Questions regarding impacts to recreation
From construction and operation of
Proposed tunnels and intakes
Sketches and Steamboat Slough description from: *Scenes of Wonder and Curiosity in California (1862)* by James M. Hutchings

**STEAMBOAT SLOUGH.**

A short distance above the Hug's Back we arrived at the junction of Jackson Slough with Steamboat Slough, and there enter the narrowest part of the stream. As this slough is deep and navigable, and moreover is about nine miles nearer for sailing throughout by the main, or "old river," nearly all vessels upward bound take this route, while those on the downstream trip (excepting steamboats) generally take the main river, inasmuch as the wind is more favorable for their return to San Francisco.

As we pass through Steamboat Slough, we are impressed with the narrowness of the channel for such large vessels, the luxuriant foliage of the trees that adorn its banks, and the snug little cabins neatly set out from right by wild vines and trees, that are seen at intervals on its margin. Indeed the scenery, as you steam up or down the river, is picturesque in no slight degree. Here and there, as you turn with the waddens windings of the stream, you may upon the little boats of fishermen, and shops, with their sails folded like the folded wings of a sea-bird, waiting for the wind. The improvements of the berthingmen are everywhere seen along the shore, and among the dropping branches of the cypress, cottonwoods, and trees, and gardens, their product of cucumbers and sambucus piled in huge heaps; and here and there a school-house or church gives a cheerful domestic character to the scene. The landscape is diversified by the gnarled oaks, with vines clinging about them for support, and their branches covered with dark masses of mistletoe.
Ocean views and other wonders of Bay Area campsites

C

Tom Stienstra

Outdoors

1. Tomales Bay Backpack, Point Reyes National Seashore. There are 20 day
pened campsites nestled along the sh
of Tomales Bay, from Tomales Point
outh to south of Inverness Bay. Book
y, you can also stay in hotels or motels.
2. Lodge at the Bay, Point Reyes

3. Muir Beach Campground. This is a
beachfront campground with 40
sites. It is a popular spot for
Defaults to the online version of the book.
Portion of 2003 Hal Schell Map of the Delta, used as reference map
2006: 14 million user days per year, over one billion in recreation dollars added by Delta, supporting 14,000 jobs Delta-related in the state. Study does not appear to include the recreation uses by the estimated 500,000 persons living within the legal Delta region, as the survey was focused on persons visiting the Delta from out of area (SHR 2-22 refers to 12 million recreation users in the Delta per year, SHR 2-26 is another report on Fishing and boating).
DWR testimony estimates impacts to Boating recreation but what about All the other recreation activities?

Add to the above biking, farm foraging and wine tasting!
3.3 Environmental Setting

Figure 1 is a map of the Bay-Delta Estuary that was included in the 2006 Bay-Delta Plan. The map depicts the location of monitoring stations used to collect baseline water quality data for the Bay-Delta Estuary and stations used to monitor compliance with water quality objectives set forth in the Bay-Delta Plan.

Legend:
- Baseline Monitoring Stations
- Compliance Monitoring Stations
- Statewide & Compliance Monitoring Stations

Figure SC.4-27. Bench Habitat Analysis Sites

10 siltation insertion and bench test resulted in raising bed of waterway
6.7 Large trees placed in waterway near banks to capture sediment & reduce waterway navigation and use in this area
3 bench built up and placed with suba but was infested with evelia Dense which is not suitable for wildlife. Also causes flood control issues as bench reduces water outflow in high flow times
CWF H3+ Operations Criteria

The Table included below summarizes the new and existing water operations criteria for CWF H3+ operational scenario adopted in the July 2017 CWF Certified Final EIR (SWRCB-109, SWRCB-108). This information is also found within Table 3.3.1 located in Revised BA (DWR-1143), Table 3.3.1 of NMFS’ CWF BO Appendix A2 (SWRCB-109), and Table 6.1.2 in the USFWS’ CWF BO (SWRCB-165).

The exact definition of the CWF H3+ spring outflow criteria is provided in the Section 5.3.3.3.2 Effects of Spring Outflow of the CWF ITP application (DWR-1038 page 5-28). The Table below reflects the CWF H3+ spring outflow criteria that was proposed, modeled, adopted by DWR as the Certified Final EIR, and included in the NMFS’ CWF BO and USFWS’ CWF BO.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Criteria</th>
<th>Source of the Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Delta</td>
<td>Bypass Flow Criteria (specified bypass flow required to remain downstream of the North Delta intakes):</td>
<td>New operational criteria used in CWF H3+</td>
</tr>
<tr>
<td></td>
<td>- October, November: Minimum flow of 7,000 cfs required in river after diverting at the North Delta intake.</td>
<td>These criteria are included within the NMFS’ and USFWS’ biological opinions, and CDFW’s Incident Take Permit for California Wine Pin</td>
</tr>
<tr>
<td></td>
<td>- December through June: - Minimum flow of 5,000 cfs required in river after diverting at the North Delta intake.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Pulse Protection:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Low-level pumping of up to 5% of total Sacramento River flow at Florin such that bypass flow never falls below 5,000 cfs. More than 395 cfs can be diverted at any rate intake.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Low level pumping maintained during the pulse protection period.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Pulse is determined based on the real-time monitoring of juvenile fish movement as described in Section 3.3.2.3 North Delta Diversion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If the initial pulse begins and ends before Dec 31, the bypass flow criteria is the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27 In coordination with NMFS, USFWS, and CDFW, several updates to CWF operational criteria were made during the EIR and CEQA compliance processes. An analysis was performed (model results submitted to USFWS on 5/5/17) to determine if the updated operational criteria would result in additional effects outside of those analyzed in the BA. The modeling results confirmed the effects of the operational updates are within the range analyzed in the BA. As a result, the EA effects analyses in Chapters 5 and 6 are representative of potential project effects and an additional analysis is unnecessary.

28 Sacramento River flow upstream of the intakes to be measured flow at Florin. Bypass flow is the Sacramento River flow quantified downstream of the Intake #3. Sub-daily Delta intakes’ diversion operations will maintain fish biomass approaches and improving velocity criteria.
SHR-2-105 reviews impacts from the low flows of the last 10 years, and questions who Has been responsible for flow reporting because there has been substantial mistakes in reports.
SUMMARY OF THE 2015 BARRIERS PROPOSALS, AND POSSIBLE LONG TERM IMPACTS FROM BARRIER INSTALLATION: WHO BENEFITS, WHO SUFFERS THE CONSEQUENCES

Barriers for Delta waterways have been proposed for various reasons over the years. The next few pages review barrier proposals from 1998 to 2015, with a focus on function, who benefits from the proposed barriers, and who suffers the negative impacts from proposed barriers.

*They can change the names but it's all the same game-flow*

Graphics and data compiled by N. Sward, Esq, a Delta land and business owner located on Steamboat Slough. Presentation April 3, 2015
2.4.2 Delta Hydrodynamics

Human management of water and changes to the physical structure of the Delta have significantly changed the timing, magnitude, and flow paths through the Delta, with adverse effects on fish and wildlife. During the summer-fall dry season, the Delta channels essentially serve as a conveyance system for moving water from reservoirs in the north to the CVP and SWP export facilities, which are operated jointly under the Coordinated Operations Agreement, as well as the smaller CCWD facility, for subsequent delivery to farms and cities in the San Joaquin Valley, southern California, and/or other areas outside the watershed (Kimmerer 2002a).

The CVP Delta facilities consist of the C.W. “Bill” Jones Pumping Plant (formerly Tracy Pumping Plant), Tracy Fish Collection Facility, and Delta-Mendota Canal (DMC). Along with these facilities, Reclamation directs the operation of the DCC to improve the transfer of water from the Sacramento River to the pumping plant (Reclamation 2009). The design capacity of the Jones Pumping Plant is 4,600 cfs, but until 2012 a variety of factors, including subsidence in the DMC, limited the maximum pumping rate to approximately 4,200 cfs. In April 2012, an intertie (two 108-inch-diameter pipes) was completed from the SWP to the CVP. The intertie allows up to 900 cfs to gravity flow from the California Aqueduct to the DMC. Completion of the intertie is expected to have some effects on the tidal elevations at the DMC intake and smaller effects on tidal elevations, flows, and velocities in south Delta channels (Reclamation 2009). Water is pumped by the Jones Pumping Plant into the

Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows

Prepared By:
State Water Resources Control Board
California Environmental Protection Agency
P.O. Box 100
Sacramento, CA 95812-0100

With Assistance From:
ICF
630 K Street, Suite 400
Sacramento, CA 95814
The Lower Sacramento River Riparian Revegetation Project is a joint initiative led by the U.S. Army Corps of Engineers and the California Department of Water Resources. The project aims to enhance riparian habitat and water quality by planting native vegetation along the lower Sacramento River.


<table>
<thead>
<tr>
<th>Parameter</th>
<th>Criteria</th>
<th>Source of the Criteria</th>
</tr>
</thead>
</table>
| Spring Outflow     | March, April, May: Initial operations will maintain the March–May average delta outflow that would occur with existing facilities under the operational criteria described in the 2008 USFWS BiOp and 2009 NMFS BiOp (U.S. Fish and Wildlife Service 2008; National Marine Fisheries Service 2009). 39 Consistent with description provided in the Section 5.3.2.3.2 Effects of Spring Outflow of the CWF 2081(b) ITP application (DWR-1036). March outflow targets are determined based on the Eight River Index and achieve the targets with export curtailments down to a minimum of 1,500-cfs exports; the March outflow target is capped at 44,500 cfs at an Eight River Index of 4.217 TAF and greater (Table 5.3-1 of the CWF 2081(b) ITP application and Table 6.1-4 of USFWS CWF BiOp). For Apr-May, the 2009 NMFS BiOp action IV 2.1 (San Joaquin River i-e... | - New operational criteria used in CWF H3+  
July 2017 low tide on the Sacramento River in Walnut Grove. Even though it was a record rain winter, DWR is still diverting so much flow away from the Delta that the river is at drought levels each low tide for part of the month.
Prospect Island water hyacinth farm, for distribution of the plant to areas of the North Delta
Summer 2015 Hogback County Park boat launch not useable.
Current Impacts from the low water flows on the Sacramento River into the Delta: dry docking marinas

9/19/2013 View of the open water on Prospekt Island where the "restoration" area is full of water hyacinths. Within a week or two, someone had moved the water weeds into Miner's Slough and then down into the open waters of Cache Slough just in time to annoy the salmon and striped fisherman for the Rio Vista derby!
Low flows cause unnatural low tides which make boat launch area unusable, and breaks the dock as well.
**Roads/Transportation**

- Detour roads needed for all intakes, temporary access roads constructed from each intake pumping plant to Sacramento River levee, and permanent roads build for intake site perimeter access road. *EIR/EIS, page 3C-60.*

- Indirect effects on existing land uses may also arise from changes in access to parcels of land. For example, the removal of access for agricultural vehicles and machinery could jeopardize the ability of that land to continue serving productive agricultural uses. The loss of access would not be considered an adverse effect under this impact. *EIR/EIS, Land Use Chap, page 13-116.*

- All construction related trucks are expected to generate eight trips per day. *EIR/EIS, Transportation Chap 19, page 19-15.*

- Level of Service (LOS) thresholds are exceeded on a total of 16 roadway segments for at least 1 hour during the 6:00 am to 7:00 pm analysis period. LOS is a qualitative measure of traffic operating conditions. See Table 19-3. *EIR/EIS, Transportation Chap 19, page 19-7.*

- Potential construction site access routes do not currently have adequate engineered pavement sections to withstand construction traffic, particularly heavy vehicles. *EIR/EIS, Transportation Chap 19, page 19-13.*

- Construction associated with Alt 4 would cause LOS thresholds to be exceeded for at least 1 hour during the 6:00 am to 7:00 pm analysis period on a total of 33 roadway segments, which is 10 more segments than have at least one hour exceeded under existing conditions. *EIR/EIS, Transportation Chap 19, page 19-40.*

- Figure 19-3 shows the study roadway segments that could experience substantial roadway effects. The highest concentration of roadway segments below applicable LOS threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be exceeded on several local roadways, including all segments studied in West Sacramento. *EIR/EIS, Transportation Chap 19, page 19-163.*

- Mitigation Measures TRANS-1a thru 1c collectively include requirements to avoid or reduce circulation effects, notify the public of construction activities, provide alternate
Did SR 84 get renamed 160? Also note that a “detour” in the Delta can mean adding 2-4 hours to your travel time due to bridge use and limits on weight allowed on the ferries. For construction projects located on the East side of the Sacramento River, ALL construction traffic should be required to come from the east, not through the Delta, and not use SR 84 or 160 or whatever new name and number CalTrans plans to use.

CalTrans sign in Walnut Grove by the bridge, confusing people trying to get to Rio Vista from Hwy 5 when Hwy 12 was blocked in the Delta.
Delta Water Availability: Quality Impacts

Delta Flows

- BDCP will fundamentally change the hydrodynamics of the Delta. Chap 5, page 5.3.2.
- The Sacramento River diversions into the proposed north Delta intakes along the Sacramento River between Freeport and Tide are the primary cause of BDCP changes in Delta flows. Chap 5, page 5.3.2.
- The BDCP is expected to result in changes in flows primarily as a result of the change in export location (new north Delta intakes) and its associated specified changes in monthly Delta operational objectives, namely, required salinity objectives, outflow objectives, export inflow objectives, OMR flow objectives, and maximum exports. Chap 5, SC.1.1.

River Flow cases for Sacramento River Flows. Chap 5, page 5.3.2.

Overall, there would be minimal upstream changes but some substantial shifts in how water moves through the Delta. Chap 5, page 5C.6.1.

- Restoration of 65,000 acres of tidal marsh (CM4) could result in changes in turbidity and tidal excursion in specific Delta locations and subregions. Chap 5, page 5C.6.2.
- In the absence of Delta, flow patterns will be altered by the increased diversions to the Yolo Bypass (CM2) and operations of the new North Delta intake facilities (CM1). Chap 5, page 5.3.2.
- The average modeled annual inflow at Freeport for the evaluated starting operations was reduced by about 650,000 acf compared to existing conditions, primarily as a result of the increased Fremont Weir Spills (CM2). Chap 5, page 5.3.3.
- The months with the greatest changes in Freeport flows for the high outflow scenario cases are increased flows in April and May, with reduced flows in June and July, caused by reduced reservoir storage from high spring releases and the goal of maintaining the existing biological condition of the Delta storage. The months with the major changes in Freeport flows for the low outflow scenario cases were reduced flow in September of about half of the years, with smaller reduction in November in fewer years. The Fremont weirs flows in January, February, and March for the evaluated starting operations were about 3,000 cfs less than existing conditions, reflecting the increased spills at the Fremont Weir into the Yolo Bypass (CM2). The Fremont medium flows for the evaluated starting ops cases in July and August were reduced by about 3,000 cfs compared to existing conditions flows because of changes in upstream reservoir releases. The evaluated starting ops north Delta intakes allowed higher imports in April, May, June and July and subsequently allowed reduced reservoir releases and reduced imports in July and August. Chap 5, page 5.3.4.

- The potential for changes in Delta salinity is the reduction of the downstream flows by about 3,000 cfs (when operated at capacity). Chap 5, page 5.3.6.
- The general effect of each north Delta intake is the reduction of the downstream flow by about 3,000 cfs (when operated at capacity). Chap 5, page 5.3.6.
- Always a downstream “upstream flow” requirement (e.g., 7,000 cfs in Oct thru Nov and 10,000 cfs in Dec thru Jan). Chap 5, page 5.3.6.
- There almost always will be an upstream Delta inflow (tide flow below main). Chap 5, page 5.3.7.
- The benefit of the intakes on the Sacramento River is operated at first which then has the effect of pulling the water down river, creating greater velocity at the upper pumps. This is in turn may also flow would be diverted from the Sacramento River north of Walnut Grove, because that the jet will cause the surface pumps, not human pumps, to move in the intake area on the Sacramento River.
- Modeling of the intakes included a downstream speed/velocity criteria of 0.4 ft per second (5Ch 5, page 5.3.7.
- Estimate cfs in this and why the change is a different approach.
- Major north Delta diversions could not begin until the Sacramento River flow was greater than a threshold of about 10,000-15,000 cfs. Chap 5, page 5C.1.5.
River Barges

- At least six river barge unloading facilities/docks for the delivery of construction materials (e.g., tunnel segments, batched concrete, major equipment) will be constructed located at: 1) State Route 160 west of Walnut Grove; 2) Tyler Island; 3) Bacon Island; 4) Woodward Island; 5) Victoria Island; and 6) Venice Island. Docks will be about 50 by 300 feet and supported by about 32 two-foot diameter steel piles. Will be removed following construction (no restoration of site mentioned). *Chap 4, page 4-11.*

- Approx 3,000 barge trips are projected, averaging 1 trip per day thru 9-yr-long construction period. *EIR/EIS, page 19-170.*
### Barge Landings Construction Schedule

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barge Landings</td>
<td>784 days</td>
<td>2/1/18</td>
<td>11/3/20</td>
</tr>
<tr>
<td>2</td>
<td>Construction Phase Start</td>
<td>0 days</td>
<td>1/1/18</td>
<td>1/1/18</td>
</tr>
<tr>
<td>3</td>
<td>Barge Landings MTP</td>
<td>0 days</td>
<td>4/2/18</td>
<td>4/2/18</td>
</tr>
<tr>
<td>4</td>
<td>Contractor mobilization</td>
<td>44 days</td>
<td>4/2/18</td>
<td>5/2/18</td>
</tr>
<tr>
<td>5</td>
<td>Contractor staff</td>
<td>656 days</td>
<td>4/2/18</td>
<td>10/5/20</td>
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<tr>
<td>6</td>
<td>Erect and remove contractor facilities</td>
<td>88 days</td>
<td>8/12/18</td>
<td>9/3/18</td>
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<tr>
<td>7</td>
<td>Operate temporary facilities</td>
<td>544 days</td>
<td>4/1/18</td>
<td>11/3/20</td>
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<tr>
<td>8</td>
<td>On-water work for Barge Landings</td>
<td>377 days</td>
<td>8/1/18</td>
<td>10/3/19</td>
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<tr>
<td>9</td>
<td>In-water work window for Barge Landings</td>
<td>95 days</td>
<td>8/3/18</td>
<td>8/3/18</td>
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<tr>
<td>10</td>
<td>Barge Landings near cottages</td>
<td>264 days</td>
<td>8/3/18</td>
<td>8/3/18</td>
</tr>
<tr>
<td>11</td>
<td>Install piles (in-water work)</td>
<td>65 days</td>
<td>8/3/18</td>
<td>9/3/18</td>
</tr>
<tr>
<td>12</td>
<td>Install support structure</td>
<td>88 days</td>
<td>11/1/18</td>
<td>11/1/18</td>
</tr>
<tr>
<td>13</td>
<td>Cast barge deck</td>
<td>66 days</td>
<td>7/1/19</td>
<td>8/1/19</td>
</tr>
<tr>
<td>14</td>
<td>Finish</td>
<td>44 days</td>
<td>5/5/19</td>
<td>5/5/19</td>
</tr>
<tr>
<td>15</td>
<td>Barge Landings near Bucoten Island</td>
<td>264 days</td>
<td>8/3/18</td>
<td>8/3/18</td>
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<tr>
<td>16</td>
<td>Install piles (in-water work)</td>
<td>65 days</td>
<td>8/3/18</td>
<td>9/3/18</td>
</tr>
<tr>
<td>17</td>
<td>Install support structure</td>
<td>88 days</td>
<td>11/1/18</td>
<td>11/1/18</td>
</tr>
<tr>
<td>18</td>
<td>Cast barge deck</td>
<td>66 days</td>
<td>7/1/19</td>
<td>8/1/19</td>
</tr>
<tr>
<td>19</td>
<td>Finish</td>
<td>44 days</td>
<td>5/5/19</td>
<td>5/5/19</td>
</tr>
<tr>
<td>20</td>
<td>Barge Landings near Intermediate Forbey</td>
<td>264 days</td>
<td>8/3/18</td>
<td>8/3/18</td>
</tr>
<tr>
<td>21</td>
<td>Install piles (in-water work)</td>
<td>65 days</td>
<td>8/3/18</td>
<td>9/3/18</td>
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<td>88 days</td>
<td>11/1/18</td>
<td>11/1/18</td>
</tr>
<tr>
<td>23</td>
<td>Cast barge deck</td>
<td>66 days</td>
<td>7/1/19</td>
<td>8/1/19</td>
</tr>
<tr>
<td>24</td>
<td>Finish</td>
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<tr>
<td>25</td>
<td>Barge Landings near Bacon Island</td>
<td>264 days</td>
<td>8/3/18</td>
<td>8/3/18</td>
</tr>
<tr>
<td>26</td>
<td>Install piles (in-water work)</td>
<td>65 days</td>
<td>8/3/18</td>
<td>9/3/18</td>
</tr>
<tr>
<td>27</td>
<td>Finish</td>
<td>44 days</td>
<td>5/5/19</td>
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- **Keywords:**
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[Diagram of construction schedule]
DWR “Industry Day” December 6, 2017 and December 7, 2017 RFQ timing:

According to Mr. Bernarsi of MWD, who spoke to participants at 12/6/17 "INDUSTRY DAY" THE ENGINEERING AND DESIGN MANAGER WILL BE SELECTED BY APRIL 1, and the other contractors and project sections will be selected as shown on this schedule. Mr. Bernarsi said work could begin as early as June 2016. Bernarsi also said 6-7 Tunnel contractors could be selected to build 7 tunnel sections all at the same time.

Bernarsi also said that this 12/6/17 meeting and the CWF website would be the only location for advertising of the project, and only those companies that participated in the 12/6/17 Industry Day presentation and also the upcoming sub-contractor "Meet the Primus" days would be able to bid to do the work.
Error: 404 – The page you requested could not be found.

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  - Drinking Water Homepage

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  - San Francisco Bay (Region 2)
  - Central Coast (Region 3)
  - Los Angeles (Region 4)
  - Central Valley (Region 5)
  - Lahontan (Region 6)
  - Colorado River (Region 7)
  - Santa Ana (Region 8)
  - San Diego (Region 9)

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