

DEPARTMENT OF WATER RESOURCES

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March 28, 2018

VIA ELECTRONIC MAIL: CWFHearing@waterboards.ca.gov

Tam Doduc, Hearing Officer
Felicia Marcus, Hearing Officer
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: Public Availability of Project Optimization Fact Sheet

Dear Hearing Officers Doduc and Marcus,

On Friday, March 23, 2018 I announced as a housekeeping matter the fact that the Department of Water Resources would be making available to the public additional engineering detail proposed for the California WaterFix. The proposed optimization of the project is a refinement of engineering detail, which is the progression of the project from a level of detail contained in the Conceptual Engineering Report.

Attached to this letter is the public announcement, in the form of a fact sheet, of this proposed optimization. DWR also provides below tables of the additional information such that the Hearing Officers can easily identify what aspects of the project are addressed. As you will see in the tables, and is stated in the fact sheet, the intent of the proposed engineering refinements is to further limit the potential effects of the construction of the California WaterFix.

It is the contention of DWR that all the aspects of the information released here is within the proper scope of rebuttal in Part 2 of the California WaterFix water rights change hearing. Should the Hearing Officers agree, parties to this hearing may utilize this information in preparing rebuttal testimony.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tripp Mizell".

Tripp Mizell
Sr. Attorney, Office of the Chief Counsel
California Department of Water Resources

Project Footprint Change Description

The proposed project would include the same major components included as part of approved project. In some instances these components have been modified with the goal of further mitigating the environmental impacts disclosed in the Final EIR/EIS. Modifications to the project components would, in some cases, result in changes to how the components would be constructed. These footprint modifications are further described below.

Location	Description of Change
Intakes 2/3/5	No Changes
Intermediate Forebay (IF)	The 2 northernmost RTM impacts on DWR parcels removed. Remaining 3 parcels have impact trimmed to remove actual pond areas.
	Zacharias Island RTM and Barge Unloading Facility removed.
	RTM area added to parcel adjacent to east of IF.
	Fuel Station shifted from NW side of Concrete Batch Plant to SE side of Concrete Batch Plant.
Intake 3 to IF	East tunnel shifted to run from Intake 3 south and east of Hood until it parallels with West Tunnel from Intake 5.
	Temporary tunnel work area moved south of Lambert road.
Staten Island	Safe Haven added to northern part of island at Walnut Grove Rd.
	Northern vent shaft shifted south approximately 22,600 ft.
	Safe Haven area moved south approximately 2,300 ft.
	Southern retrieval shaft shifted north 18,200 ft.
	Tunnel curve extended to move tunnel further east where it crosses the South Mokolumne River.
	Tunnel alignment straightened heading onto Bouldin Island from the north.
Bouldin Island	Shafts moved East to directly south of Highway 12 Interchange.
	Access road from Hwy 12 to launch shaft straightened.
	RTM area on east side of island moved north to avoid wetland impacts.
	Tunnel alignment shifted to accommodate new locations for Bouldin launch shafts.
	Barge Landing Facility moved east approximately 1,500 ft.
	Concrete Batch Plant and Fuel Station moved SE to be adjacent to west side of Bouldin launch shafts.
Venice Island	Tunnel alignment – see above description at Bouldin Island
Mandeville Island	Shaft location shifted north approximately 1,900 ft.
	Access road modified to connect to shaft at further north location.
Victoria Island	Tunnel makes westerly curve west south of CA Hwy 4 to intersect new terminal forebay.
Clifton Court Forebay	No changes are being made to the existing conditions at Clifton Court Forebay. Any and all impacts at this location that were described under Alternative 4A in the Final EIR/EIS have been removed.
Byron Tract	New terminal forebay added in location of prior RTM area NW of CCF.

	RTM areas modified to be directly north of terminal forebay. Impact removed from adjacent to river levee.
	New Canal section runs west out of terminal forebay until siphon crosses under Byron Highway, then turns southeast to intersect CA Aqueduct.
	New Canal section connects CA Aqueduct and Delta Mendota Canal.
	Concrete Batch Plant and Fuel Station added directly north of shafts.

Location	Power
WAPA (South)	PG&E Interconnection option removed.
	New line follows canal alignment to new terminal forebay then runs along west and north edges of new terminal forebay.
	Alignment follows east side of tunnel easement, with diversions that make shorter waterway crossings between Bacon and Mandeville Islands, over the San Joaquin River, and between Venice and Bouldin Islands.

Figure 1. Construction Effects on Listed Fish Species

Chapter 11 – Fish and Aquatic Resources	Alternative	
	Approved Project ¹	Proposed Project
Impacts AQUA-1, AQUA-19, AQUA-37, AQUA-55, AQUA-73, AQUA-91, AQUA-109, AQUA-127, AQUA-145, AQUA-163, AQUA-181, and AQUA-199: Effects of Construction of Water Conveyance Facilities on Delta Smelt, Longfin Smelt, Chinook Salmon (Winter-Run ESU), Chinook Salmon (Spring-Run ESU), Chinook Salmon (Fall-/Late Fall-Run ESU) , Steelhead, Sacramento Splittail, Green Sturgeon, White Sturgeon, Pacific Lamprey, River Lamprey, and Non-Covered Aquatic Species of Primary Management Concern	Tidal perennial habitat ² : 52.0 acres; Channel margin habitat ³ : 1.02 miles; Shallow water habitat ⁴ : 500.6 acres.	Tidal perennial habitat ² : 48.9 acres; Channel margin habitat ³ : 1.02 miles; Shallow water habitat ⁴ : 500.6 acres.
	LTS/NA	LTS/NA

¹ Based on impacts described in Table 3.4.1 in Chapter 3 of the updated CWF BA.

² Comprises: 26.7 acres at North Delta Diversions; 2.9 acres at Head of Old River; and 22.4 acres for barge landings under approved project, and 19.3 acres for barge landings under proposed project.

³ All at the North Delta Diversions.

⁴ From the downstream end of intake 5 to the upstream observed limit of delta smelt occurrence (Knights Landing).

Figure 2. Acres of Permanent and Temporary Impact on Natural Communities

Project Impact Acreage	Approved Project	Proposed Project
Agricultural	10,891	10,317
Alkali Seasonal Wetland Complex	1	3
Developed	136	133
Grassland	695	485
Managed Wetland	364 ^a	336 ^b
Nontidal Freshwater Perennial Emergent Wetland	5	4
Nontidal Perennial Aquatic	80 ^c	32 ^d
Tidal Freshwater Emergent Wetland	9	5
Tidal Perennial Aquatic	368 [2,299 ^c]	87
Valley/Foothill Riparian	71	35
Vernal Pool Complex	22	2
Total	12,276 [14,575^c]	11,439

^a 321 acres of this impact are from tidal restoration, which would not be a loss of wetland but a conversion and an improvement in wetland functions and services.

^b 317 acres of this impact are from tidal restoration, which would not be a loss of wetland but a conversion and an improvement in wetland functions and services.

^c 16 acres of this impact are from tidal restoration, which would convert open water to tidal wetland.

^d Includes 1,931 acres that are dredging of Clifton Court Forebay.

Figure 3. Acres of Permanent and Temporary Impact on Federally and Stated Listed Species

Species	Federal/State Status	Approved Project	Proposed Project
Boggs Lake hedge-hyssop	-/E	23	5
CA Least Tern	E/E	2,389 ^a	169
California Black Rail	-/T, FP	35	22
Conservancy Shrimp	E/-	6	0.001
California red-legged frog	T/SSC	54	472
California tiger salamander	T/T	52	403
Delta button celery	-/E	96	79
Giant garter snake	T/T	1,320	737
Greater sandhill crane	-/T, FP	9,709	8,409
Least Bell's vireo	E/E	78	41
Longhorn fairy shrimp	E/-	6	0.001
Masons Lilaeopsis	-/R	53	28
Riparian brush rabbit	E/E	0	0
Riparian woodrat	E/SSC	0	0
San Joaquin kit fox	E/T	327	488
Swainson's hawk	-/T	11,914	11,009
Tricolored blackbird	-/CE	10,779	9,494
Valley elderberry longhorn beetle	T/-	489	252
Vernal pool fairy shrimp	T/-	6	0.001
Vernal pool tadpole shrimp	E/-	6	0.001
Yellow-billed cuckoo	T/E	59	32

^a Includes 1,930 acres of Clifton Court Forebay dredging.



DESIGN REFINEMENTS PROPOSED

To Minimize Impacts, Improve Performance and Reduce Costs

Design improvements are being proposed to minimize impacts of the WaterFix project on local communities and the environment. The proposed changes build on past modifications that significantly reduced the project's footprint and costs. The new optimizations also seek to minimize impacts on Delta wetlands and the natural environment.

The proposed optimizations will be subject to environmental review as a part of the forthcoming Supplemental Environmental Impact Report expected in Spring 2018.

KEY BENEFITS OF THE NEWLY PROPOSED OPTIMIZATIONS



Significantly reduces wetland impacts



Reduces impacts to salmon and smelt at the Clifton Court Forebay



Reduces the number of power poles and lines required which improves aesthetics, reduces impacts to birds, and minimizes the need for power facilities near the town of Courtland, while also eliminating the need to relocate large 230 kV and 500 kV transmission lines



Consolidates the reusable tunnel material (RTM) footprint to minimize impacts to Stone Lakes Wildlife Refuge and nearby agricultural lands



Reduces potential impacts to the town of Hood and a residential neighborhood on Kings Island

DESIGN REFINEMENTS & PROPOSED MODIFICATIONS

WaterFix will reduce permanent impacts to Delta wetlands by

MORE THAN
500 ACRES

And reduce temporary impacts to wetlands by

2,000 ACRES

Eliminate barge landing at Snodgrass Slough

BENEFITS: Reduces barge traffic in the northern portion of the Delta; reduces impacts to wetlands

Move a shaft site on Mandeville Island

BENEFITS: Avoids wetlands

Eliminate the Clifton Court Forebay modifications by moving the terminus of the main tunnels and forebay to a new location

BENEFITS: Reduces impacts to wetlands, salmon, and smelt; improves construction access; reduces permanent impacts to wetlands by 270 acres and temporary impacts to wetlands by over 1,900 acres

Eliminate the need to relocate a 500 kV and 230 kV transmission line from the Tracy substation

BENEFITS: Reduces wetland impacts and eliminates unnecessary costs

Move the north tunnel alignment to the east, just outside the town of Hood instead of directly below it

BENEFITS: Reduces potential impacts to the town of Hood

Move power line alignment to use SMUD's existing transmission corridor*

BENEFITS: Fewer powerlines required, improves aesthetics, reduces impact to birds, reduces need for large substation near the town of Courtland

Consolidate the Reusable Tunnel Material (RTM) footprint near the Intermediate Forebay into a single site

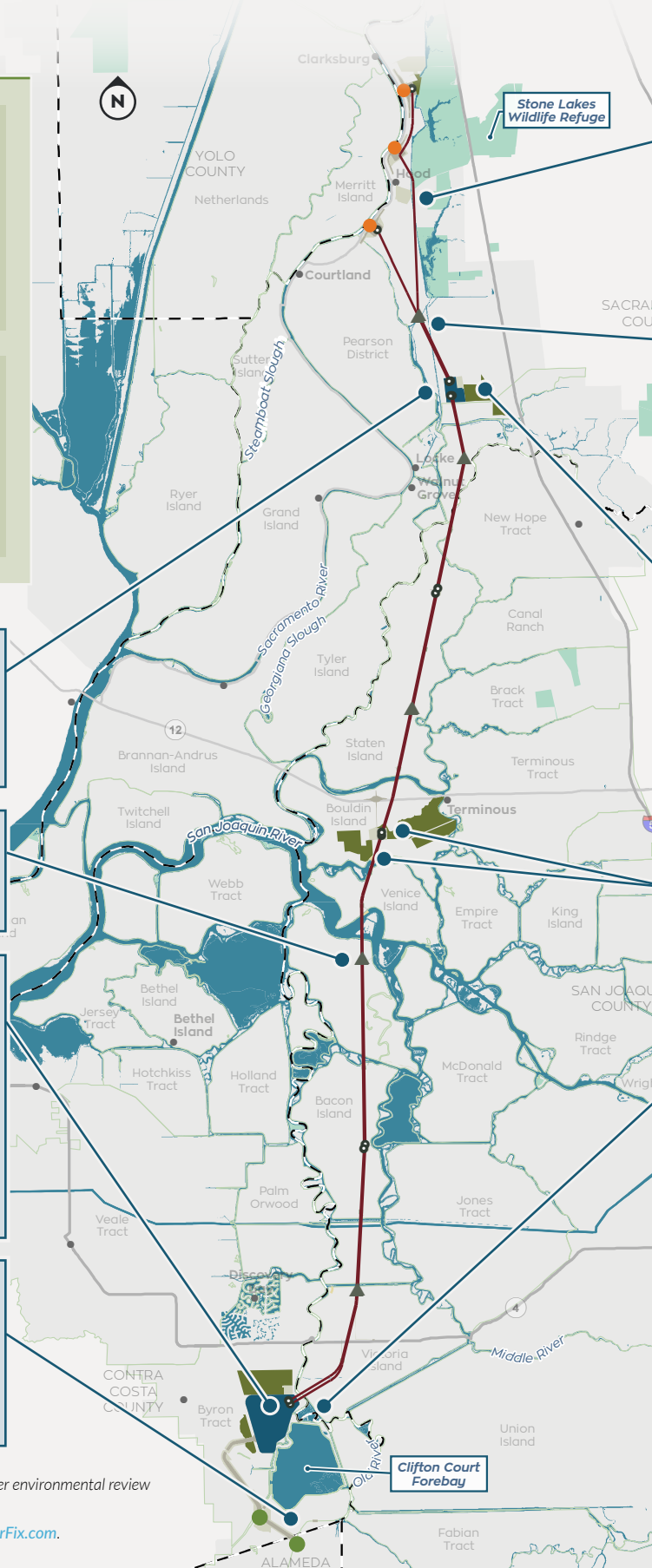
BENEFITS: Reduces impacts to Stone Lakes Wildlife Refuge, wetlands, and nearby agricultural activities; reduces construction impacts caused by truck traffic and improves operational efficiency; wetland impacts reduced by more than 50 acres

Optimize Bouldin Island activities by relocating shaft site, RTM, and barge landing

BENEFITS: Reduces wetlands impacts by over 100 acres on Bouldin Island; reduces potential impacts to Delta navigation and recreation opportunities

Move a pumping plant away from Kings Island

BENEFITS: Reduces impacts to a residential neighborhood on Kings Island; reduces impacts to wetlands



MAP LEGEND

Forebay	Ventilation/Access Shaft
Reusable Tunnel Material Area	Intake
Main Tunnels	Existing CVP and SWP pumps
Main Construction Shaft	County Lines

* Previously implemented, not subject to further environmental review
An updated Conceptual Engineering Report will soon be available at www.CaliforniaWaterFix.com.