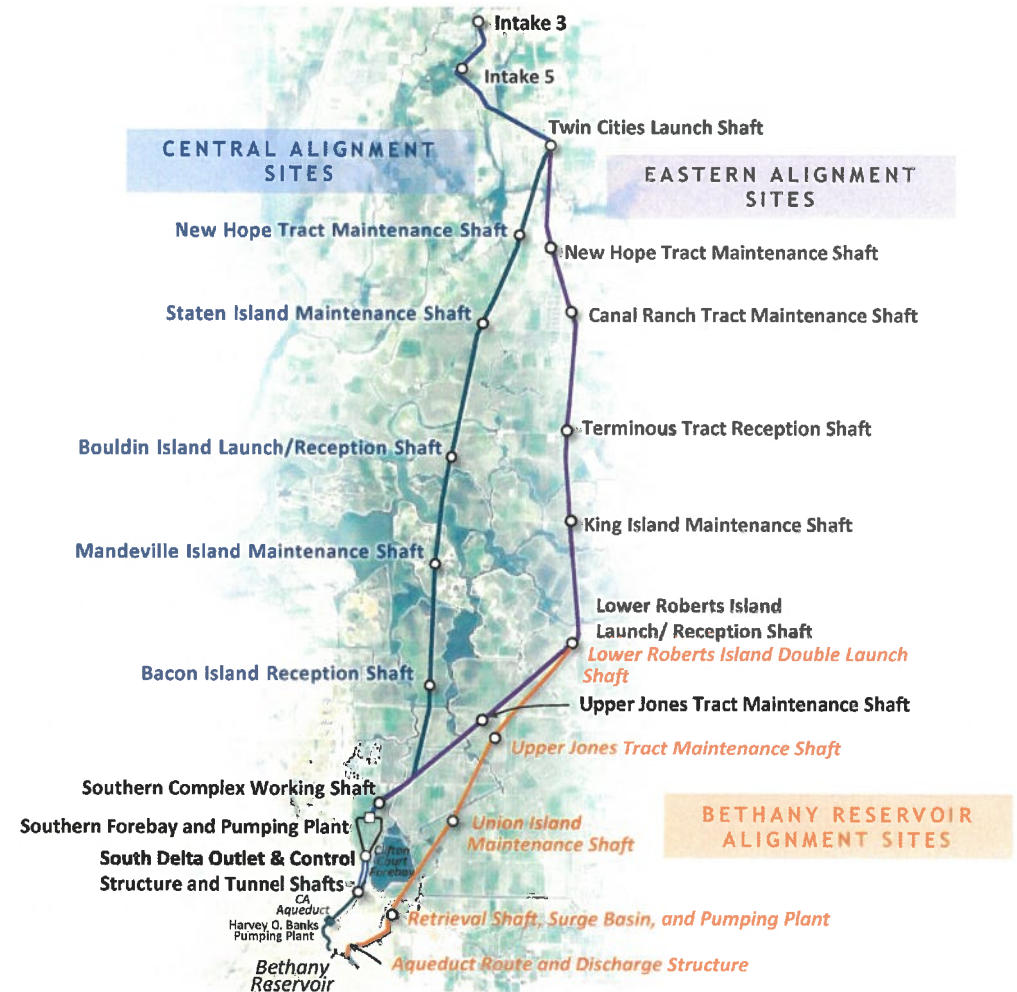
- Central
- Eastern
- Bethany

## Two Engineering Project Reports

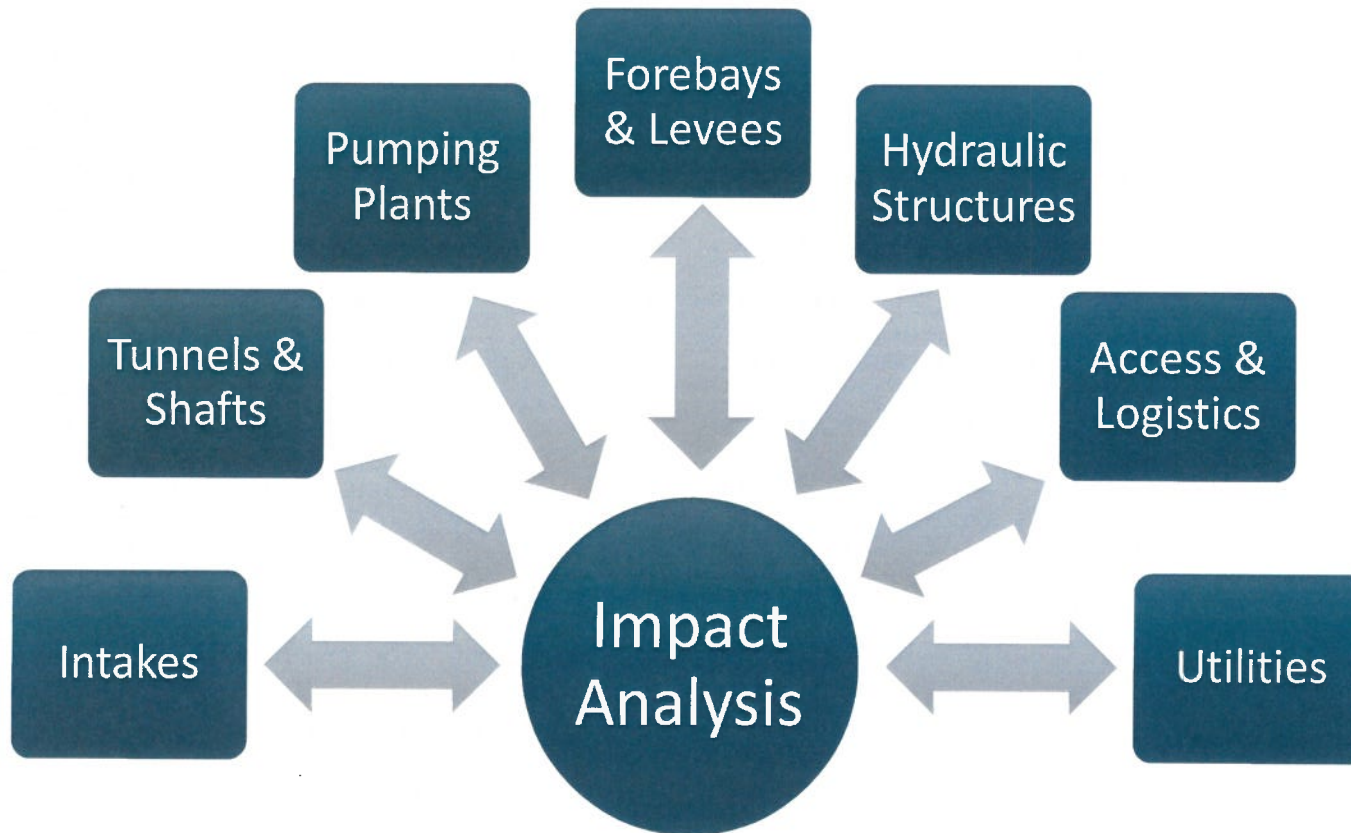
- Central/Eastern Corridors for Proposed Project
- Bethany Reservoir Alternative

## Four Capacity Options

- 3,000 cfs
- 4,500 cfs
- 6,000 cfs – Proposed Project
- 7,500 cfs



# Engineering Input for Impact Analysis

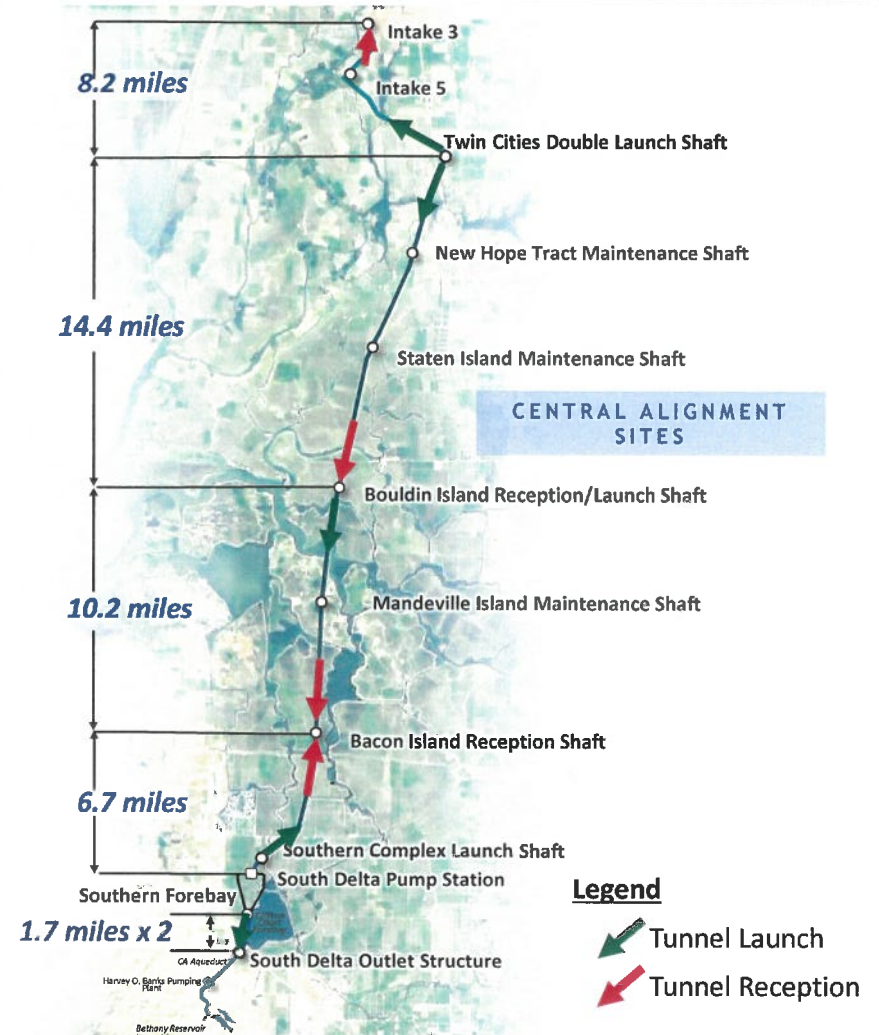


## Key Considerations

- Facility Siting
- Geotechnical Conditions
- Roads/Bridges/Rail
- Systemwide Soil Balance
- Reusable Tunnel Mat'l Management (RTM)
- Flood Risk Reduction
- On-site Concrete Batch Plants
- Power and Water
- SCADA/Comms

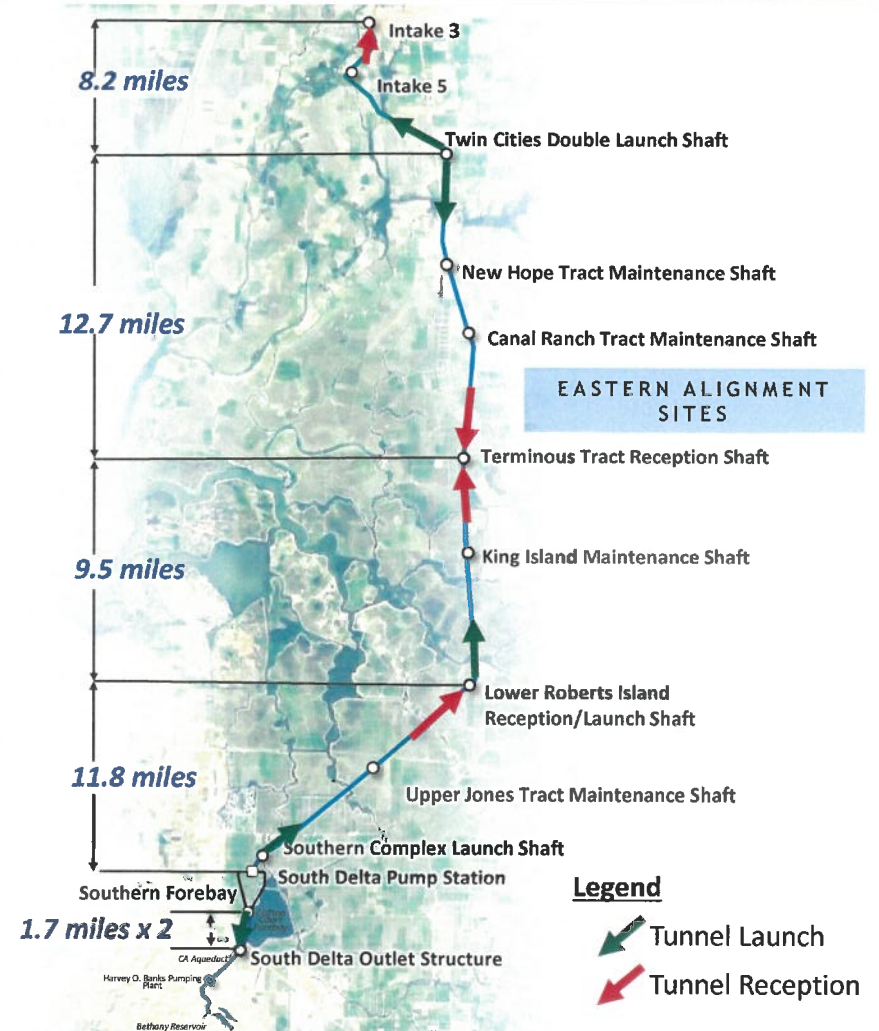
# Central Alignment

- Number of Intakes for all alternatives will vary depending on capacity; examples show 6,000 cfs configuration.
- 42.9 miles of tunnel (shortest of the 3 alignments).
- Consists of 3 Launch Shafts (1 double + 2 singles), 3 Maintenance Shafts, and 3 Reception Shafts (One Intake would become a reception shaft).
- Connects to the CA Aqueduct upstream of Harvey O. Banks Pumping Plant – connecting tunnels require added set of Launch and Reception Shafts from Southern Forebay.
- Connection to Central Valley Project for 7,500 cfs option requires additional tunnel to discharge into C.W. Bill Jones Pumping Plant approach canal.



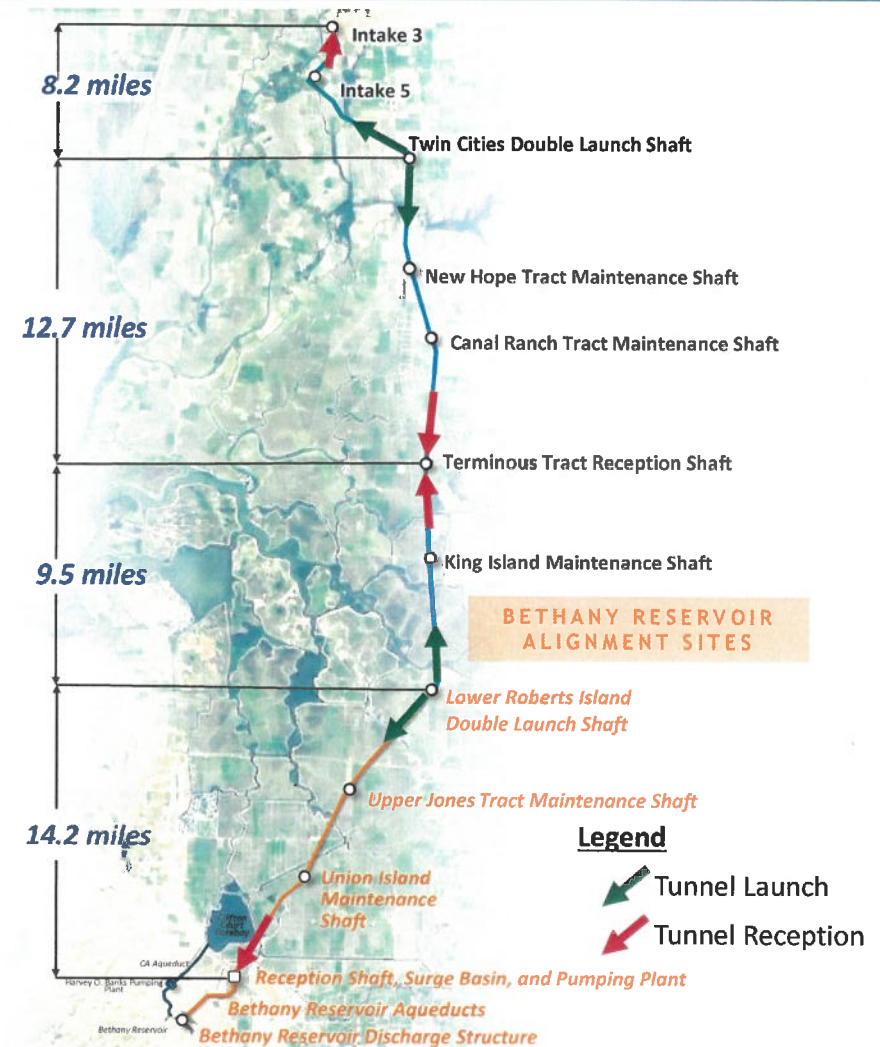
# Eastern Alignment

- Uses the same alignment as Central for the Northern Facilities and Southern Facilities for connection to CA Aqueduct and potentially to federal system.
- Alignment follows a route closer to eastern margin of the Delta; closer to I-5, higher ground elevations, better shallow ground conditions in some areas.
- 45.6 miles of tunnel (longest of the 3 alignments).
- Consists of 3 Launch Shafts (1 double + 2 singles), 4 Maintenance Shafts, and 3 Reception Shafts.



# Bethany Reservoir Alignment

- Uses the same Northern Facilities as Central/Eastern and follows Eastern Alignment to Lower Robert Island.
- Delivers water directly to Bethany Reservoir through new pumping plant and discharge structure.
- 44.6 miles of tunnel.
- Consists of 2 Launch Shafts (2 doubles), 5 Maintenance Shafts, and 3 Reception Shafts (including shaft at Surge Basin).
- Requires 3 miles of aqueduct pipelines (# of pipelines varies by capacity); additional pipeline also required for connection to Jones Pumping Plant approach channel for 7,500 cfs design option.



# Stakeholder Engagement Committee

## Purpose:

*Provide feedback to the DCA on engineering work with focus on reducing potential construction-related impacts.*

*Emphasis on facility siting, traffic affects, waterway affects, and land area/use affects.*

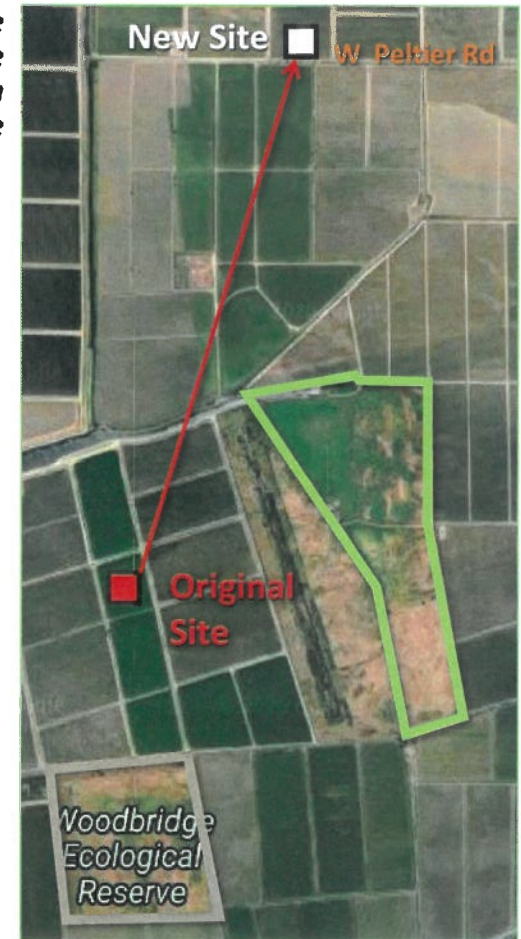
- 17 Committee Members
- Represent wide array of interests and geographies
- 19 Committee Meetings
- November 2019 thru December 2021
- Over 65 agendized presentations

# Incorporated Valuable Input

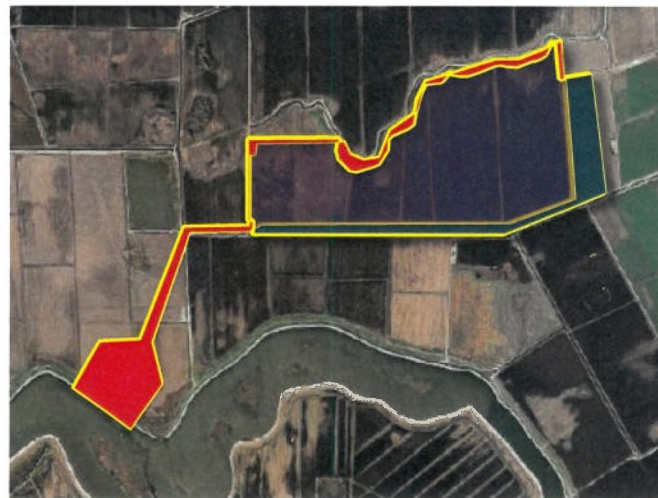
## Examples of Included Adjustments:

- Reduced site footprints throughout and maximized reclamation of impacted agricultural land
- Shifted facilities away from natural areas including Stone Lakes and Woodbridge Reserves
- Eliminated most barging and associated affects to recreational boating
- Added rail, expanded roads, or eliminated structures to maintain acceptable levels of service
- Reduced borrow and import requirements to reduce traffic loads
- Focus on “eco-friendly” tunnel conditions
- Reduced pile driving impacts at intakes by 80% through cofferdam re-design

*Moved shaft one mile from Woodbridge Reserve Boundary to Canal Ranch Maintenance Shaft Site*



*Eliminated the Barge Landing at Bouldin Island Launch Shaft Site*



## DCA Outreach and Engagement Next Steps

- DCA completed conceptual designs for DWR impact analyses – time to sunset the SEC
- Continue Outreach Efforts in the Delta
  - Local Community Engineering Briefings
  - Publication and Distribution of DCA Materials and Content
- Transition to DWR-led engagement consistent with CEQA



CARRIE BUCKMAN, DWR ENVIRONMENTAL MANAGER

# DWR Planning Update





# Current Project Schedule

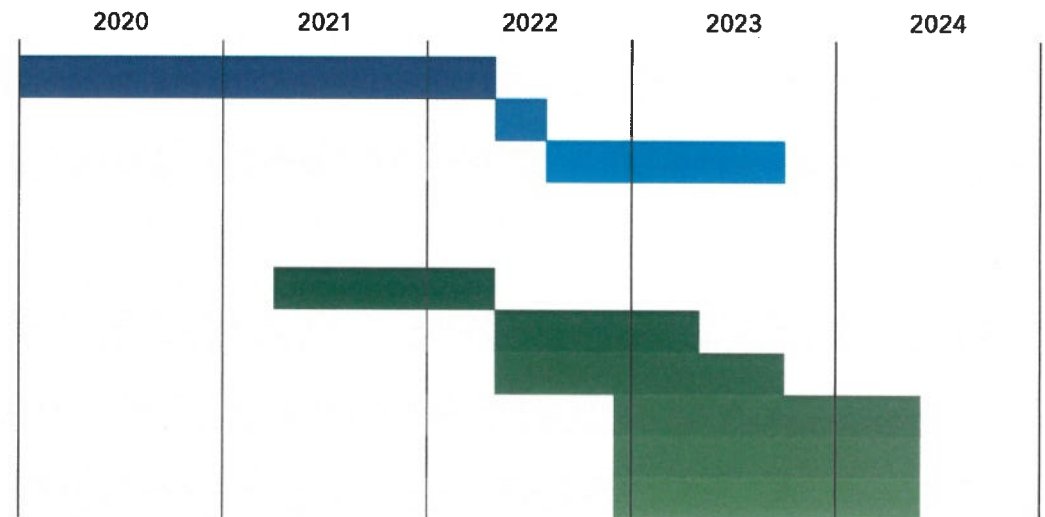
## Delta Conveyance Project Schedule

### CEQA/NEPA

- Prepare Draft EIR and Draft EIS
- Public review period
- Final EIR, Final EIS, ROD, and NOD

### Other Environmental Processes

- Biological Assessment and ITP Application
- Biological Opinion
- ITP
- Water Rights
- Delta Plan Consistency
- Other Environmental Permits





# Dual Conveyance Operations

- Preliminary operations discussed during technical webinars
- Proposed North Delta Diversion (NDD) intakes would operate in conjunction with the existing south Delta intakes (Dual Conveyance)
- Potential flexibility in using either south or north Delta intakes with proposed NDD
- Current assumptions:
  - Use NDD to augment excess flow diversions on top of permitted diversions at south Delta intakes – winter/spring
  - Use NDD to manage salinity and realize potential carriage water savings – summer/fall
  - Maximizes benefits while minimizing impacts

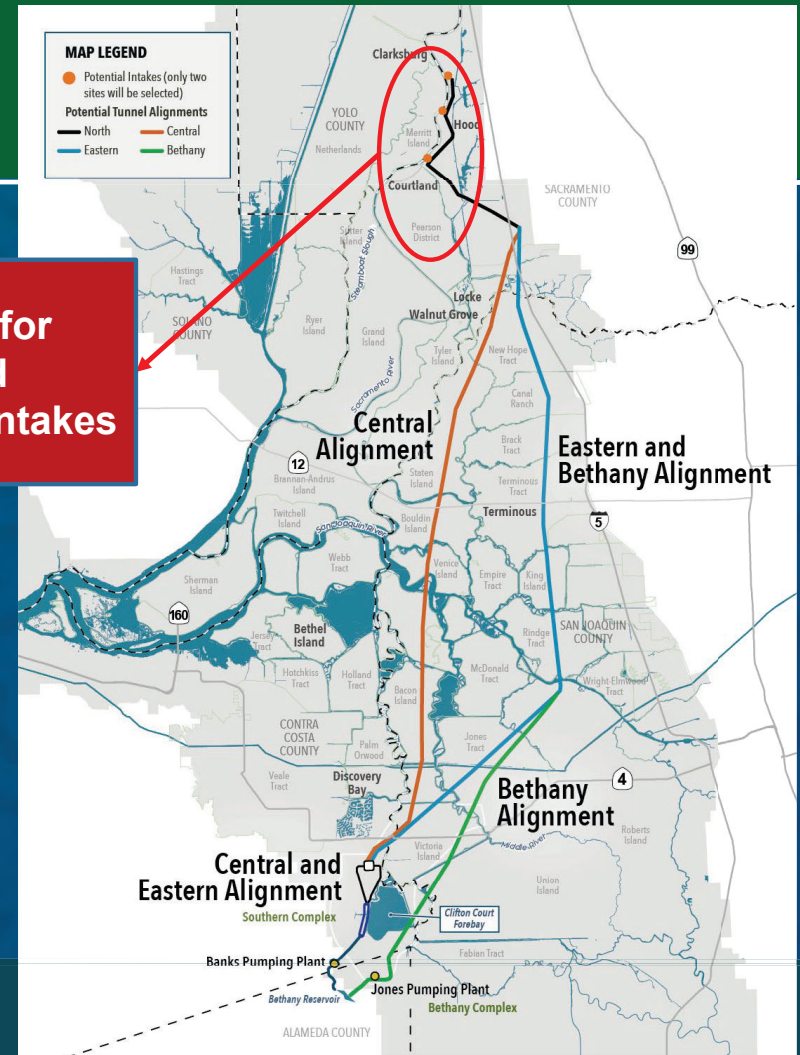


# Operational Criteria for New Intakes

## Existing Delta Operations (Use 2020 ITP Criteria)

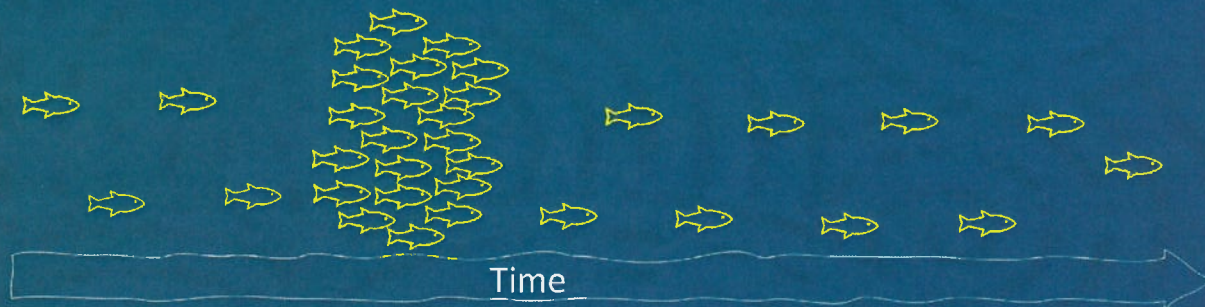
- Delta Outflow Requirements
- D-1641 E/I Ratio computation (Account for ND diversion as part of export)
- OMR
- Export limits

**New Criteria for  
the proposed  
North Delta Intakes**

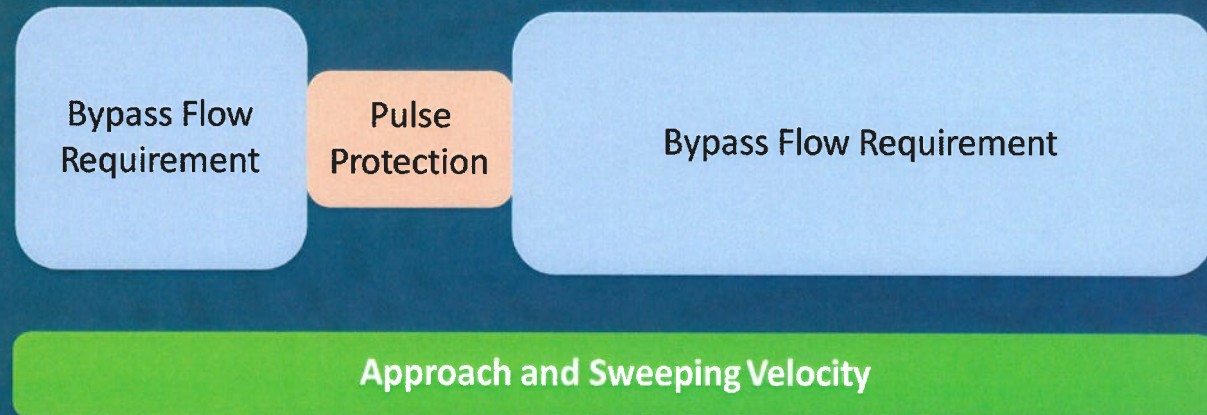


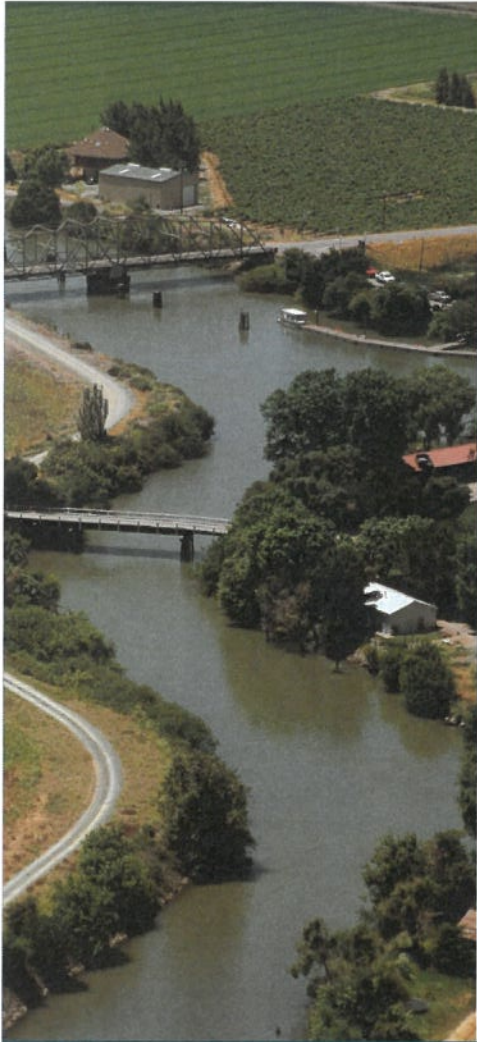
# NDD Operations Criteria Concepts

Concept of Fish Migration in the Intake Reach



Layering of Protections for NDD Operations

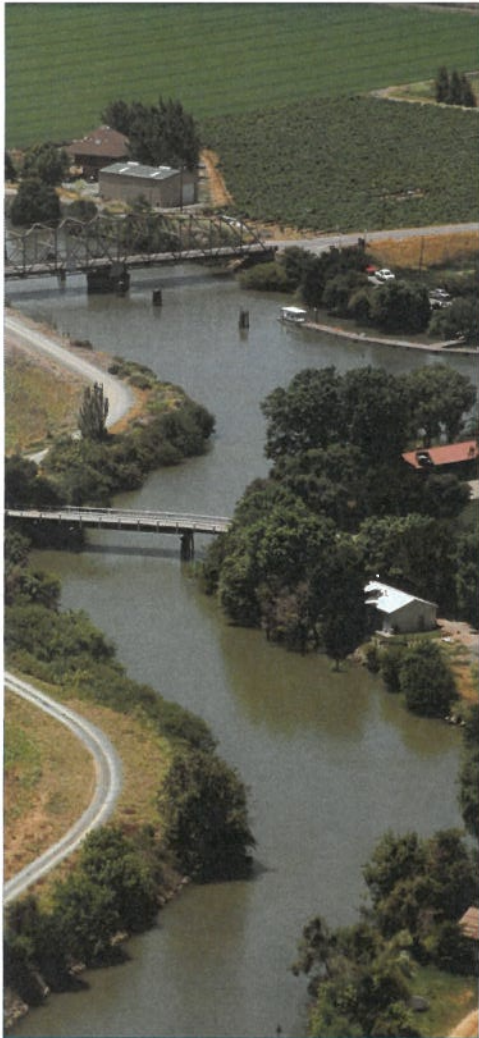




# Impact Analysis

- Analysis underway to consider potential impacts and mitigation for the project alternatives
- Assessment of impacts from construction, operations and maintenance
- Analysis of construction impacts is driven by conceptual designs from the DCA
- Analysis of operational effects uses modeling tools
  - Existing conditions (basis for CEQA determinations)
  - Future conditions including changes in land use, urban growth, climate change, and sea level rise





# Public Outreach and Community Engagement Plan for 2022

Public outreach in 2022 will focus on the release of the Draft EIR

## Public Information

- Provide informational resources to help the public review, understand and react to the DEIR.
- Videos, website updates, fact sheets, graphics, social media, flyers, eblasts.

## Public Outreach + Engagement

- Proactive outreach to inform and engage.
- Encourage and assist in participation.
- Emails, phone calls, meetings, briefings, presentation.

## Public Participation + Notification

- Provide meaningful opportunities to access public review documents and respond through formal public input processes.
- Workshops, publicity, flyers, libraries, translations.



**Thank You!**



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