

DELTA STEWARDSHIP COUNCIL · APPEAL HEARING

Consistency Appeal for the Delta Tunnel

Cert. ID C20262-A3 · Inconsistency with ER P5 and DP P2

Presented by Delta Agencies and Counties

San Joaquin County, Solano County, Yolo County, Central Delta Water Agency, Local Agencies of the North Delta · October 15, 2026



Overview of Presentation

Today you will hear from:

Osha Meserve, Counsel

Paul Canepa, San Joaquin County Supervisor

Sabrina Snyder, Yolo County Water
Resources Program

Emily Pappalardo, Tule Engineering



OPENING

The Question Before the Council

SCOPE & STANDARD OF REVIEW

Did DWR address each of the Council's findings on the remanded issues?

Cal. Code Regs., tit. 23, § 5035, subd. (a)(1)

Substantial evidence: "reasonable in nature, credible, and of solid value" (*Maxwell-Jolly*). Speculation is not evidence. (*Maxwell-Jolly*; *Grant*).

Wat. Code, § 85225.25

1

ER P5 – Invasive Species

No substantial evidence of consistency regarding golden mussel

Decision, p. 98:21-23

2

DP P2 – Siting

No showing that the Twin Cities Complex was sited to avoid or reduce conflict with Harvest Water

Decision, p. 106:4-10

Bottom line: DWR has not closed either gap

What ER P5 Requires



The potential for new introductions of or improved habitat for invasive nonnative species must be fully considered and avoided or mitigated in a way that appropriately protects the ecosystem.

— Cal. Code Regs, tit. 23, § 5009 (ER P5)

WHAT THE RULE DOES NOT SAY:

ER P5 contains no geographic limitation to the Delta

OPENING

Who We Are and What's at Stake

San Joaquin County

Much of the \$750M Delta recreation economy

2/3

of the legal Delta lies in San Joaquin County

~ 40%

of farms in the Delta supporting \$5.2B agricultural economy reside in San Joaquin County

~ 167,000

Delta residents in San Joaquin County

Solano County

~86,000 Delta acres; 400,000+ residents

Yolo County

~73,053 Delta acres, including Clarksburg and the Yolo Bypass

Central Delta Water Agency

~120,000 acres within Western San Joaquin and the Delta; protects vested water rights and supplies

Local Agencies of the North Delta

Coalition of reclamation districts: drainage, water supplies, levee maintenance

This Is Already Happening

Golden Mussel Impact

- Facilities in and south of Delta are severely impacted by the invasive species.
- Damage infrastructure by fouling pumps, intakes, gates, and screens.
- Reduce SWP conveyance capacity, increase mechanical failure risks, elevate operation and maintenance costs.
- State Water Project Incident Command Team of 35 staff dedicated for the response.



CWC briefing, Aug. 19, 2026, Agenda Item 8, SWP Briefing: Financial and Operations Update (DAC Appeal, p. 10)

3 counties

Declared emergencies
(Sacramento, San
Joaquin, Kern)

DAC Appeal, Exh. A, p. 1

\$35M+

Replacement costs of
clogged siphons, pump
stations and drainage
pipes in Delta

DAC Appeal, Exh. A, p. 2

\$3M

Spent on treatment by
Arvin-Edison

DAC Appeal, Exh. A, p. 3

**\$2M to
\$3.8M**

Westside's new projected
costs, with rate increases

DAC Appeal, Exh. A, p. 3

PART 1 • ER P5 AND GOLDEN MUSSELS

In DWR's Own Words

Golden mussel “spreads rapidly through hydrologic connectivity and human-mediated transport.”

Remanded Cert., p. 7:40-41

There is “no known prevention mechanism” for connected conveyance.

Remanded Cert., p. 12:41

“It is premature for DWR to approve specific control actions.”

Remanded Cert., p. 11:5-9



Mussel-covered wing gate replacement during annual maintenance at Skinner Fish Facility on May 4, 2026 (DAC Appeal, p. 10)

The Management Plan: A Palette, Not a Plan

Measure	Limitation DWR concedes	Not substantial evidence because...
ROV scraping	Roughens the surface and speeds recolonization	▶ Worsens recolonization; efficacy not assumed
Drying	Not usable where facilities cannot be dewatered	▶ Concession removes credibility
Copper	Water-quality and regulatory risk	▶ May be infeasible
Chlorine	Byproduct; promise only in small pipes	▶ Cannot be used for the tunnel
Zequanox	Promise only in small pipes	▶ Cannot be used for the tunnel
Hot Water	Cannot be used on tunnel or sedimentation basin	▶ Cannot be used for the tunnel
UV Light	Only usable for a shallow water column	▶ Fails for large-diameter tunnels
Gene vectors	“Significant ethical, safety, and regulatory concerns” requiring refinement before implementation	▶ No showing it could actually be used

Source: DAC Supp., Table 1 (citing, Golden Mussel Management Plan (RDCP.PD.1.0003), pp. 4-6 to 4-10 [GMMP]; *Maxwell-Jolly, supra*, 199 Cal.App.4th at 308; *Apt. Assn., supra*, 90 Cal.App.4th at 1176).

Intake Screens: Lessons from Skinner



Golden mussels at Skinner Fish Facility Operated by DWR, July 1, 2025 (DAC Appeal, p. 9)

DWR proposes:

Nylon brushes on the fish screens

DAC Appeal, p. 8 (citing Remanded Cert., pp. 20-21)

The appeal shows:

- Byssal threads attach strongly to hard surfaces
- A few mussels can blind the screens
- The screens are not designed to be removed for cleaning

DAC Appeal, pp. 8-11

At Skinner: louvers had to be fully removed for manual scraping, and extra louvers had to be manufactured.

DWR's New Theory: "The Tunnel Is Not Part of the Delta Ecosystem"

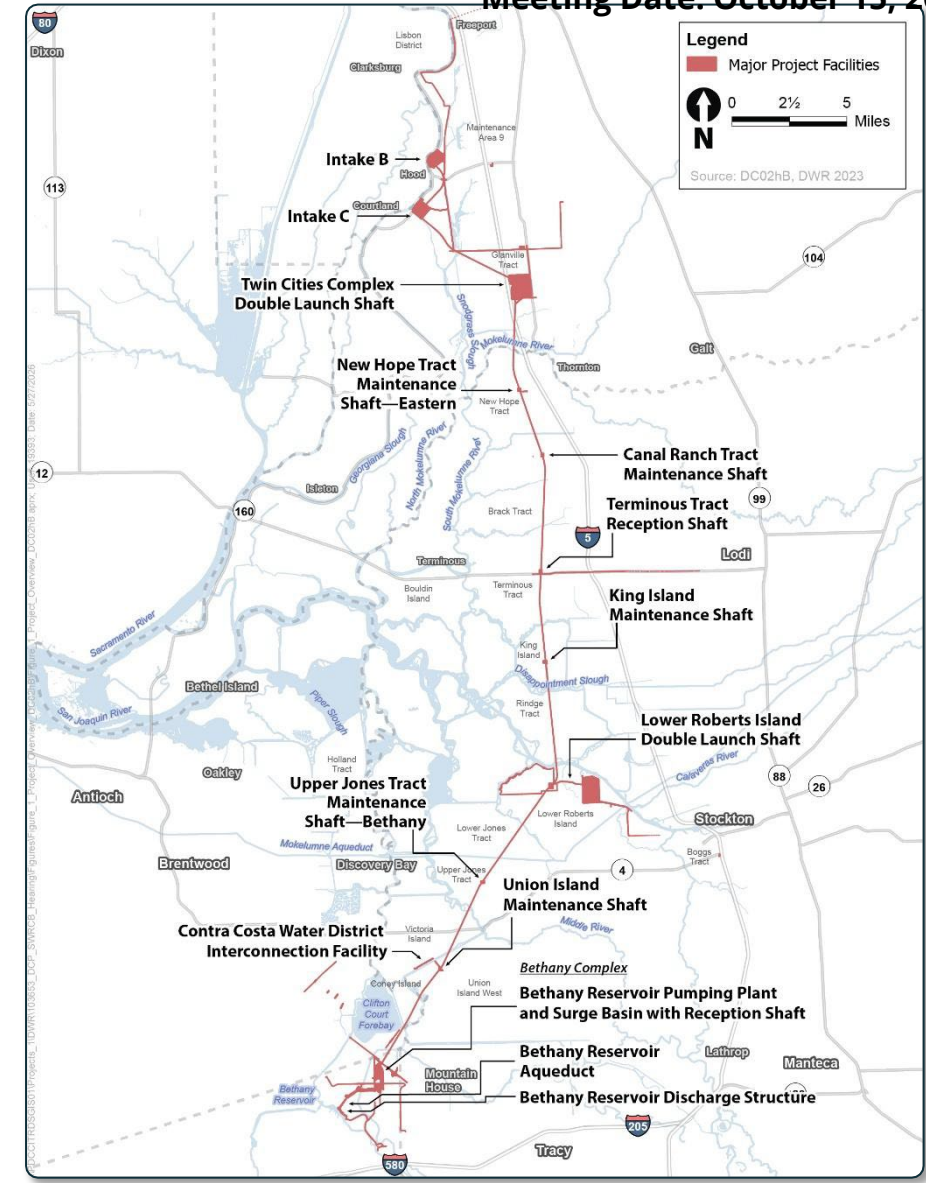
DWR SAYS:

The facilities "do not connect to the Delta ecosystem"

Remanded Cert., p. 6:28-29

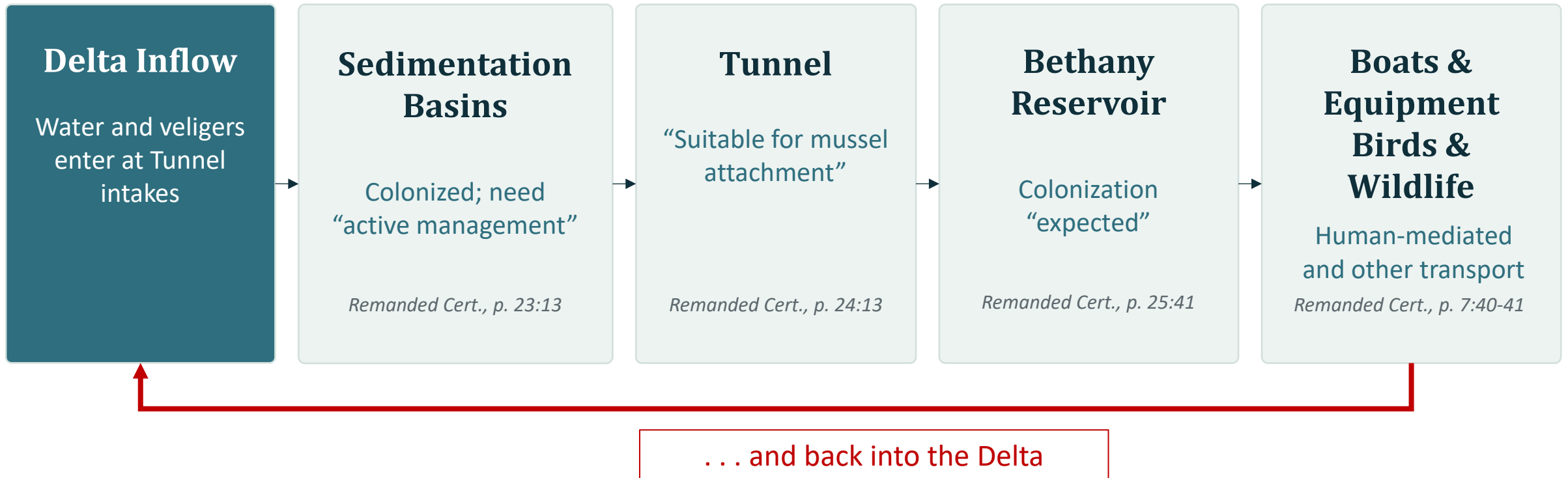
IN REALITY:

- ER P5's plain language is not limited to the Delta
- A covered action occurs "in whole or in part" within the Delta (Wat. Code, § 85057.5 subd. (a))
- DWR's own figure places the tunnel in the Delta (Remanded Cert., p. 6:28-29)
- No such facility existed when the Act and regulations were adopted



Map of the Delta Conveyance Project (DAC Appeal, p. 5, fn. 10)

The Two-Way Ecological Connection



Why This Isn't Substantial Evidence

NOT SUBSTANTIAL EVIDENCE:

- Analytical gaps, arguments, speculation, or unsubstantiated opinion (*CBD v. DFW*)
- “Reasonable to assume that something potentially . . . may occur” (*Apt. Assn.*)
- Logic that “is flawed, or . . . contrary to the evidence” (*Maxwell-Jolly*)

WHAT DWR OFFERS

- A palette of unselected measures
- Each is limited or infeasible by DWR’s own account
- Unproven at this scale
- Efficacy DWR itself calls uncertain

And the new “not part of the Delta ecosystem” theory cannot substitute for the missing evidence.

Impact on Coequal Goals

“Any diversion out of the delta, most likely, is spreading this mussel.”

DWR’s environmental program manager, SF Chronicle, June 14, 2026 (DAC Appeal, p. 12)



Delta Ecosystem

- The golden mussel is a “prolific ecological engineer altering food web dynamics, water clarity, and benthic community composition in invaded systems.”



Water Supply Reliability

- More habitat means more veligers leaving the Delta.
- Infestations in the Delta would destroy costly pumps and irrigation systems, affecting water users in the Delta.



Water Quality

- Contamination of water with golden mussel veligers would impact the water supply from biofouling by mussels originating in the Delta Tunnel.

Reliability Issues DWR Never Addressed

+77-99%

water absorption after
one-year colonization

DAC Appeal, Exh. B

-21%

Compressive strength
after one-year
colonization

DAC Appeal, Exh. B

Ca loss

Calcium leached from the
concrete after one-year
colonization

DAC Appeal, Exh. B

\$0.38

Benefit per dollar of cost
before any of these costs
are counted

Not Addressed by DWR:

- Microbially induced corrosion: Not mentioned in the Remand Certification
 - Reduces compressive strength of concrete
 - Leaches calcium
 - Increases water absorption
- Accumulation of dead-mussel biomass inside the tunnel
- Treatment, power, and disposal costs
- Whether design parameters withstand colonization

What DP P2 Requires and What the TCC Is



Facilities must be sited to avoid or reduce conflicts with existing uses and uses in adopted general plans, when feasible.

— Cal. Code Regs, tit. 23, § 5011 (DP P2)

The Twin Cities Complex (TCC)

tunnel boring machine launch shafts •
segment storage • slurry plant • water
treatment • helipad • muck drying

**586
acres**

impacted during
construction

**222
acres**

permanently
destroyed

Harvest Water Is an Existing, Planned Use



The Council already agreed: Harvest Water is an existing use (Decision, p. 117:2).

So does the DPC: Harvest Water is an existing land use, and the tunnel "would adversely impact Harvest Water's advancement of the coequal goals."

DWR's Siting Analysis Does Not Answer the Finding

WHAT THE REMAND ASKED DWR TO SHOW:

- **Is there a conflict with Harvest Water, an existing use?**

Yes, the Council found Harvest Water is an existing use that conflicts with the TCC siting.

- **Was the TCC sited to avoid or reduce the conflict with Harvest Water?**

What DWR needed to answer.

DWR's Answer:

- **It answers the wrong question:**
DWR says the TCC cannot move.
- **It points to a different alternative:**
If so, the only way to avoid the conflict is a different alternative.
- **The contrary recital was never supported:**
The recital that through-Delta options fail project objectives was never substantiated.

Impact on the Coequal Goals



Delta Ecosystem

What Harvest Water Supplies:

Harvest Water is exactly the kind of “wildlife-friendly” agriculture that Chapter 5 of the Delta Plan encourages.

- 2,500-3,500 acres of planned sandhill crane habitat total
- South Sacramento County Agriculture and Habitat Lands Recycled Water Program



What the TCC does to it:

- 586 acres affected, with about 222 acres in conflict that would be permanently destroyed
- Noise, light, and vibration reaches beyond the TCC footprint
- Blocks about part of the green core reserve (ECOS-50R)
- Obstructs the Dierssen Road I-5 wildlife corridor between Stone Lakes and the Cosumnes River Preserve

REQUESTED ACTION

Remand the Certification Back to DWR

1

ER P5

No substantial evidence that golden mussel will be avoided or mitigated.

2

DP P2

No showing that the TCC was sited to avoid or reduce conflicts with Harvest Water.

THANK YOU!

Questions?