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April 17, 2020

VIA EMAL DeltaConveyanceScoping@water.ca.gov

Wade Crowfoot
Secretary
California Natural Resources Agency

Karla Nemeth
Director
California Department of Natural Resources

Re: Comments Notice of Preparation Environmental Impact Report
For the Delta Conveyance Project

Dear Secretary Crowfoot and Director Nemeth:

These comments are submitted on behalf of Save the California Delta Alliance. Thank you for the opportunity to submit these comments and for considering our views.

In short, we believe that the Notice of Preparation ("NOP") should be redrafted because it is not consistent with the Delta Reform Act, the Delta Plan, the Public Trust Doctrine, California Constitution Article X, section 2, the California Environmental Quality Act ("CEQA"), the legal uses to which the State Water Project ("SWP") may be put, environmental justice principles codified in Government Code section 65040.12, requirements to consider and avoid climate change impacts of new infrastructure and to consider mitigation of climate impacts through alternative uses of natural infrastructure codified in Public Resources Code section 71154, and other applicable laws.

A revised NOP should provide for a Natural Systems Alternative that reduces exports in order to provide more water for through-Delta seaward flow and includes strengthening and restoring Delta levees through the use of setback levees and channel margin habitat. This approach will achieve the project objectives of mitigating salt water intrusion from climate-induced sea level rise and mitigating the risk of salt water intrusion from catastrophic levee failure. It will also achieve the project objectives of providing operational flexibility to improve aquatic conditions in the Delta and of protecting the ability of the SWP and CVP[1] to reliably deliver water. It is superior to a tunnel with regard to project objectives and without the significant adverse environmental impacts of a tunnel. The Natural Systems Alternative should therefore be the preferred alternative pursuant to CEQA.

The major premises of the project are to mitigate sea level rise due to climate change and to mitigate the risk of levee failure due to earthquake risk. The rationale is that by moving the point of diversion upstream, the incremental effects of salt water intrusion into the

[1] The federal government has not indicated that it will participate in the tunnel project and it appears that the Trump administration is focused on maximizing CVP supplies with existing infrastructure.

south and central Delta due to continuing sea level rise, and the potential for abrupt salt water intrusion due to levee failure, will be mitigated because the point of diversion will be far enough upstream to remain in fresh water--despite significant incursion of salt water into the Delta (whether over time due to climate change or suddenly due to catastrophic levee failure).

This approach abandons the south, west, and central Delta to salt water intrusion and seeks to protect export water supplies by moving the point of diversion to the far north out of reach of salt water intrusion. However, it ignores the fact that a fundamental purpose of the SWP is to *prevent* salt water intrusion into the Delta. "One of the major purposes of the projects was containment of maximum salinity intrusion into the Delta. By storing waters during periods of heavy flow and releasing water during times of low flow, the freshwater barrier could be maintained at a constant level." (*United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 107.) With sea level rise as an omnipresent increased source of salt water intrusion, diverting Sacramento River inflow upstream of the south and central Delta, and reducing through-Delta freshwater flows, is antithetical to the purpose of the SWP.

It is also antithetical to the dire need for more seaward flow in order to reverse the catastrophic decline of the Delta ecosystem now in progress. In the words of former United States Environmental Protection Agency Regional Administrator and current Secretary of the California Environmental Protection Agency, Jared Blumenfeld, "existing freshwater diversions and significantly diminished seaward flows have played a significant role in precluding the recovery of Bay Delta ecosystem processes and declining fish populations." (August 26, 2014, Letter from USEPA Administrator Jared Blumenfeld to National Marine Fisheries Service Administrator Will Stelle, p.2.)

The only logical, and legally sound, approach to the problem is to *increase* the capacity for through-Delta freshwater flows in order to enhance the ability to push back anticipated increased salt water intrusion and at the same time address the ongoing ecosystem crisis. Reducing water withdrawals for export is the optimal response to provide more water for critically needed in-stream seaward flow. "[T]he condition of the Delta's watery ecosystem, as measured especially by the population of wild salmon and other native fishes, has gone critical. The list of causes begins, but does not end, with all those water withdrawals, a kind of tax that leaves the system in a condition of chronic drought." (Delta Plan, p. ES-2.)

Strengthening the levees and at the same time utilizing setback levees with channel margin habitat is the proper response to salt water intrusion from seismic risk. Although set in a heavily altered system, restored setback levees implement the requirements of Public Resources Code section 71154 for "using natural ecological systems or processes to reduce vulnerability to climate change related hazards, or other related climate change effects, while increasing the long-term adaptive capacity of coastal and inland areas by perpetuating or restoring ecosystem services." (Pub. Res. Code § 71154, subd. (c)(3).) Specifically, "levees that are combined with restored natural systems … provide a wide array of benefits to people and wildlife." (*Id.*) A wholly artificial tunnel, on the other hand, is not consistent with state policy on climate change adaptation as codified section 71154.

A single-tunnel project also itself contributes significantly to carbon emissions over the very long run and thereby hampers California's ability to rapidly reduce carbon emissions. It does this because it locks in export of Delta water to the Metropolitan Water

District ("MWD" or "Met"), the major advocate and financial guarantor of the single-tunnel project, and to other south of Tehachapi contractors.[2]

The State Water Project ("SWP") is one of the worst carbon offenders in the nation, if not the world. The SWP consumes approximately 8,000 gigawatt-hours of electricity each year. SWP dams and hydropower plants generate abut half that much, leaving 4,000 gigawatt-hours of net energy consumption, much of which is generated by gas-fired power plants.[3] (https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan, last visited April 12, 2020.)

DWR has taken some steps in recent years to address the most egregious climate offensive aspects of the SWP, including elimination of a filthy coal fired power plant in Nevada as a source of purchased SWP power and bringing online the Pearblossom Solar Facility. However, the fact remains that the SWP wastes enormous amounts of energy because delivering Delta water to Southern California is by far *the most* energy intensive source of water while much more energy efficient means of supplying southern California are readily available.

The SWP is the largest consumer of electricity in California and the Edmonston Pumping Plant (which pushes Delta water up and over the Tehachapi Mountains to Met's service area) consumes 40% of SWP electricity usage.
(https://www.watereducation.org/aquapedia/ad-edmonston-pumping-plant, last visited April 15, 2020.) Edmonston is the largest single-point user of electricity in California. (David Carle, Introduction to Water in California (2d ed. 2016) p. 103.) Additional electricity consumption occurs at the pumping plants prior to Edmonston in the foothills, and at distribution pumping plants south of the Tehachapis.
Delta water delivered south of the Tehachapis consumes over 5,000 kWh/acre foot. By comparison, water re-use (including Reverse Osmosis filtration) supplies water at about 1,200 kWh/acre foot and many conservation and water efficiency measures are available that use only nominal amounts of energy. Even the more energy intensive alternatives come in at less than 2,000 kWh/acre per acre foot. (*See, e.g.,* Professor Bob Wilkinson, August 23, 2007, presentation to the State Water Resources Control Board, *Water, Energy, and Climate,* p.9 [Attachment 1].)

It simply does not make sense in the face of a climate crisis to found California's water future on pushing trillions of tons of water up and over a half-mile high mountain range. Current pumping burns massive amounts of fossil fuel. The clean energy we may acquire in the future must be applied to more rapidly replacing carbon based power in essential sectors of the economy. It would be hard to imagine a waste of energy more profligate than continued export of Delta water to Southern California.

It is time to implement a planned retreat from exporting Delta water south of the

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[2] There are 13 south of Tehachapi SWP contractors, including Met. In recent years, Met has accounted for about 80% of Delta exports to Southern California and the other 12 contractor combined, about 20%. Several of the other south of Tehachapi contractors have received only de minimis amounts of SWP water in recent years. (Bulletin 132-17, Appendix B, Table B-5B.)

[3] DWR proclaims itself a climate leader and a leader in carbon emission transparency. However, no evidence could be found to support those claims. For example, how much of the 4,000 gigawatts of non-hydropower consumption is attributable to carbon based generation and how much to renewables could not be found despite several hours searching DWR websites and bulletins. From the incomplete information found, DWR's GHG emissions have been increasing since 2014. (https://water.ca.gov/Programs/State-Water-Project/Clean-Energy, last visited April 15, 2020.) If better information exists in an accessible format, Delta Alliance would appreciate DWR pointing the way in its response to this comment.

Tehachapi Mountains, thereby achieving the Delta Reform Act's imperative to "reduce reliance on the Delta in meeting California's future water supply needs" by completely replacing Met's Delta water supply with "improved regional supplies, conservation, and water use efficiency," (Wat. Code § 85021), and carefully reassessing the delivery of Delta water to other south of Tehachapi contractors.

I. Public Resources Code Section 71154 Requires That DWR Fully Consider A Non-tunnel Natural Systems Alternative.

Public Resources Code section 71154 is binding on all state agencies and requires that when state agencies are taking steps to adapt to climate change, in particular the development of new infrastructure, they develop an alternative that utilizes existing natural features rather than constructing large new artificial infrastructure:

> When developing infrastructure to address [climate] adaptation, where feasible, a project alternative should be developed that utilizes existing natural features and ecosystem processes or the restoration of natural features and ecosystem processes to meet the project's goals.
>
> For purposes of this subdivision, "natural infrastructure" means using natural ecological systems or processes to reduce vulnerability to climate change related hazards, or other related climate change effects, while increasing the long-term adaptive capacity of coastal and inland areas by perpetuating or restoring ecosystem services … [including] levees that are combined with restored natural systems, to provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.

(Pub. Res. Code §§ 71154, subd. (c)(2) & (3).)

State agencies adapting to climate change are also required, to the maximum extent practicable, to "Protect[] and enhance habitat, species strongholds, and wildlife corridors that are critical to the preservation of species that are at risk from the consequences of climate change." (Pub. Res. Code § 71154, subd. (g).)

The single-tunnel project is proffered to "address anticipated rising sea levels and other reasonably foreseeable consequences of climate change and extreme weather events," (NOP, p.2), and is therefore subject to section 71154. Read together with CEQA, section 71154 requires that DWR develop a non-tunnel Natural Systems Alternative for full study in any Environmental Impact Report ("EIR") culminating from the NOP in order to comply with CEQA's mandate to study a reasonable range of alternatives. We believe that the Natural Systems Alternative should be the preferred project.

II. The Natural Systems Alternative.

A. First, strengthen Delta Levees and use setback levees and channel margin habitat at critical and feasible locations.

Setback levees with channel margin habitat are feasible and cost-effective, at a cost of $14 million or less per mile. (*See, e.g.,* West Sacramento Setback Levee Project, https://www.cityofwestsacramento.org/government/departments/community-development/flood-protection/levee-projects-overview, last visited April 14, 2020.). Where set back levees are not practical, strengthening conventional levees would be much less costly per mile. For example, 4.7 miles of levee on Bouldin Island were

recently strengthened at a cost of $3 million per mile. (http://www.mwdh2o.com/DocSvcsPubs/Delta_Islands/, last visited April 15, 2020.) An adequate portion the Delta's approximately 1100 miles of levees could be replaced or strengthened for far less than the $15 billion plus or minus price tag of a single tunnel.

A tunnel mitigates levee failure risk only as to exported water supplies but ignores catastrophic damage to the Delta ecosystem and loss of fresh water supply to in-Delta users, including Delta communities and farms. Restored levees protect export supplies, in-Delta users, and not only protect the Delta ecosystem but greatly enhance it.

Restored levees, using setback levees in locations where feasible, are consistent with Delta Plan Recommendations:

> Setting levees back from the riverbank can expand flood conveyance capacity and reduce flood risk while providing ecosystem restoration and recreational opportunities. Setback levees also allow opportunities for construction of an improved levee foundation and section using modern design and construction practices, thereby reducing risk of failure. Integrating fish-and-wildlife-friendly channel margin treatments into levee improvements can also help.

(Delta Plan, Chapter 7, as amended March 2020 , p.21.)

The Natural Systems Alternative might also consider flooding of selected Delta Islands. Intentionally breeching levees at some locations can mitigate the threat of future unplanned catastrophic levee failure in an earthquake and also create additional freshwater storage and habitat, serving the twin goals of ecosystem restoration and water system reliability. Although requiring careful study and planning before acceptance of any future project, freshwater storage on flooded Delta Islands has been found feasible and cost-effective in the past. (http://www.semitropic.com/pdfs/Delta%20Welands%20project%20EIR/209629-delta-wetlands-feir-20110817%20permissions.pdf, last visited April 15, 2020.)

B. Second, implement a planned retreat from exporting of Delta water south of the Tehachapi Mountains.

Replacing Delta water exported to the Metropolitan Water District with new local and regional supplies is feasible and cost-effective.

Credible estimates of the cost of water delivered from the late WaterFix tunnel project ranged from about $2400 to well over $5,000 per acre foot. The Natural Resources Defense Council estimated the cost at $2361 per acre foot. (Doug Obegi, MWD's WaterFix Cost Assessment is Inaccurate and Inadequate, August 11, 2017 [Attachment 2].) The Final WaterFix EIR estimated the yield of WaterFix at 172,000 acre feet per year. Dr. Rodney T. Smith, of Stratecon, Inc., produced a table analyzing WaterFix cost per acre foot at a range of yields. For 200,000 acre feet per year, the cost would be between $4795 and $8463 per acre foot, depending on the assumed risk premium. For 100,000 acre feet per year, the cost would be over $9500 per acre foot. (Rodney T Smith, Impact of the Annual Yield of the Twin Tunnels Project on the Cost of Project Water, August 30, 2016 [Attachment 3].) There is no reason to believe that a new single tunnel project could deliver water more cheaply than the former WaterFix projections.

From 2012 to 2016, an average of about 1,095,000 acre feet per year of SWP water was delivered to Southern California. (Bulletin 132-17, table B5-B.) Even assuming that half

of Delta deliveries would be foreclosed without a tunnel (a scenario not supported by evidence, but apparently part of contract amendment negotiations) the cost per acre foot for a tunnel project would be over $2,000 per acre foot utilizing Dr. Smith's former WaterFix projections.

Any credible cost estimate for single tunnel delivered water will make numerous other sources of supply more cost-effective than a tunnel.

Costs for replacing exported Delta water with local and regional supplies in Southern California would be less per acre-foot than supplies delivered through a single tunnel project. DWR estimated the mid-point cost for municipal recycled water as $800 per acre foot. (DWR, California Water Plan 2013.) The WateReuse Research Foundation has estimated the following costs for water supply alternatives per acre foot: direct potable re-use $820–$2000; indirect potable re-use $820–$2000; seawater desalination $1500–$2300; water use efficiency and conservation $495–980. (WaterReuse Research Foundation, The Opportunities and Economics of Direct Potable Reuse (2014).)

The Metropolitan Water District of Southern California's 2015 Urban Water Management Plan identifies specific potential recycling projects with a yield of 680,000 acre feet per year but none of those projects are included in Met's projected supply figures. Met consistently overstates demand and understates local and regional supply potential in order to justify continued demand on Delta Water. (*See, e.g., Issue Brief, Mismatched*, Natural Resources Defense Council 2017.)

The untapped potential for stormwater capture in Southern California is at least 300,000 acre-feet per year. (*See The Untapped Potential of California's Water Supply: Efficiency, Reuse, and Stormwater Capture*, NRDC and Pacific Institute 2014; *see also* Testimony of Doug Obegi before the State Water Resources Control Board for unpublished county-by-county data, *available at* *https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/nrdc.html*.) The Southern California Water Coalition conducted a survey of stormwater capture projects in Southern California and found that the median cost per acre foot was $1070. In the aggregate, for all the projects surveyed, there was a cost of $132 million for a yield of 13,400 acre feet annually, or a cost of $328 per acre foot over a 30 year period. (SCWC Stormwater Task Force, 2018 WhitePaper Update, available at http://www.socalwater.org/wp-content/uploads/scwc-2018-stormwater-whitepaper_75220.pdf, last visited April 16, 2020.)

Met has placed the cost of water savings through turf replacement at $600 per acre foot. (*http://mwdh2o.com/PDF_Newsroom/Turf_Removal_Program.pdf,* last visited April 16, 2020.) Turf replacement, encouraging homeowners and businesses to replace thirsty green lawns with water-efficient landscaping, is perhaps one of the biggest untapped, cost-effective, sources of new water in Southern California. No data were found to indicate the total potential for turf replacement at this writing. Extrapolating from Met's figures, approximately one acre foot per year is saved for every 7400 square feet of turf replaced. With a service area of 5200 square miles, populated with millions upon millions of detached single family homes, and businesses, sprouting lush lawns, the potential must be at least in the hundreds of thousands of acre feet per year. If they do not exist, accurate figures for this potential should be developed. If DWR has information as to the potential for turf replacement, Delta Alliance would appreciate the provision of those figures in response to these comments.

Substantial new water is also available in Southern California through better indoor water conservation rebate and incentive programs, which are also currently limited in budget

and application. Estimates range from 1.4 to 2.4 million acre-feet of new water annually from untapped urban water conservation measures, including indoor measures and outdoor measures in the South Coast Hydrologic Region, most of which is comprised of Met's service area. (*See The Untapped Potential of California's Water Supply: Efficiency, Reuse, and Stormwater Capture*, NRDC and Pacific Institute 2014; *see also* Testimony of Doug Obegi before the State Water Resources Control Board for unpublished county-by-county data, *available at* https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/nrdc.html.)

Desalination technology is improving, and with advances in brine management, provides an additional, essentially unlimited, source of regional supply.

From 2012 through 2016, Met received an average of about 830,000 acre feet of SWP supplies per year. (Bulletin 132-17, table B-5B.) There can be little doubt that it is feasible to replace Met's SWP supplies with local and regional supplies that are cost effective, without the environmental damage to the Delta, and that are not wildly energy intensive as is pushing trillions of tons of water over a mountain range.

III. The Public Trust Doctrine Requires DWR To Consider Phasing Out Exports South Of The Tehachapi Mountains.

DWR has an affirmative duty to perform a public trust analysis of any tunnel project, which involves considerations beyond those required by CEQA. (*See, e.g.* California WaterFix Findings of Fact and Statement of Overriding Considerations, Part IV, Findings Regarding the Public Trust Doctrine.)

Even absent a new project, tunnel or otherwise, DWR has an ongoing duty of supervision to consider public trust principles in managing water resources. DWR's water rights, in particular as to place of use in Southern California, *are not vested*. DWR must consider changes in the allocation of water resources when new information makes a renewed public trust analysis appropriate:

> The public trust doctrine and the appropriative water rights system are parts of an integrated system of water law. The public trust doctrine serves the function in that integrated system of preserving the continuing sovereign power of the state to protect public trust uses, a power which precludes anyone from acquiring a vested right to harm the public trust, and imposes a continuing duty on the state to take such uses into account in allocating water resources.

(*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 452.)

In particular, past allocation decisions may need to be revised in light of new information:

> Once the state has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water. In exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs.

(*National Audubon,* 33 Cal.3d at 447.)

Contract provisions designating delivery to Southern California SWP contractors and DWR's water rights permits designating place of use in Southern California must give way to public trust considerations where a public trust analysis demonstrates that protection of public trust resources is feasible and reducing or eliminating diversions is in the public interest. The "state must bear in mind its duty as trustee to consider the effect of the taking on the public trust, and to preserve, so far as consistent with the public interest, the uses protected by the trust." (*National Audubon,* 33 Cal.3d at 446-447, citations omitted.)

"The state accordingly has the power to reconsider allocation decisions even though those decisions were made after due consideration of their effect on the public trust. The case for reconsidering a particular decision, however, is even stronger when that decision failed to weigh and consider public trust uses." (*National Audubon,* 33 Cal.3d at 447.)

Here, there is no doubt that ongoing diversions of Delta water to supply Southern California significantly harm public trust resources in the Delta, including driving several fish species to the brink of extinction. The Delta ecosystem is in crisis. There are multiple stressors but it is beyond dispute that lack of freshwater flow through the Delta, caused by excessive exports, is the master stressor that needs to be addressed before ecosystem recovery will be possible. (*See, e.g.,* August 26, 2014, Letter from USEPA Administrator Jared Blumenfeld to National Marine Fisheries Service Administrator Will Stelle, p.2; Delta Plan, p. ES-2; State Water Resources Control Board, Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, p. 2 ["The best available science suggests that current flows are insufficient to protect public trust resources"]; p.5 ["Recent Delta flows are insufficient to support native Delta fishes … . Flow modification is one of the immediate actions available" to address ecosystem decline].)

But the need to protect public trust resources in the Delta must be balanced against the consumptive needs of Southern California. "As a matter of practical necessity the state may have to approve appropriations despite foreseeable harm to public trust uses." (*National Audubon,* 33 Cal.3d at 446.) However, the public interest balance has changed significantly in recent years due to three factors: 1) Increasing awareness as to the availability of feasible, cost effective, alternative supplies that do not harm public trust resources; 2) The awareness of climate change and the energy / GHG impacts of exporting water over the Tehachapi Mountains; and 3) The dramatic worsening of Delta ecosystem decline.

At one time in history, perhaps when the Edmonston Pumping Plant went into operation in 1972, a public interest balancing may have favored continued exports. The Delta ecosystem was not yet in catastrophic decline, technology for alternative sources of water was not yet developed, and the climate impacts of enormously energy intensive pumping were not understood. The societal good of supplying water might have outweighed impacts on the Delta ecosystem—so far as those impacts were understood. However, we know today that the public interest counterbalance of supplying water to Southern California is obliterated by the climate impacts of pumping that water over the Tehachapi Mountains, especially in light of far more energy efficient and cost-effective sources of water. There is no longer any public good to weigh against the need to reduce harm to the Delta ecosystem as the benefit to society of exported water is canceled out by the climate impacts of export pumping.

Any public trust analysis culminating from the NOP should fully consider phasing out exports to Met.

IV. Locating Intakes At Former WaterFix Locations, And A Through-Delta Tunnel Route Violate The Delta Reform Act, Are Inconsistent With The Delta Plan, Violate California Constitution Article X, Section 2, And Offend Principles Of Environmental Justice.

The NOP continues to limit intake location to one of three former WaterFix intake sites. We know from conclusive evidence developed in the former WaterFix proceedings that the massive concentrated construction impacts associated with intake siting in this location place enormous and unreasonable stress on the nearby Delta legacy communities, including Hood, Clarksburg, and Locke.

The massive size of the intake(s) at this location is an unreasonable method of diversion. California Constitution, Article X, section 2, expressly prohibits any "unreasonable method of diversion of water." The NOP violates this provision of our state constitution.

Delta Plan Policy DP P2 (23 CCR §5011) requires that DWR "Respect Local Land Use When Siting Water or Flood Facilities or Restoration Habitats." Extensive evidence developed during the State Water Resources Control Board and Delta Stewardship Council Proceedings for the former WaterFix shows that it is not feasible to site intakes in these locations consistent with Policy DP P2.

Hood is a largely low income and minority community that would bear the brunt of intake impacts, including increased air pollution from diesel exhaust associated with construction activities. Locating intakes as shown in the NOP is not consistent with environmental justice principles expressed in Government Code section 65040.12.

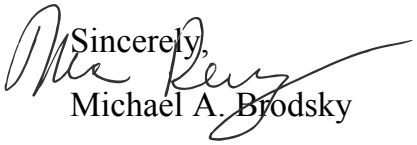
DWR continues to push for intake siting near these legacy communities not because of any physical advantage to locating intakes here but because it believes it retains an antiquated water right for a point of diversion. Siting an intake here would, on DWR's belief, require only a petition for a change in the point of diversion and would not initiate a new water right. However, this is not a legitimate justification for placing intakes in an unreasonable manner. Intake location should be considered based on minimal impact to Delta communities and locations not included in the current NOP need to be open for consideration.

Finally, it has been conclusively proven through extensive evidence introduced in the former WaterFix proceedings that a tunnel route through the Delta is not feasible. Impacts on Delta recreation and navigation of a through-Delta route are unacceptable. It is a waste of time and money to continue to pursue a through-Delta tunnel route as shown on the NOP. Attachment 4 hereto is a slide show presented to the Delta Stewardship Council during the former WaterFix proceedings summarizing some of the evidence showing that the intakes cannot be located as shown on the NOP and that a through-Delta tunnel route is not an option.

V. Conclusion.

The NOP should be redrafted to provide for a Natural Systems Alternative that includes phasing out exports of Delta water to the Metropolitan Water District, strengthened levees, and increased through Delta seaward flow to manage salinity intrusion and recover the Delta ecosystem. Intake locations at the sites of former WaterFix intakes and any through-Delta tunnel route should be eliminated from consideration now.

Sincerely,



Michael A. Brodsky

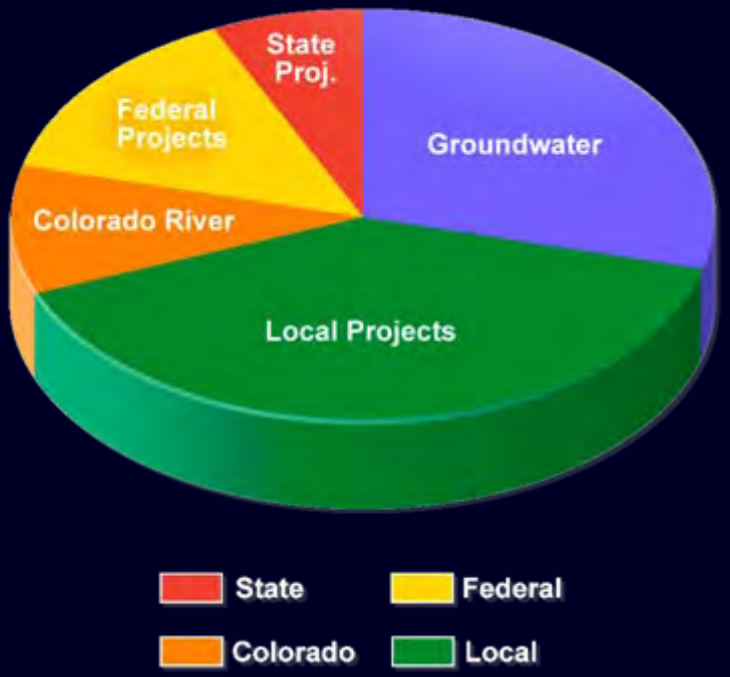
ATTACHMENT 1

Water, Energy, and Climate

State Water Resources Control Board
California Department of Water Resources

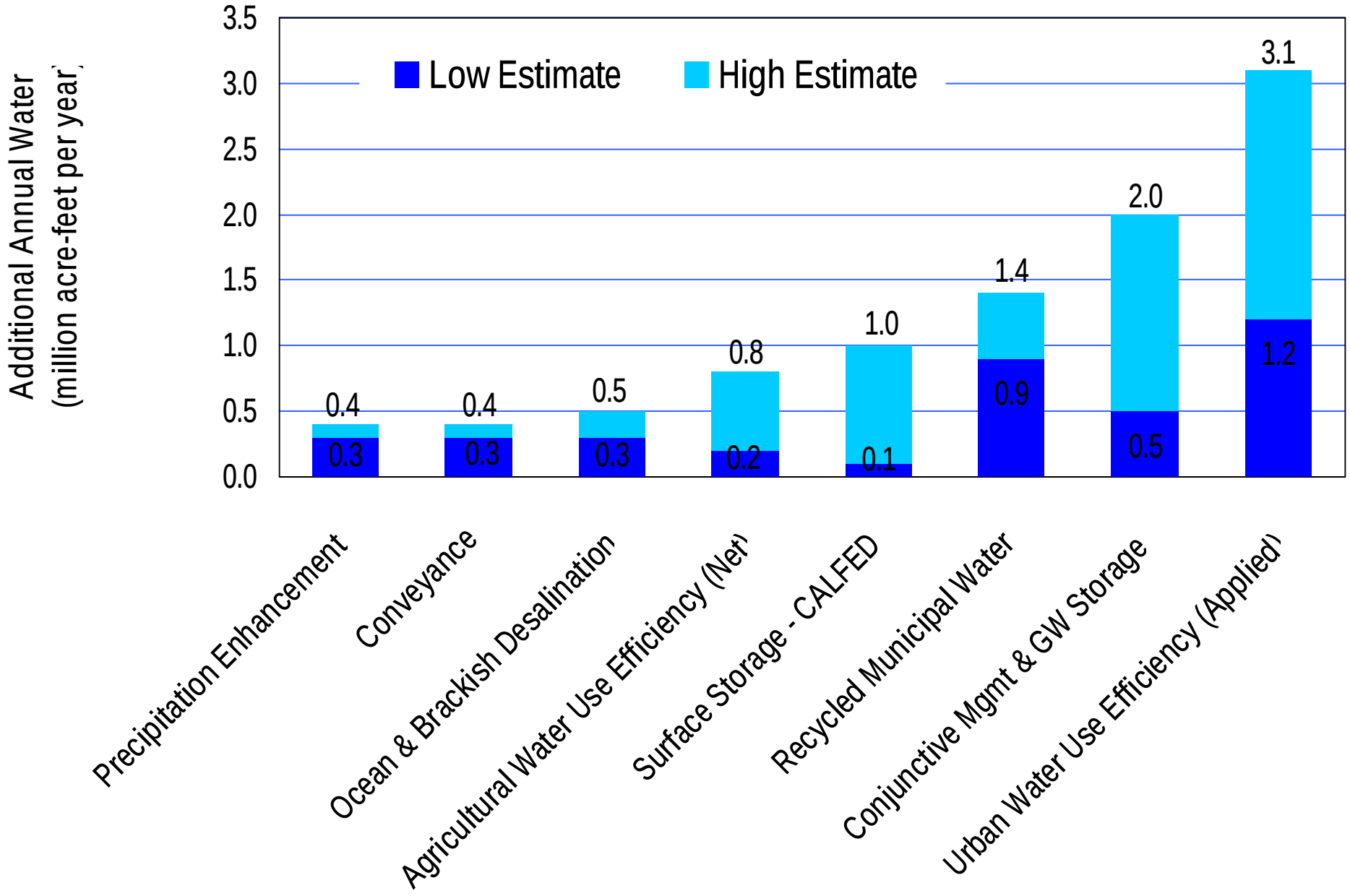
Sacramento
August 23, 2007

State Water Supply Systems

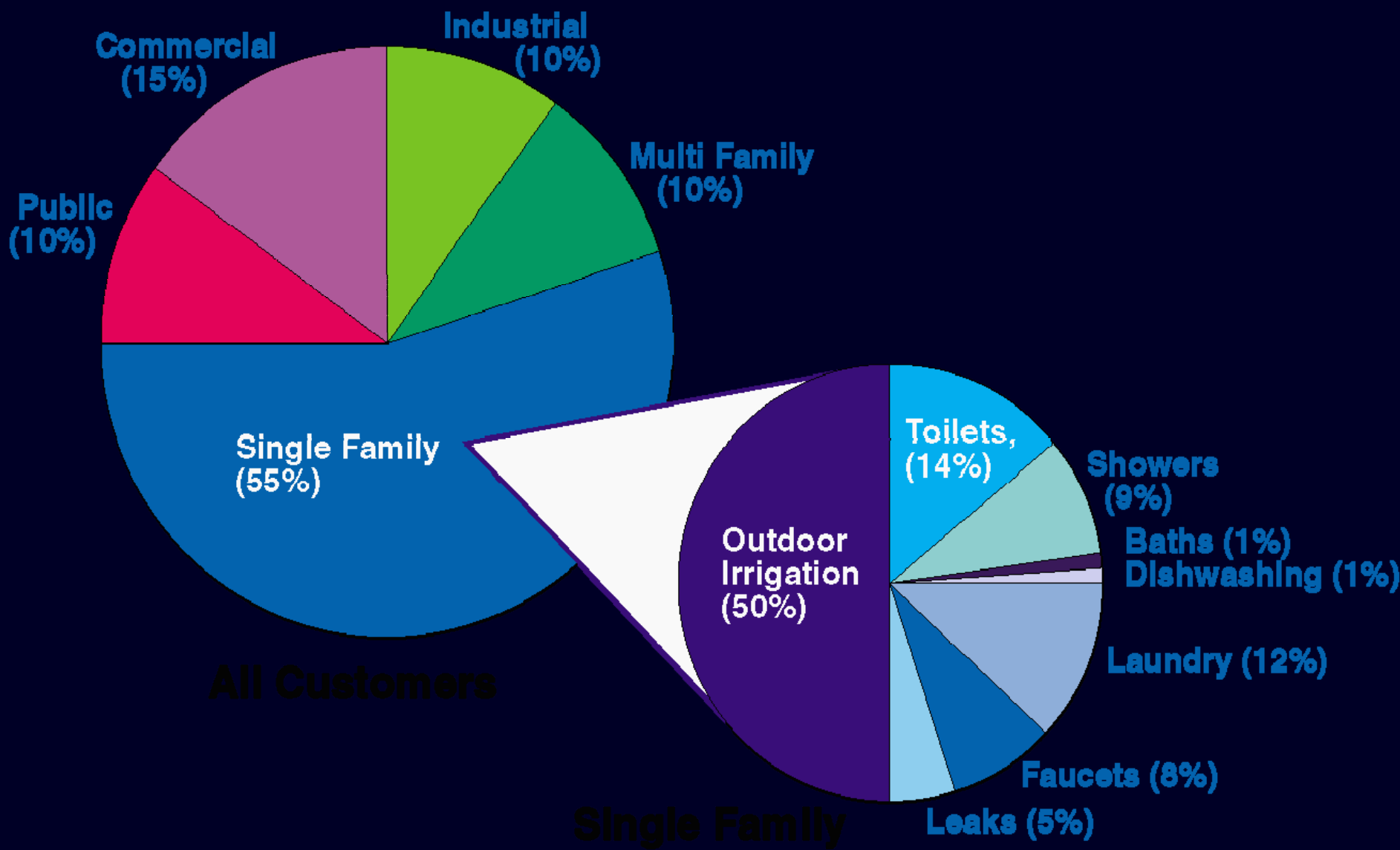


Lester Snow, California
Department of Water Resources

California Water Supply Options



Urban Water Uses



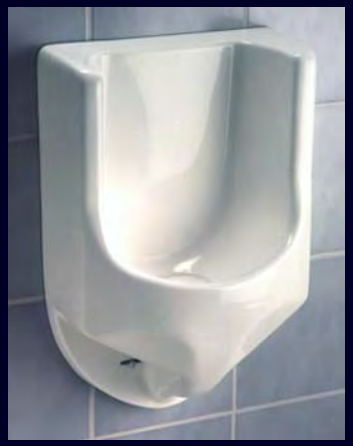
Waste = Opportunity

Efficiency

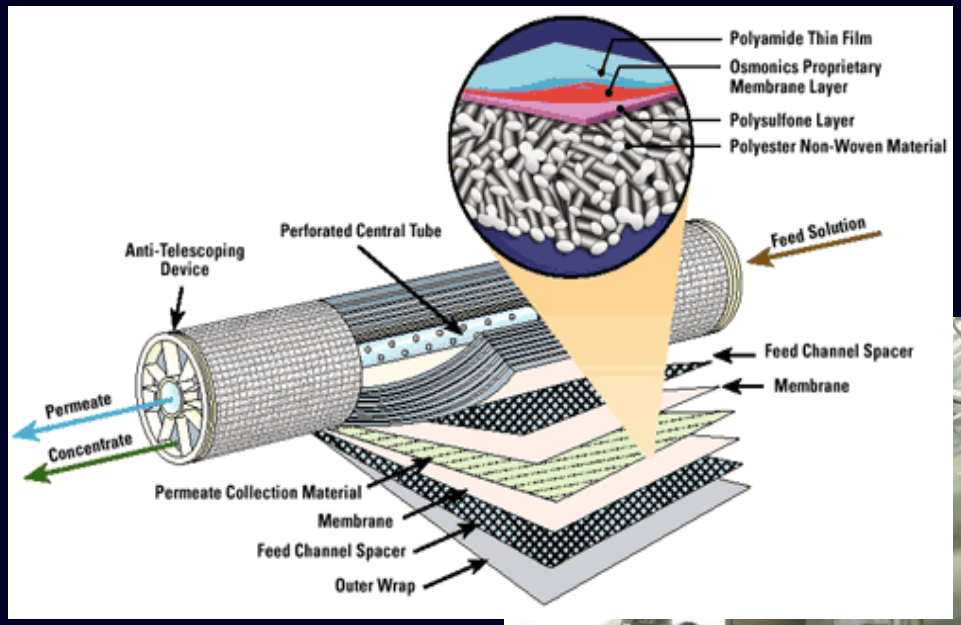

WeatherTRAK ETplus


CALIFORNIA FRIENDLY
plant
bewaterwise.com

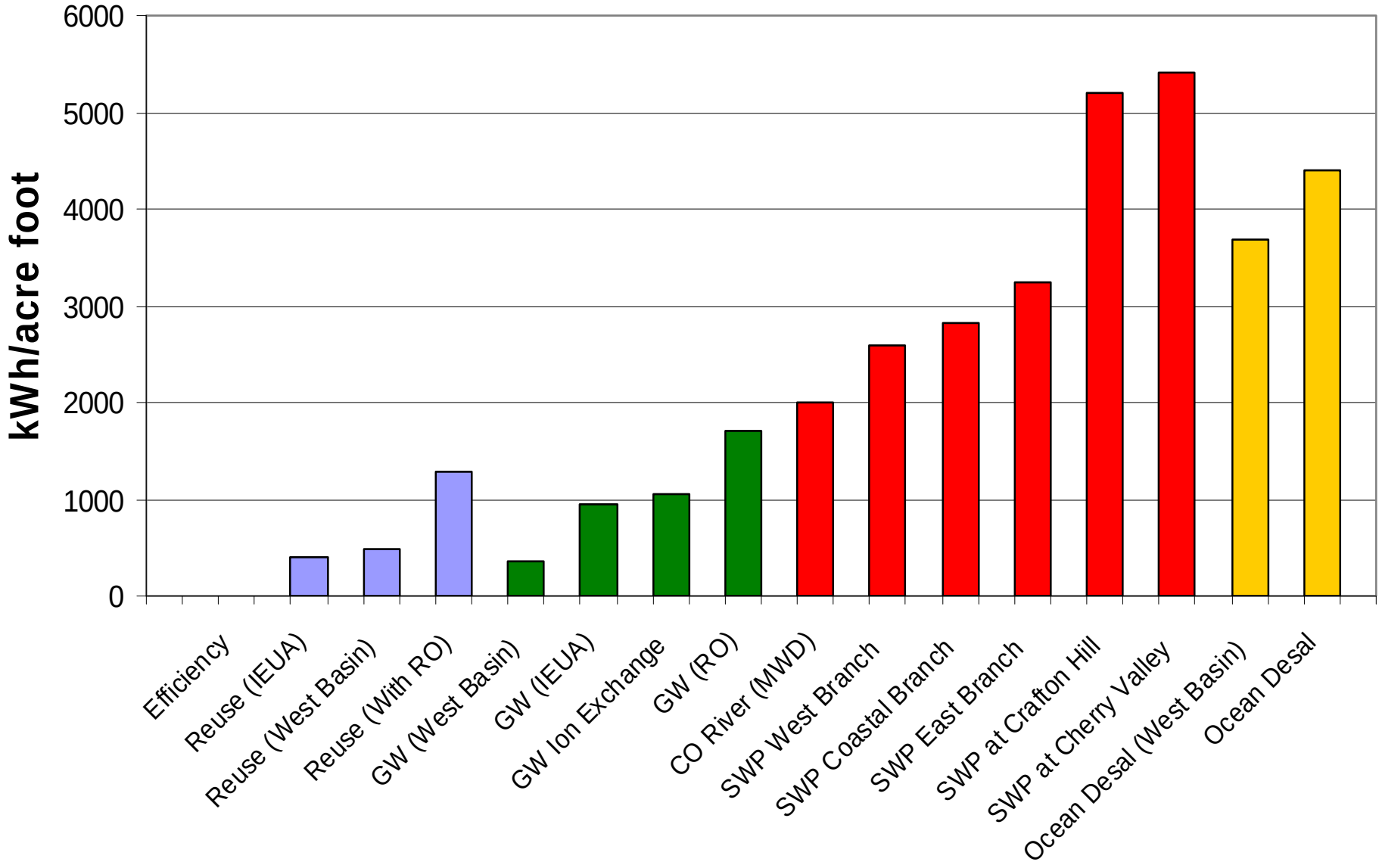
Efficiency Options



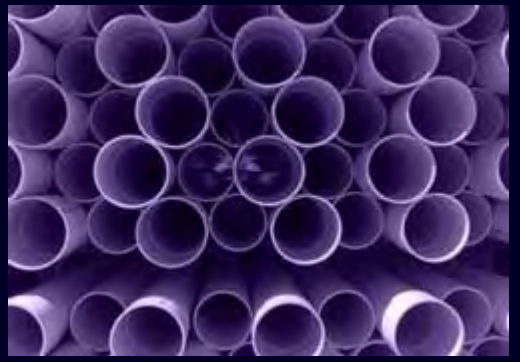
Advanced Water Treatment



Energy Intensity of Selected Water Supply Sources in Southern California



Recycled Water



Stormwater Flows

Infiltration Islands

Courtesy of Bruce Ferguson

Bioretention

Rain Gardens

Permeable Surfaces

Robert Wilkinson, Ph.D.

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University of California, Santa Barbara

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ATTACHMENT 2

MWD's WaterFix Cost Assessment is Inaccurate and Inadequate

August 11, 2017 | Doug Obegi

The Metropolitan Water District of Southern California (MWD) released its final white paper on paying for the California WaterFix project yesterday. Based on my initial review, as discussed below the white paper relies on two inaccurate assumptions, which significantly bias the analysis and conclusions and provides the Board of Directors with misleading and inaccurate information. An accurate

assessment of costs and cost allocation is critical for the Board of Directors to exercise their fiduciary duty to ratepayers across Southern California, as they decide whether to commit billions of dollars over the coming decades in higher water rates and property taxes, to pay for WaterFix. MWD's white paper provides a wholly inadequate basis for the Board of Directors to exercise that fiduciary duty. MWD's Board of Directors should demand an external review of the memo (for instance, the Westlands Water District had Goldman Sachs provide a presentation to their Board of Directors), and more time to consider the pros and cons, before making a decision on whether to fund the tunnels.

Inaccurate assumption #1: *SWP will pay 55% of the cost for WaterFix*.

MWD's memo claims that there will be a 55%/45% split of SWP and CVP cost allocation for WaterFix. This is almost certainly inaccurate and significantly understates the cost allocation for the State Water Project and MWD. Because the Bureau of Reclamation is not intending to opt into WaterFix (*see* USBR's memorandum regarding CVP contractor participation in WaterFix), two groups of CVP contractors will continue to get nearly 20% of the total average water exports from the Delta, but will not pay

for WaterFix: the San Joaquin River Exchange Contractors (875taf/year), and south of Delta wildlife refuges (271taf/year). As a result, the SWP's share of WaterFix cost allocation is likely to be at least 65-75%, generously assuming all other CVP contractors opt in, based on the SWP's share of the remaining Delta water exports.

This is not a new problem. In a 2015 cost-benefit analysis commissioned by the State of California, David Sunding "assume[d] that the federal government or some other entity makes a roughly $3.9 billion contribution to the capital and operating costs of WaterFix to cover the costs allocated to the exchange contractors and refuges. If these costs must be borne by the other Delta water users, then the net benefits of the project are even more negative for agricultural contractors." Because the federal government will not be paying these costs, the SWP and MWD will have to pay a higher share of the total costs of WaterFix. In a prior blog I explained why Goldman Sachs' presentation to the Westlands Water District, which similarly failed to account for the costs associated with Delta exports to the Exchange Contractors and wildlife refuges, was also inaccurate.

This incorrect assumption has major implications for MWD member agencies. Instead of paying for 26% of total WaterFix costs, assuming that all other SWP and CVP contractors opt in, MWD is likely to pay a minimum of 32-35% of the total cost. This incorrect assumption is likely to increase the cost to MWD and other SWP contractors by nearly 30% compared with what MWD presented in its white paper.

In addition, MWD's memo largely ignores what happens if other contractors opt out (USBR's Participation Memo assures CVP contractors that they will not suffer any water supply impacts or financial impacts if they opt out of WaterFix). If other contractors opt out, then the share of those contractors who opt in would necessarily have to increase. Similarly, the prior financial analysis for the California Treasurer's office also noted that the contracts will have to include provisions to deal with contractors defaulting or opting out later (step up provisions), as well as provisions to deal with how agricultural contractors can afford to pay for the project in dry and drought years when they get little or no water from the Delta. And if the contractors decide to capitalize interest payments during the construction period (as some other analyses have assumed), this would

also increase the repayment costs. All of these factors are likely to result in additional fiscal impacts that MWD ignores.

NOTE: MWD and other SWP contractors apparently have been meeting with the Bureau of Reclamation and CVP contractors for months to discuss WaterFix cost allocation, but they have refused to make any of those documents publicly available. NRDC filed a request for these documents under the Public Records Act on April 10, 2017, but the California Department of Water Resources has repeatedly delayed providing any documents in response to our request.

Inaccurate Assumption #2: *WaterFix will increase water supply by 1.3 million acre feet.*

MWD's memo asserts that WaterFix would increase water supply by 1.3 million acre feet per year, with MWD getting 337,000 acre feet of additional water supply per year. In contrast, the final EIS/EIR for WaterFix estimates that the State Water Project would increase exports by 186,000 acre feet, and the Central Valley Project would reduce exports by 14,000 acre feet, for a total increase of 172,000 acre feet per year. Of course, one could ask why CVP contractors would agree to pay half the cost of a project

that reduces their water supply, but we'll ignore that problem for now.

MWD member agencies should be alarmed by MWD's continued use of this fake baseline to estimate water supply costs. Why are staff hiding behind fake numbers, and refusing to use the numbers in the EIS/EIR to calculate per acre foot costs? MWD's continued use of these false numbers to compare with other water supply options is false and misleading. Indeed, MWD's use of this fake baseline to estimate increased water supply might be considered fraudulent if it was asserted in an official statement for a bond or other financial document.

In contrast, if we use MWD's estimated $207M annual cost for WaterFix *(ignoring incorrect assumption #1 above)*, and assume that MWD gets 47.13% of the 186,000 acre feet per year increase in SWP exports from the final EIS/EIR *(fixing incorrect assumption #2)*, **then the cost per acre foot is approximately $2,361**. Even ignoring incorrect assumption #1, fixing incorrect assumption #2 shows that the cost per acre foot is nearly four times the cost estimate in MWD's memo. If we were to try to fix incorrect assumption #1 and incorrect

assumption #2, the costs would skyrocket.

Conclusion #I: *WaterFix is less cost effective than local water supply projects.*

Contrary to MWD's incorrect assumptions and assertions, WaterFix is more expensive than other local water supply projects. As shown above, even without fixing incorrect assumption #1, fixing incorrect assumption #2 shows that the cost of WaterFix is more than $2,300 per acre foot, significantly more expensive than the cost of local recycled water projects and is nearly the same as desalination. There are numerous local water supply projects that MWD Member Agencies have identified in their urban water management plans, which will enable Southern California to reduce reliance on the Delta, increase drought resilience, and help protect the economy and environment. Below are just a few examples of projects that are significantly cheaper than WaterFix:

Project	Cost	Water Supply Yield (average)	Source
	$2.7		

	billion capital cost		
Carson Regional Water Recycling Project	$129M annual O&M cost $1,600 per acre foot	168,000 AF/year (150 MGD)	*Source: MWD*
Pure Water San Diego	$1,700-$1,900 per acre foot	90,000 AF/year (83 MGD)	*Source: City of San Diego*
Tillman Groundwater Replenishment Project	$400M capital cost $19M annual O&M Cost	30,000 AF/year	*Source: Los Angeles Department of Water and Power*

OCWD Groundwater Replenishment System, Phase III	$252M	33,000 AF/year (30 MGD)	*Source: Orange County Water District*
Inland Empire Recycled Water Distribution System	$81.8M capital cost $3.6M annual O&M cost	20,000 AF/year	*Source: MWD 2015 UWMP; IEUA 2015 UWMP*
LA Basin Regional Stormwater Capture	$1,300 per acre foot	43,300 AF/year	*Source: Los Angeles County Public Works, LA County Flood Control District, U.S. Bureau of Reclamation*

LA County Flood Control Dams modification (stormwater capture)	$183 per acre foot	150,000 AF/year	*Source: Los Angeles County Public Works, LA County Flood Control District, U.S. Bureau of Reclamation*

Conclusion #2: *MWD's White Paper provides an inadequate basis for the Board of Directors to make this major fiduciary decision.*

MWD's Board of Directors has a fiduciary duty to the millions of Southern Californians who would have to pay for this project. If WaterFix is approved, Southern Californians will pay for the project for decades; that's true even if they don't use any water from the Bay-Delta, since MWD has assumed it will collect more than $100M per year in property taxes across the region to pay for WaterFix. The Board of Directors must have an accurate assessment of the costs and cost allocation to make this

decision. In addition to understanding what the actual cost of WaterFix is likely to be, the Board of Directors must also decide whether WaterFix is a better investment than other water supply projects, and whether paying for the tunnels precludes more cost-effective investments in local and regional water supply projects that the member agencies have planned in their Urban Water Management Plans. MWD's white paper fails on all counts.

Ultimately, MWD's White Paper on Cost Allocation is misleading, inaccurate, and an inadequate basis on which to decide whether to spend billions of dollars over the coming decades. If I were on the Board of Directors of MWD, I would demand an independent review and significantly more time to weigh the pros and cons of this momentous decision.

ABOUT THE AUTHORS

DOUG OBEGI

Director, California River Restoration, Water Division, Nature Program

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ATTACHMENT 3

STRATECON INC.

To: Jeffrey Michael

From: Rodney T. Smith

RE: Impact of the Annual Yield of the Twin Tunnels Project on the Cost of Project Water

Date: August 30, 2016

This memorandum responds to your inquiry for an update of my analysis on the above matter I originally published in September 2013. As with any long-term project, expectations about the future are critical for project assessment. There are no guarantees. We can identify the implications of a range of possible outcomes.

Structure of Project Commitment

Like any infrastructure project, the Twin Tunnels requires significant investments up front, with a significant delay between the timing of financial commitments and start of project operations. With the design and construction period currently anticipated to last fifteen years before the start of project operations, a meaningful economic valuation of project costs must address the timing issue.[1]

The Annual Cost of Twin Tunnels Water

The table below shows how the annual cost (2014$) varies with average annual yield of incremental water supplies from the project.[2] Use your own expectation about the future water supply situation with and without the tunnels. Go down the first column until you reach your estimate of the annual (incremental) yield of the tunnels. Go across the row for the annualized cost estimate that is consistent with your project risk assessment. If you believe that project risk (other than hydrology) is as sound as a U.S. Treasury Note or Bond, then stop at the estimated water cost for the risk premium of 0%. Keep going if you think that there are material project risks.

California water utilities earn risk premium 150 basis points (1.5%) above the yield on U.S. Treasury Notes. A risk premium of this magnitude seems reasonable given the well-known financial risks of "mega infrastructure projects" and the legendary environmental risks confronting the State Water Project. Therefore, the annual cost of project water would fall within the amounts given in the last two columns in the table.

[1] To address the timing issue, the annualized cost of water is estimated by dividing the present value of project costs (design, construction, land acquisition, mitigation, commissioning and operations and maintenance) by the present value of water anticipated water deliveries using an inflation-adjusted interest rate. The resulting annual cost represents the financial equivalent of the project value of project costs by paying the estimated annual cost at the time of project deliveries.

[2] See attachment for discussion of assumptions.

The annual cost of project water must be considered within the context of water quality (untreated), location (Tracy) and reliability (non-firm supply).

Annualized Cost of Twin Tunnels Water (2014$)
by Incremental Yield of Tunnels

Annual Yield (acre feet)	Risk Premium		
	0%	1%	2%
100,000	$9,590	$12,817	$16,926
200,000	$4,795	$6,408	$8,463
300,000	$3,197	$4,272	$5,642
400,000	$2,397	$3,204	$4,231
500,000	$1,918	$2,563	$3,385
600,000	$1,598	$2,136	$2,821
700,000	$1,370	$1,831	$2,418
800,000	$1,199	$1,602	$2,116
900,000	$1,066	$1,424	$1,881
1,000,000	$959	$1,282	$1,693
1,100,000	$872	$1,165	$1,539
1,200,000	$799	$1,068	$1,410
1,300,000	$738	$986	$1,302
1,400,000	$685	$915	$1,209

Annual Yield (acre feet)	Risk Premium		
	0%	1%	2%
1,500,000	$639	$854	$1,128
1,600,000	$599	$801	$1,058
1,700,000	$564	$754	$996
1,800,000	$533	$712	$940
1,900,000	$505	$675	$891
2,000,000	$479	$641	$846

Assumptions of Analysis

Item	*Assumption*	*Comment*
Design and Construction Costs	$14.9 billion (2014$)	Program Budget[3]
Mitigation Costs	$796 million (2014$)	California WaterFix Mitigation Cost Estimate[4]
Operations & Maintenance Cost	$25.1 million for 5 years and $38.1 million thereafter (2014$)	2012 BDCP estimate
Timing of Design and Construction Costs	Pro-rated over periods identified in DCE Program Schedule[5]	
Timing of Mitigation Costs	Prorated over construction period	
Project Cost Increases	Real cost of design and construction increase at 1% annually	Based on historical record of Bureau of Reclamation indexes increasing by 1.1% faster than inflation since 2000
Mid-year adjustment for calculation of present value	Costs incurred throughout the year	
Debt Service Reserve	50% of annual debt service	Valuation considers earned

[3] AGREEMENT REGARDING CONSTRUCTION OF CONVEYANCE PROJECT BETWEEN THE DEPARTMENT OF WATER RESOURCES AND THE CONVEYANCE PROJECT COORDINATION AGENCY , Budget | Exhibit E | V. 4

[4] *Ibid*

[5] *Ibid*

Item	*Assumption*	*Comment*
		interest and terminal value of debt reserve at the end of project financing
Real Interest Rate	2.275%	Based on DWR's estimate of interest rate and inflation

ATTACHMENT 4

SAVE THE CALIFORNIA DELTA ALLIANCE

WATERFIX VIOLATES POLICY DP P2

DP P2 – Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats

"Water management facilities, ecosystem restoration, and flood management infrastructure ***must*** be sited to avoid or reduce conflicts with existing uses…."

(Delta Plan, p. 194)

WaterFix Intakes Improperly Sited At Delta Legacy Communities Clarksburg & Hood

WATERFIX FEIR ADMITS IMPACTS ON CLARKSBURG AND HOOD

- "[WaterFix construction will] result in changes to the rural qualities of these communities during the construction period…."
- "Effects associated with construction activities could also result in changes to community cohesion…."
- "..adverse social effects could also arise as a result of declining economic stability in communities closest to construction effects…."
- **"[N]oise-related effects on residential property could lead to localized abandonment of buildings."**

(WaterFix FEIR, p. 16-165)

DEAFENING PILE-DRIVING NOISE FROM INTAKE CONSTRUCTION

- Construction of WaterFix includes driving **23,900 piles** at twelve construction areas spread across the Delta.
- A total of 10,909,704 strikes from impact hammers will be required to drive the piles home.
- The majority of these piles will be driven at the three intake structures located near Clarksburg, Hood, Locke, and Walnut Grove.
- Intakes 2,3, and 5 will each experience **90,000 pile strikes per day** during pile driving activities. Over an eight hour shift, that is three strikes per second.

(SCDA-82, p.3.E-4 - 3E-5: 2-11; 28-33)

NOISE IMPACTS ANALYZED BY ACOUSTICAL ENGINEER CHARLES SALTER

Charles M. Salter, PE
President

Mr. Salter has practiced acoustical engineering for over 40 years. With educational backgrounds in architecture, planning, engineering, and business, he has conducted a wide range of consulting in the areas of architectural acoustics, noise control engineering, and environmental noise impact. As an expert witness, Mr. Salter has been involved in over 100 legal cases in California, Arizona, Nevada, Utah, Oregon, Washington, and Hawaii. He has testified in over 20 court trials and arbitrations and has given more than 70 depositions. The cases have involved noise sources such as freeways, rapid transit, plumbing systems, music, mechanical equipment, aircraft flyovers, and the San Francisco cable car system.

education

Boston College MBA
Finance, 1972

Massachusetts Institute of Technology, BS Art and Design, major in Architecture, minor in City Planning, 1969

Tufts University BSCE major in Structural Engineering, minor in Economics, 1965

publications

Coauthor, *ACOUSTICS: Architecture, Engineering, the Environment* (1998 William Stout Publisher)

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(X04.000015)

Sound Levels From Pile Driving Calculated by Acoustical Engineer Charles Salter:

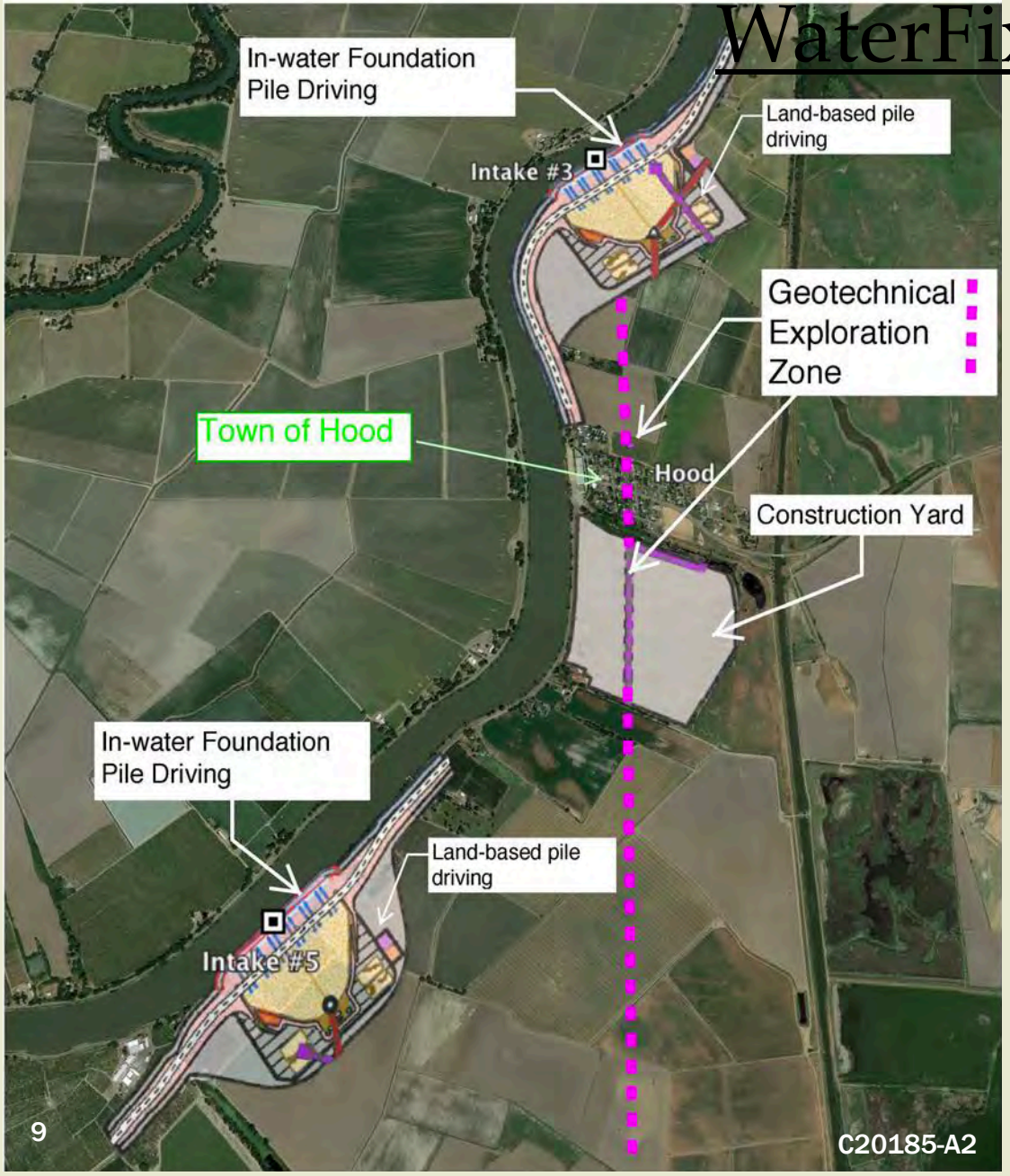
"We estimate that the sound from the ten million plus impact hammer strikes will be 115 dBA at a distance of 50 Ft from the source. 115 dBA is very loud, roughly equivalent to the sound produced by a siren on an emergency vehicle."

C20185-A2

(p.3 SCDA – 65, x.4.000015)

When given the opportunity at SWRCB WaterFix Hearings, DWR's experts declined to dispute any of Mr. Salter's findings.

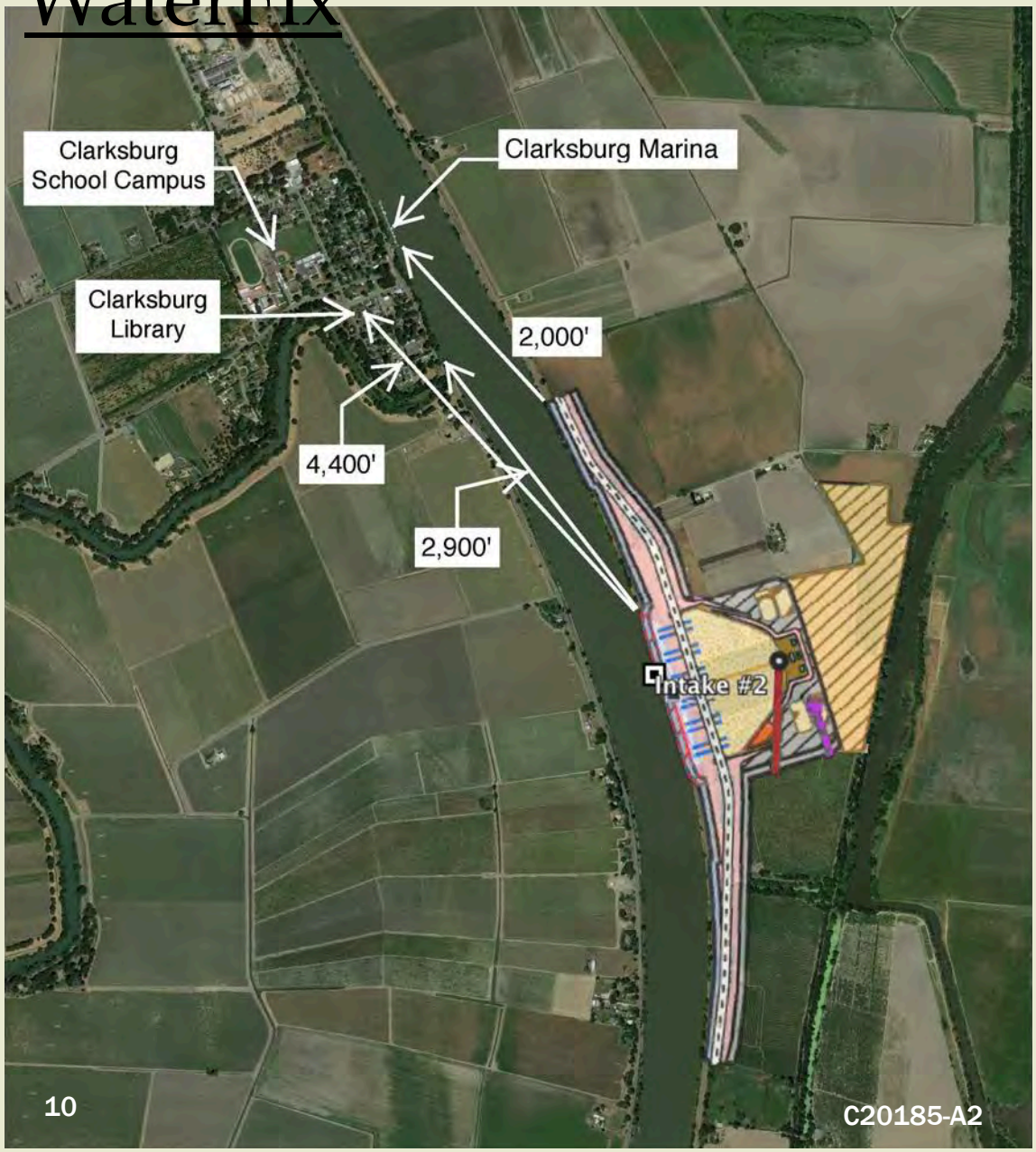
Town of Hood Dwarfed by California WaterFix



SOUND LEVELS FROM CONSTRUCTION NOISE AND PILE DRIVING:
Town of Hood = 80 dBA
(SCDA – 65, p.2: 12-16, x.4.000015)

80 dBA equivalent to a freight train 15 meters away.

Town of Clarksburg Impacted by California WaterFix



SOUND LEVELS FROM CONSTRUCTION NOISE AND PILE DRIVING:

Clarksburg Marina = 75 dBA

Clarksburg Library = 76 dBA

Clarksburg School = 76 dBA

(SCDA – 65, p.2: 12-16, x.4.000015)

Salter concludes:

"[The construction noise] will interfere considerably with speech communication in the communities of Hood and Clarksburg, requiring people to raise their voices. Interference with such a basic activity as speech is likely to have a significant negative impact on the communities, making them unattractive places to live and visit."

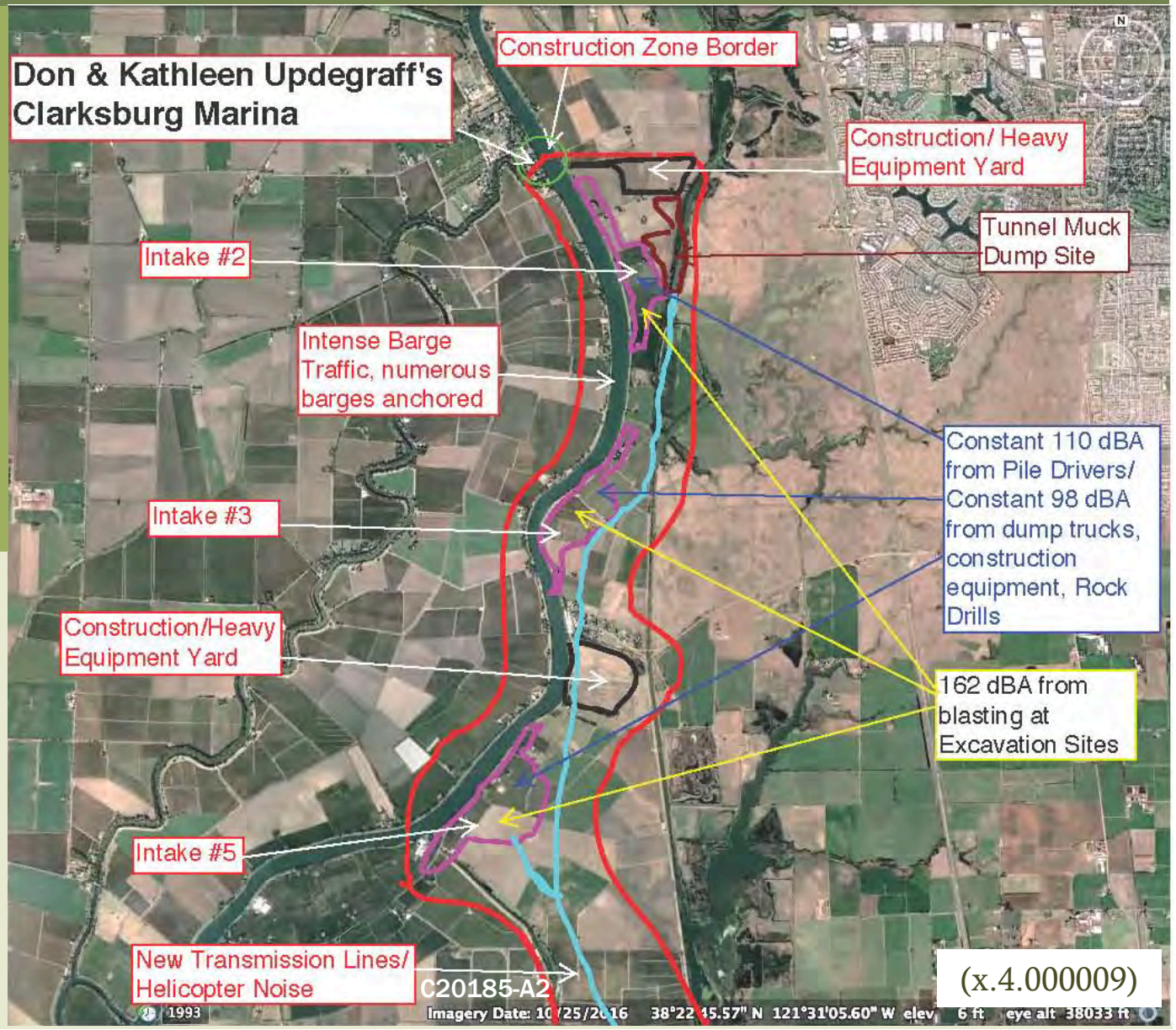
(SCDA-65, p.2: 17-25)

CLARKSBURG / HOOD CONSTRUCTION ZONE IMPACT CATASTROPHE

WaterFix schedule shows 8 years construction at intakes.

(SCDA-83)

Would you want to live through this for 8 years?



WaterFix FEIR Conclusion Regarding Multiple Noise Impacts From Intake Construction:

"Significant and Unavoidable"

(FEIR p.23-193 – 23-197)

22 year Clarksburg resident - Barbara Daly's comments on WaterFix FEIR

"These are small towns and people here do not have a lot of money and there is not a lot of opportunity to make money here. Our communities are held together by sense of place and home. We stay here because it is quiet and peaceful and the outside world doesn't much intrude.

(July 10, 2017, comments on FEIR comment table 3-3)

22 year Clarksburg resident - Barbara Daly's comments on WaterFix FEIR continued..

"Hood will likely be abandoned entirely to become a ghost town. There will be large scale abandonment in Clarksburg. The historical integrity of Locke and Walnut Grove, situated within their historical vernacular landscape, will be lost forever."

(July 10, 2017, comments on FEIR comment table 3-3)

Clarksburg Marina Owners - Don and Kathleen Updegraff's Comments on WaterFix FEIR

"[Noise from WaterFix construction will] drive all our customers away and put us out of business. [I]t is likely none of the businesses will return even after construction is complete because the whole area will be an industrial zone due to the intakes."

(July 6, 2017 comments, FEIR table 3-3)

Let's Turn to Delta-wide Impacts On Recreation, Particularly Boating and Marinas.

COEQUAL GOALS

- "Providing a more reliable water supply for California, and
- Protecting, restoring, and enhancing the Delta ecosystem.

These goals, the Legislature added, ***must*** be met in a manner that:

- *Protects and enhances* the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."

(Delta Plan ppES2-ES3)

WATERFIX OVERWHELMS RECREATION THROUGHOUT THE DELTA

- Tunnel muck dumps on Delta Islands (30,000,000 cubic yards)
- 18,800 barge trips concentrated in summer recreational boating season
- Barge landings located in prime Delta recreational anchorages
- Pile driving
- Heavy truck traffic on 2 lane Delta Roads
- Traffic Backups due to draw-bridge openings for barges

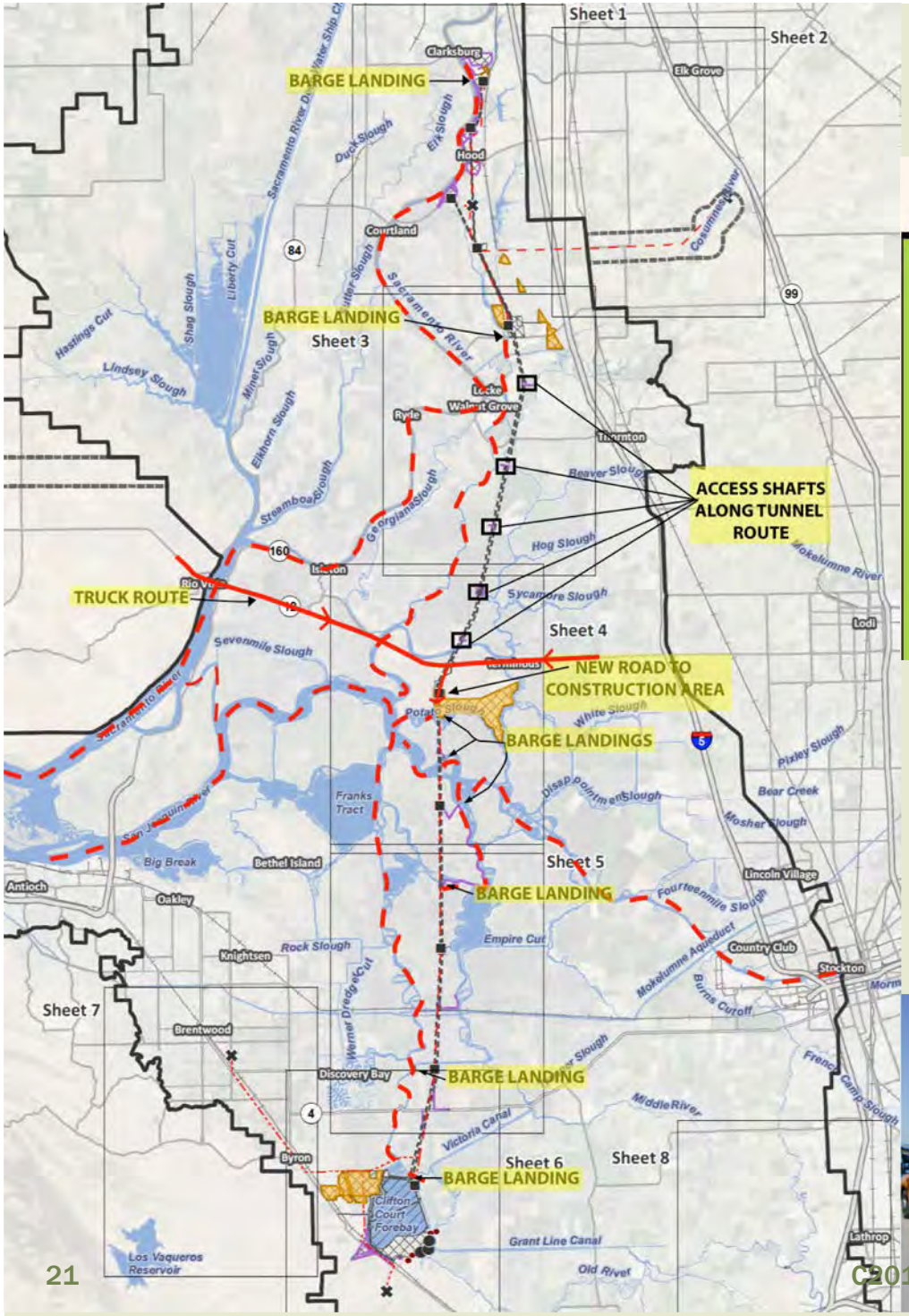
CEQA CONCLUSION:

"Construction of Alternative 4A intakes and related water conveyance facilities would result in permanent and long-term (i.e., lasting over 2 years) impacts on well-established recreational opportunities and experiences in the study area because of access, noise, and visual setting disruptions that could result in loss of public use. These impacts would occur year-round.

* * *

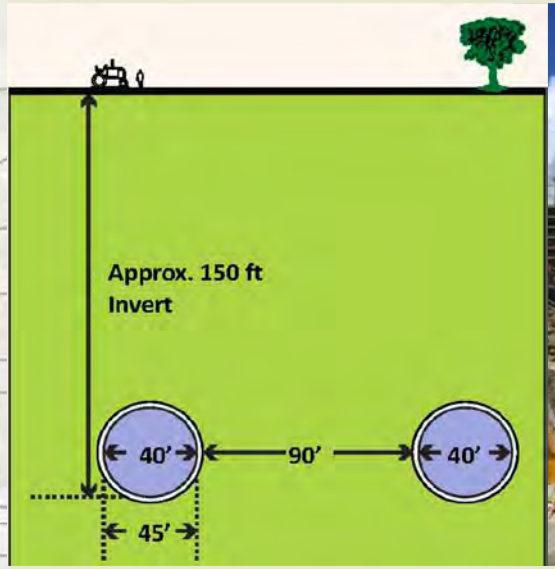
Therefore, these impacts are considered significant and unavoidable"

(WaterFix FEIR, p.15-469:26-37)



EXCAVATED TUNNEL MATERIALS SITES

BARGE ROUTE



- Total excavated material will be about equal to 2-1/2 million dump truck loads
- There will be a total of 9,400 barge trips mostly during summer and fall months occurring over 5-6 years

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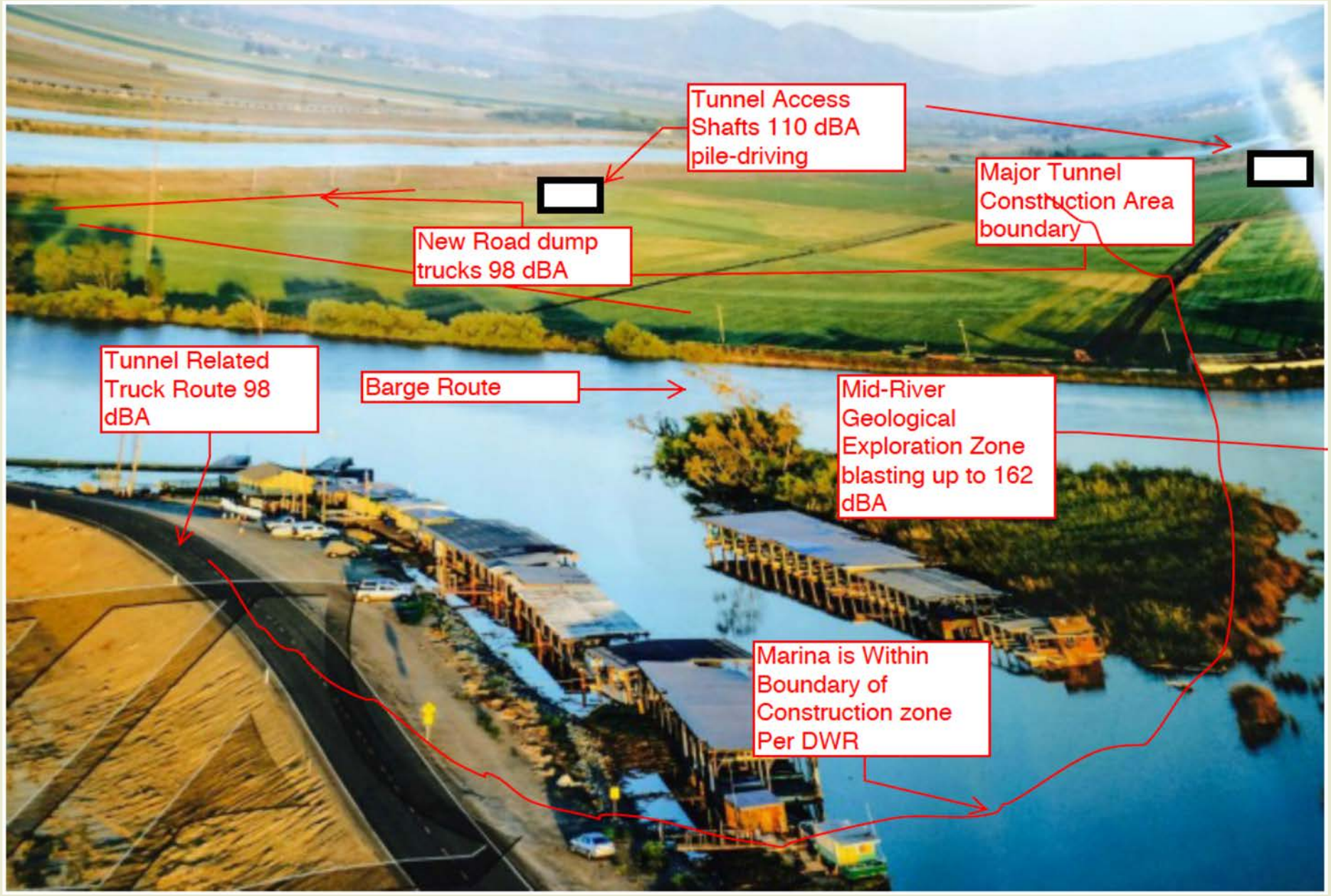
Construction Impacts Bullfrog Marina



(July 7, 2017, FEIR comment letter from Carl Wenske, comment table 3-3)

BULLFROG MARINA WILL FACE

- **River blockages**
- **Continuous noise**
- **Heavy barge traffic**
- **Congestion**
- **Truck traffic**
- **Visual disturbance**

Bullfrog Marina Manager - Carl Wenske's comments at FEIR hearing

"Our marina **will not be able to survive** the lengthy construction and we will have to close our business."

(July 7, 2017, FEIR comment letter from Carl Wenske, comment table 3-3)

WaterFix FEIR admits marinas will be forced to close

"[R]ecreation-dependent businesses including **many marinas** and recreational supply retailers may not be able to economically weather the effects of multiyear construction activities and may be forced to to close as a result.."

(WaterFix FEIR, p, 16-168:3-4.)

Many marinas will be forced out of business because boaters will abandon the Delta in droves.

Survey of Delta Boaters Conducted at 2017 Rio Vista Bass Derby

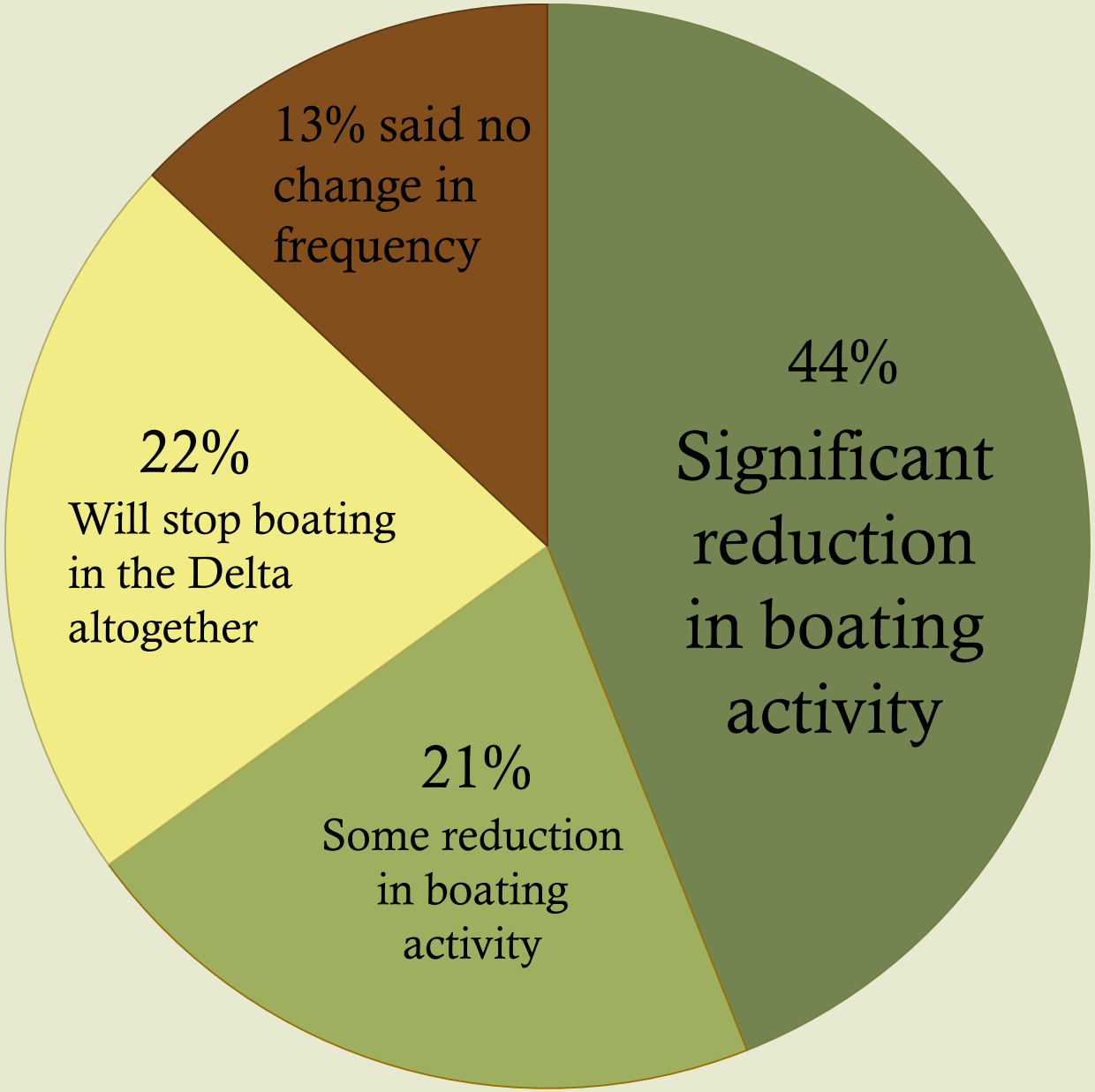
- Conducted by 15 survey-takers, over 2 days
- 220 surveys completed

(SCDA-351-1 – 352-5)

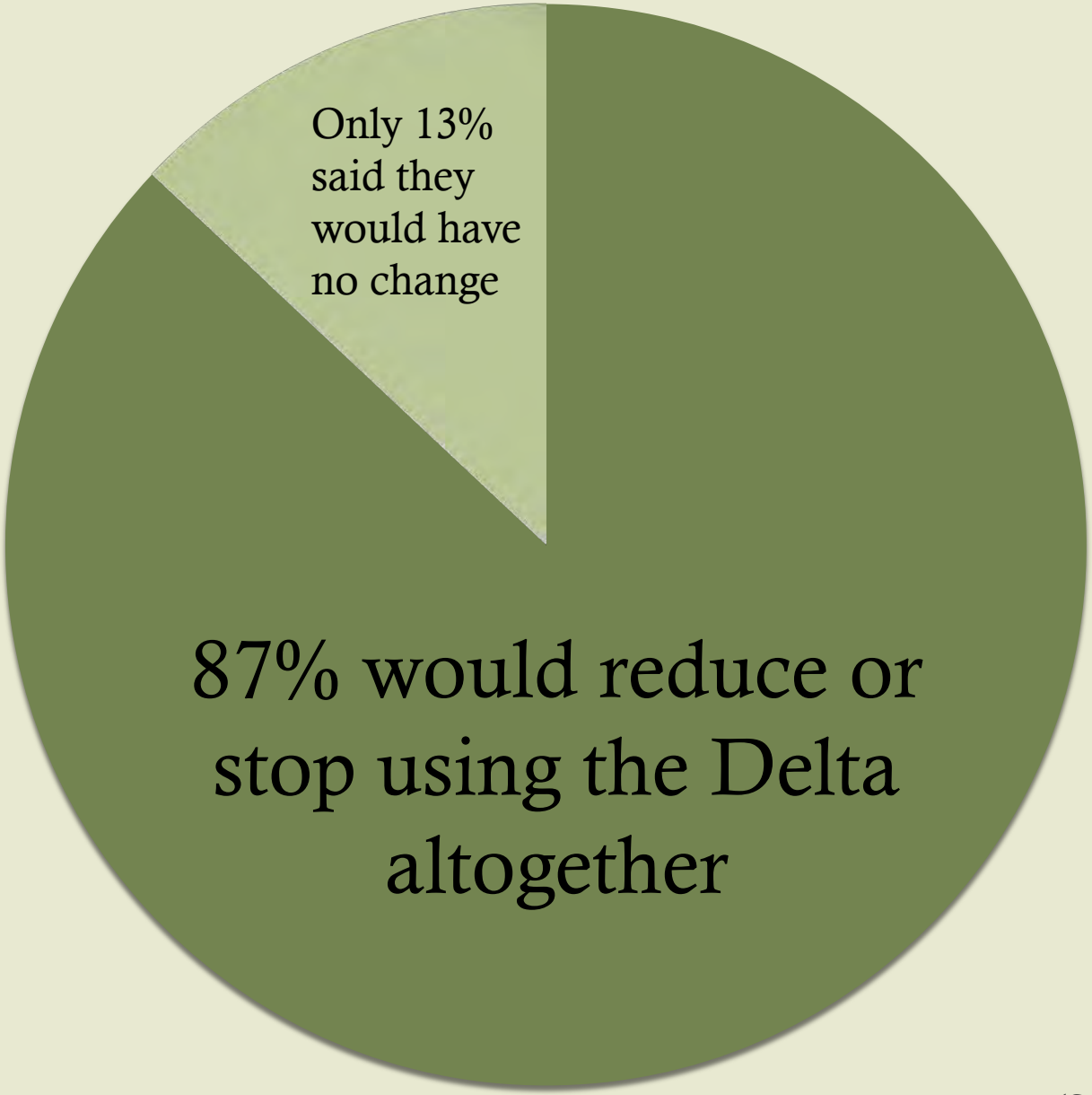
- All who completed the survey were Delta recreational boaters
- Survey questions were neutrally worded
- Survey takers disclosed no position on tunnels
- Participants were read description of project from WaterFix FEIR

(SCDA-351-1 – 352-5)

Rio Vista Bass Derby Survey



Rio Vista Bass Derby Survey



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(SCDA-351-1 – 352-5)

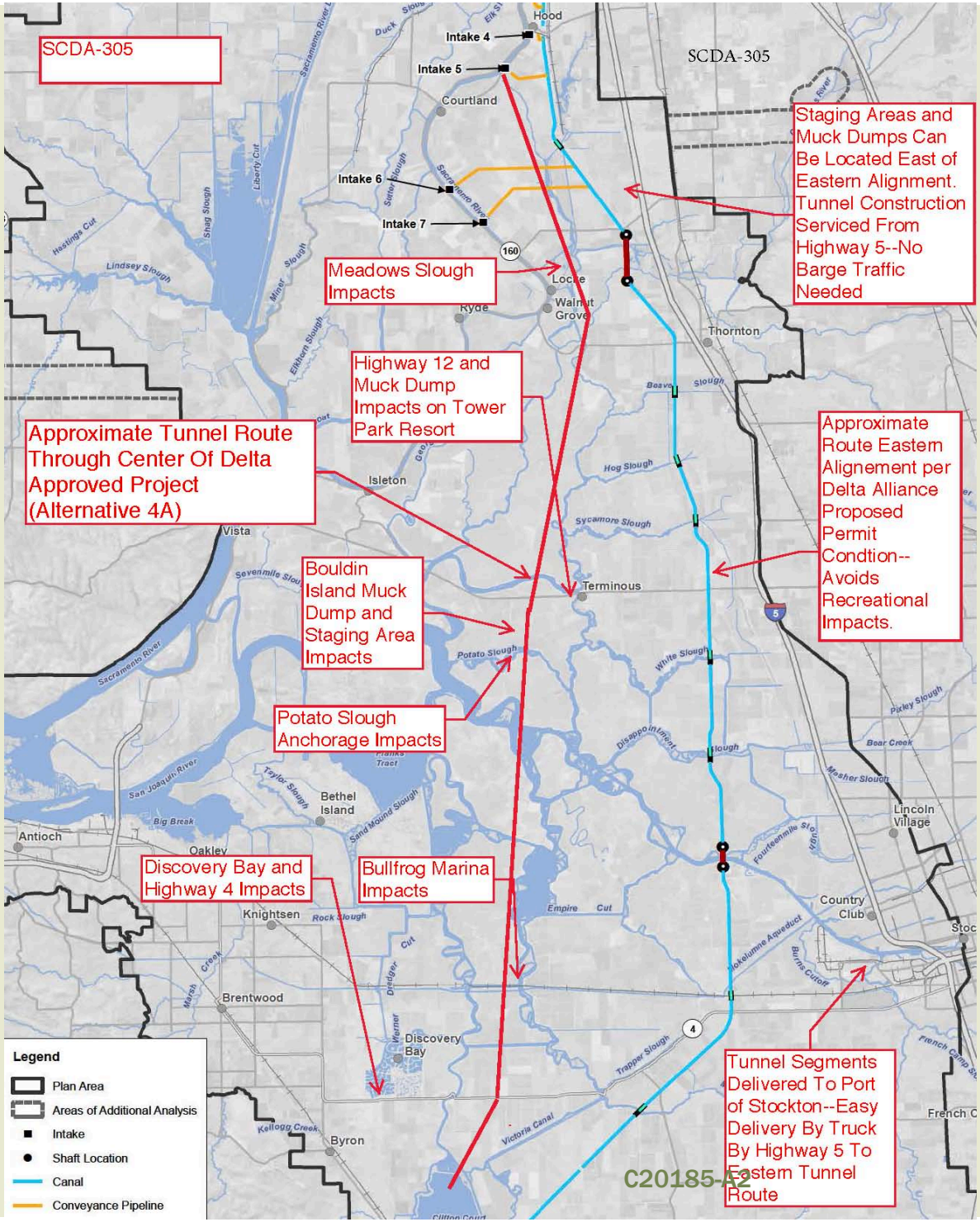
All of this is the result of poor decisions siting water facilities – **recall DP P2**

WATERFIX VIOLATES POLICY DP P2

DP P2 – Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats

"Water management facilities, ecosystem restoration, and flood management infrastructure **must be sited to avoid or reduce conflicts with existing uses….**"

(Delta Plan, p. 194)



WATERFIX FEIR FIGURE 3-4 EASTERN ALIGNMENT

(SCDA – 305)

Turning to Delta Plan Policies ER P1 and WR P1

Delta Plan Policy ER P1

"The State Water Quality Control Board Bay Delta Water Quality Control Plan flow objectives shall be used to determine consistency with the Delta Plan."

A key measure in D-1641 flow objectives is the Export to Inflow Ratio (E/I Ratio)

- The D-1641 E/I Ratio limits the amount of water that can be withdrawn from the Delta for export.

The maximum amount that can be withdrawn for export at any time is a percentage of the water that is flowing into the Delta at that time.

- Most of Delta inflow comes from the Sacramento River.

- D-1641: Sacramento River Inflow is measured at Freeport.

- *All* exported water is included in the "Export" term of the D-1641 E/I Ratio.

WaterFix violates the D-1641 E/I Ratio.

- WaterFix does not "count" water diverted by the new intakes as an export for the D-1641 E/I Ratio.
- WaterFix moves the Sacramento River inflow compliance point from Freeport to downstream of the new intakes.

- The new WaterFix north Delta intakes can divert up to **9,000 cubic ft per second** (cfs).

- For perspective, the entire flow of the Sacramento River during summer months is about **16,000-20,000 cfs**

FOR WATERFIX:

- All exports from the new intakes count as zero for export calculation
- D-1641 compliance point for calculating Sacramento River inflow moved

"For the PA [proposed action, i.e., California WaterFix], Reclamation and DWR propose that the NDD be excluded from the E/I ratio calculation. In other words, Sacramento River inflow is defined as flows downstream of the NDD and only south Delta exports are included for the export component of the criteria."

(USFWS BiOp, p. 28)

All of the modeling submitted by DWR to this Council that purports to show that WaterFix "complies with D-1641"shows only that it purports to comply with D-1641 as DWF has **unilaterally re-defined** the E/I Ratio.

Mr. Brodsky: It's a yes or no question. You're changing the location of where the flow of the Sacramento River is measured to calculate the export-inflow ratio; yes or no?

Witness Pierre: That's correct

Mr. Brodsky: So for purposes of the CALSIMS modeling that was presented to the Board, you took the measurement of Sacramento River flow at a point different from Freeport; isn't that correct?

Witness Pierre: Yes, that's what's being proposed in this criteria, and that's how it was also modeled.

(State Water Resources Control Board California WaterFix Hearing Transcript, July 29, 2016, Part 1A, Transcript Vol. 4, p.231:12-25; p.232:1-8)

WaterFix does not comply with Policy ER P1 and there is ***no*** evidence in the record to show that is does comply.

WATERFIX VIOLATES DELTA PLAN POLICY WR P1

WR P1 "is the very core of the Delta Plan"

(Delta Stewardship Council argument in Delta Stewardship Council Cases, JCCP 4785)

DELTA PLAN POLICY WR P1 PROHIBITS WATER EXPORT ACTIVITY IF:

1. Water supplier has failed to include in their 2015 water management plan "expected outcome for measurable reduction in Delta reliance".

2. Failure of #1 has significantly caused the need for the export activity.

3. The export activity would have a significant adverse environmental impact in the Delta.