

State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
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**PROTEST – (Petitions)
OBJECTION
PETITION FOR RECONSIDERATION
PETITION FOR HEARING**

BASED ON ENVIRONMENTAL OR PUBLIC INTEREST CONSIDERATIONS

Temporary Urgency Change Petition and Responding Order for Permits 16478, 16479, 16481, 16482 and 16483 (Applications 5630, 14443, 14445A, 17512 and 17514A, respectively) of the Department of Water Resources for the State Water Project and License 1986 and Permits 11315, 11316, 11885, 11886, 11887, 11967, 11968, 11969, 11970, 11971, 11972, 11973, 12364, 12721, 12722, 12723, 12725, 12726, 12727, 12860, 15735, 16597, 20245, and 16600 (Applications 23, 234, 1465, 5638, 13370, 13371, 5628, 15374, 15375, 15376, 16767, 16768, 17374, 17376, 5626, 9363, 9364, 9366, 9367, 9368, 15764, 22316, 14858A, 14858B, and 19304, respectively) of the United States Bureau of Reclamation for the Central Valley Project.

We, Chris Shutes, Water Rights Advocate, California Sportfishing Protection Alliance (CSPA), 1608 Francisco St., Berkeley, CA 94703, blancapaloma@msn.com, (510) 421-2405; Bill Jennings, Executive Director, CSPA, 3536 Rainier Ave, Stockton CA 95204, deltakeep@me.com, (209) 464-5067; Barbara Vlamis, Executive Director, AquAlliance, P.O. Box 4024, Chico, CA 95927, barbarav@aqualliance.net, (530) 895-9420; Carolee Krieger, Executive Director, California Water Impact Network, 808 Romero Canyon Rd., Santa Barbara, CA 93108, caroleekrieger7@gmail.com, (805) 969-0824; and Michael Jackson, counsel to CSPA, CWIN and AquAlliance, P.O. Box 207, 429 W. Main St., Quincy, CA 95971, mjatty@sbcglobal.net (Protestants)

have read carefully a notice relative to a petition for Temporary Urgency Change (TUCP) of the Department of Water Resources (DWR) and the Bureau of Reclamation (Bureau), dated January 23, 2015. The Executive Director issued an Order granting this petition in part and denying it in part on February 3, 2015 entitled *Order Approving in Part and Denying in Part a Petition for Temporary Urgency Changes in License and Permit Terms and Conditions Requiring Compliance with Delta Water Quality Objectives in Response to Drought Conditions* (TUCO or “Order”).

The proposed petition for water and Order will:

- (1) not be within the State Water Resources Control Board’s (SWRCB) jurisdiction**
- (2) not best serve the public interest**

- (3) be contrary to law**
- (4) have an adverse environmental impact**

(All of the above)

We object to the TUCP and petition for reconsideration of the proposed Order for the reasons described below.

State Facts, which support the foregoing allegations:

Summary

The State and Federal water projects have again petitioned the State Water Board to relax Bay-Delta standards in February and March so that more water can be exported from the Delta during what appears to be a fourth consecutive year of drought. After twenty years of acquiescing to the water interests, consistently leaving Delta standards unenforced in dry years, Board staff has issued an Order that would reduce Delta outflow requirements, allow additional operation of the Delta Cross Channel gates, and reduce Vernalis flows with no mitigation, but would not allow the requested higher exports when D-1641 standards are not being met, despite acquiescence of the fisheries agencies to what these agencies appear to have assumed was a foregone conclusion. However, the Order leaves open the option for the Board to change its mind on the request in the future, and will discuss the matter with those involved at a February 18, 2015 public workshop.

Recognizing the failure of the fisheries agencies to address the appropriate legal standard (whether the requested actions will have unreasonable effects on fish and wildlife), Board staff at least refuses in the Order the request of DWR and the Bureau to weaken export requirements even more than last year.¹ In what we would like to think is responsive to our comments last September,² the Order cites to objective evidence and highlights key biological considerations.³ The discussion portion of the Order describes how it is necessary to consider the condition of affected fisheries over the past several years and over the past few months. However, despite the acknowledgment of such required analysis, the Order incredibly draws exactly the same conclusions and requires the same weakened Delta outflow and export conditions that similar

¹ See Order, p. 17:

It should be noted that while the fisheries agencies indicated that the changes proposed in the TUCP could be made in compliance with ESA and CESA requirements, those letters did not determine whether the potential impacts of the changes would unreasonably affect fish and wildlife. The ESA and CESA standard of avoiding jeopardy to the continued existence of a threatened or endangered species is a minimal standard, and as such may differ from the Water Code requirement that the changes must not unreasonably affect fish and wildlife, especially when many species have already experienced extreme impacts from the drought for several years.

² See CSPA et al Comments on *Draft Order Denying Petitions for Reconsideration and Addressing Objections regarding the Temporary Urgency Change Petitions and Orders for the operation of the Central Valley Project and the State Water Project*, September 16, 2014, p. 2: “Rather than citing objective evidence, the Board has relied on concurrence from the fisheries agencies to support its decisions.”

³ See Order, Section 2.6.

orders required last year. These are the conditions that led, as CSPA predicted in 2014, to all-time lows in Delta smelt abundance and the population collapse of winter-run Chinook salmon.

The Order recognizes that the main beneficiaries of water held in storage rather than released to meet D-1641 outflow and salinity requirements are water users. In light of the failure of 2014's efforts to maintain temperature control, and the loss of ~95% of the 2014 winter-run cohort and the loss of virtually all of the 2014 spring-run cohort (of fish that spawn in the Sacramento River), the statement is indisputable. The solution in 2015 is to require lower deliveries to CVP Settlement Contractors north of Delta and/or lower deliveries of CVP Settlement Contractors' water in the form of transfers south of Delta. With 75% of deliveries in 2014 allowed to CVP Settlement Contractors north of Delta, and likely identical deliveries in 2015, this represents real water, far greater than the savings achievable by starving Delta outflow and water quality requirements. The glib statement in the TUCP cover letter that requested "... changes would allow management of reservoir releases on a pattern that conserves upstream storage for fish and wildlife protection" offers no assurance that such management will occur or will be effective.⁴ This year, the Board should exercise strict independent oversight of efforts to manage water temperature in the Sacramento River downstream of Keswick, using its water rights authority to limit north of Delta CVP deliveries if necessary, and not rely on the irresolute federal fisheries agencies who failed in 2014. This option should be considered in the water temperature modeling that is required under Order ¶6(b), alternative (c).

The Order appears to make an improvement over last year's orders in that it does not allow transfers of water from SWP and CVP contractors north of Delta to SWP and CVP contractors south of Delta unless D-1641 requirements are being met. This appears to respond affirmatively to our criticism in our September 16, 2014 comments: "the transferred water [in 2014] was largely sourced from Project reservoirs, sold by settlement contractors who in water year 2014 got most of the available water."⁵ One does not conserve project water in storage for any purposes by allowing it to be called on from Lake Shasta by Settlement Contractors and then transferred south of Delta.

However, the Order continues to exempt from limitations transfers of water that are made where the transferred water is sold by an entity with non-project water rights.⁶ It makes no difference to fish if the increased risk of entrainment or other causes of mortality in the central and south Delta is caused by export of transferred water rather than export of project water. The Board should not only disallow transfers of *any* water through project facilities when D-1641 standards are not being met, it should require the same import-export mitigations it requires of the projects. What is unreasonable for project water is no less unreasonable for anyone else's water.

Storage conditions in the San Joaquin tributary reservoirs are particularly severe. However, the Order does nothing to reduce the severe risks to lower San Joaquin River and San Joaquin tributary fisheries. The Board should order the Bureau of Reclamation to immediately develop and, as soon as practicable, implement a plan in conjunction with the Department of Fish and Wildlife to capture Stanislaus River salmonid outmigrants at the fish weir on the Stanislaus River

⁴ See TUCP cover letter, p. 1 of TUCP.

⁵ CSPA et al September 16, 2014 comments, op cit, p. 5.

⁶ See Order at ¶1(e), p. 22.

and transport them to barges at the upstream-most point this is reasonably feasible, for barge transport to Suisun or San Pablo Bay. In addition, the Bureau should capture and transport juvenile salmon migrants from the San Joaquin River downstream of Friant Dam to the same barges, rather than dumping them at the confluence of the lower San Joaquin River with the Merced River, as the Bureau did in 2014. In the absence of such a program, allowing exports at D-1641 levels under flow conditions in the lower San Joaquin River will have severe impacts on San Joaquin River and tributary salmon and steelhead, to a level that will have unreasonable effects to fish and wildlife.⁷

In sum, the TUCO, if adopted, would allow measures that would have unreasonable effects on fish and wildlife. The protective measures in the TUCO should be retained. The variances requested in the TUCP should be denied, especially considering that rainfall in the Sacramento Valley has been near or above normal and Shasta and Oroville have almost a million acre-feet more water in storage than this time last year. In addition, we recommend adding protections and a strong array of mitigation actions rather than relaxing standards. In the long run it makes no sense to destroy public trust fishery resources for a minute augmentation of water supply.

TUCP Proposed Changes

The Temporary Urgent Change Petition (TUCP) requests temporary modification of requirements included in Water Board's Decision 1641 (D-1641) to meet water quality objectives in the Water Quality Control Plan (Plan) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. Specifically, the TUCP requests modifications to water right requirements to meet the Delta outflow, San Joaquin River flow, Delta Cross Channel (DCC) Gate closure, and Delta export limits objectives. Reclamation and DWR are requesting these temporary modifications in February and March in order to respond to unprecedented critically dry hydrological conditions as California enters its fourth straight year of below average rainfall and snowmelt runoff. The TUCP also identifies possible future requests for further modifications to operating standards for the period from April to September.

The following are the proposed changes in standards:

1. The Delta Standard for the minimum net daily Delta outflow index (NDOI) during February through June is 7,100 cfs calculated as a 3-day running average. This requirement may also be met by achieving either a daily average or 14-day running average EC at the confluence of the Sacramento and San Joaquin Rivers of less than or equal to 2.64 millimhos per centimeter (mmhos/cm) (Collinsville station C2). **Proposed Change:** reduce minimum to 4000 cfs in February and March.
2. The San Joaquin River Delta inflow requirement for February and March is 710 or 1,140 cfs. **Proposed Change:** reduce to 500 cfs in February and March.
3. X2 Days at Port Chicago (days EC is to be 2.64 millimhos per centimeter at Port Chicago - station C2 – 9 days according to Table 4 D-1641). **Proposed Change:** no requirement.
4. The Delta Cross Channel (DCC) is to remain closed in winter. **Proposed Change:** Opening DCC as necessary to protect water quality.

⁷ Of the juvenile salmon transported from the San Joaquin River downstream of Friant to confluence of San Joaquin and Merced rivers, 2 were captured in the Mossdale trawl and none were detected at Chipps Island.

5. Delta Exports are not to exceed 1500 cfs when NDOI is less than 7100 cfs or 45% of Delta Inflow. **Proposed Change:** Allow exports when NDOI is less than 7100 cfs up to 45% of Delta Inflow.

Possible Future Change Requests

According to the TUCP, potential future requests to modify D-1641 requirements include: (1) additional requests to modify Delta outflows to balance upstream storage and fish protection, (2) requests to move the compliance point for the Western Delta agriculture salinity objective from Emmaton to Three-Mile Slough, (3) additional requests to modify San Joaquin flows at Vernalis, and (4) requests to modify Rio Vista flow requirements. Additionally, the Petitioners may request flexibility provided in D-1641 to adjust the export limits to modify required averaging periods for sporadic storm events. There will also likely be a request to place salinity barriers in the Delta to minimize salt water intrusion into the Delta (so that the “last drop” of freshwater can be exported). Other water project funded actions may include preferential pumping at one or the other SWP and CVP export facilities in the South Delta to reduce fisheries impacts (which serves to mask true fish losses) and increasing hatchery production to mitigate for drought impacts.

These potential future requests, while not presently under consideration, will individually and collectively result in serious biological harm to beleaguered pelagic and salmon fishery populations that are already at or near historically low abundance levels. The parties filing this Object and Petition for Reconsideration will provide comprehensive comments on the consequences of these potential actions when DWR and the Bureau formally request them.

Order in Response to TUCP

The Order in response to the TUCP would make the following temporary modifications to D-1641 requirements during February and March:

- Modify minimum monthly Delta outflows to 4,000 cfs;
- Modifies minimum monthly San Joaquin River flows at Vernalis to 500 cfs;
- Allow the DCC Gates to be opened consistent with triggers to protect fish species;
- Adds export constraints to allow exports of 1,500 cfs when Delta outflows are below 7,100 cfs regardless of DCC Gate status and allows exports up to D-1641 limits when Delta outflows are above 7,100 cfs and the DCC Gates are closed. (Note this is not consistent with the TUCP, which requests higher exports.)
- The Order appears to drop the requirements for D-1641 Table 4 minimum X2 requirements, though it leaves open the option of a flow pulse for the estuary.

The Order also includes additional requirements to assure that the changes: do not impact other legal users of water, do not have unreasonable impacts of fish and wildlife and other beneficial uses; and are in the public interest. The Order also provides for a higher pulse flow to be scheduled to benefit fish species (possibly to satisfy Table 4 requirements in D-1641). The magnitude, timing, and duration of this pulse flow will be determined through the upcoming consultation process.

The Order would allow the DCC gates to be opened during February and March as needed to reduce upstream releases to maintain salinity conditions in the interior Delta. To ensure that gate opening avoids impacts to fish, the Order would require the gates to be operated in compliance with the DCC Gate Triggers Matrix in the April 2014 Drought Operations Plan and Operational Forecast. The opening would only occur when exports are less than 1500 cfs.

The Order does not approve the requested interim export level of 3,500 cfs when NDOI is at least 5,500 cfs. This request may be allowed in subsequent orders.

The Order would reserve the Executive Director's authority to require modifications to the Order to protect fish and wildlife or other uses of water based on additional information, including information that may be presented during the State Water Board workshop on February 18, 2015, concerning the Order and the Drought Contingency Plan.

Given the present condition of fisheries, the Order's modification of D-1641 standards developed and implemented through extensive evidentiary proceedings will unreasonably affect fish and wildlife. The standards themselves have proven to be seriously inadequate and fishery populations have continued to decline. To further weaken these inadequate standards will cause grievous irrevocable harm and potential extinction.

Status of the Fish Populations

The populations of fish species that depend on the Delta including Chinook salmon, steelhead, sturgeon, American and threadfin shad, striped bass, and delta and longfin smelt have all declined over the past eight years that included six years of drought (2007-09; 2012-14). The latest indicators show near historic or historic low levels of abundance for all of the Delta's pelagic species. All indications are that the populations that depend on the Delta are at extreme risk of added mortality under the present winter 2015 conditions. According to the Order most of the limited production of wild winter run salmon smolts moved into the Delta during the December storms and have yet to leave to the Bay and Ocean. In addition, the spawning runs of adult delta and longfin smelt moved upstream from the Bay into the Delta during the December flow events. They have begun spawning in areas where hatched larvae are highly vulnerable to South Delta exports.

If we have learned anything from decades of relentlessly declining fisheries, it is that the present D-1641 standards, as well as the current biological opinions, are not protective of listed species or the Bay-Delta ecosystem. Given this irrefutable fact, species that are hovering on the precipice of extinction should not have to assume an additional burden of further sacrifices to benefit water exports and deliveries. Any "balancing" of the public trust or beneficial uses must take the present jeopardy of these fisheries into consideration.

Over the last several years, CSPA has appeared before the State Water Board on a number of occasions and described the consequences of weakening already inadequate standards protecting fisheries and water quality. Unfortunately, our predictions came true. In August 2013, we prepared a report that documented the adverse impacts to Delta smelt from the Board's relaxation of standards (Attachment 1, *Summer of 2013*). Again, in October 2014, we prepared a

report chronicling the impacts from the relaxation of standards on Delta smelt (Attachment 2, *Summer of 2014*). As we predicted, the population abundance of Delta smelt, as well as all pelagic species, again declined (Attachment 3, Fall Midwater Trawl 2014 Annual Fish Abundance Summary). In January 2015, the California Department of Fish and Wildlife's initial Spring Kodiak Trawl revealed that abundance of spawning Delta smelt had declined 84% from the last year's abysmal low.⁸ With Delta smelt abundances at a historical low, the State Water Board inexplicably proposes to again relax critical standards established to protect these species in drought conditions. We further advised the Board in 2014 that efforts to reserve cold water in Shasta Reservoir to protect fisheries would come to naught if the reservoir was drained to provide water to CVP contractors. That too came to pass, as deliveries to Sacramento River contractors depleted the reservoir leaving insufficient water to maintain temperatures and protect spawning beds (Attachment 4, Demise of Winter Run in Summer 2014). Consequently, Winter-run salmon losses approached 95%.

Winter 2015 Risk Factors

Following a respite from drought in a wet December, there was record low January precipitation that brought back drought conditions to the Central Valley and the Bay-Delta. With limited restrictions in the Delta Standards for January⁹, moderate exports brought salvage events at the south Delta fish facilities of winter run Chinook salmon smolts and adult delta smelt. Surveys indicate that most of the 2014-year class of winter-run salmon have yet to move out of the Delta on their emigration from the Sacramento River to the Bay and Ocean. Early warning trawl surveys in January indicate the presence of adult longfin and delta smelt in the lower San Joaquin River near Jersey Point and Prisoners Point, a sign that the smelt may likely spawn in the Central and South Delta where newly hatched larvae will be highly vulnerable to South Delta exports. The January Larval Smelt Survey indicates recently hatched longfin smelt larvae are concentrating in the low salinity zone in the Western Delta¹⁰. Gages measuring salinity indicate that as Delta outflow has fallen in January, the low salinity zone has moved upstream into the central Delta. With each high tide, large amounts of the low salinity zone water are "pumped" into Franks Tract and Old River where water and planktonic fish like the smelt are likely to be entrained into the flow to the south Delta export pumps. Little remains of the fresh water in the Delta left over from the December storms. This pool of fresh water has been diverted from the Delta by high January exports. Any benefits to Delta conditions accruing from the February storms will likely dissipate if not followed by subsequent rain events. No one really believed the Delta needed protection in January when D-1641 standards were originally being developed in 1995. What has happened this January is already a demonstration that this lack of concern was a grave mistake.

The Smelt Working Group has met weekly in January and has carefully documented these risks and what may be in store for the fish¹¹. Each week, it indicates that "some of its members" are worried, but the conclusion is often "*distribution information does not indicate advice is*

⁸ <http://www.dfg.ca.gov/delta/projects.asp?ProjectID=SKT>

⁹ 4500 cfs minimum Delta outflow; export allowed up to 65% of Delta inflow.

¹⁰ http://www.dfg.ca.gov/delta/data/sls/CPUE_Map.asp

¹¹ http://www.fws.gov/sfbaydelta/cvp-swp/smelt_working_group.cfm

warranted?. We believe the level of concern is greater than expressed, and recommend that the Board hear from individual members of the Smelt Working Group at the upcoming workshop.

In early February of this year, 600,000 hatchery winter-run Chinook juveniles were released from the Livingston Stone fish hatchery into the Sacramento River near Redding. Although flows downstream at Bend Bridge reached 50,000 cfs on February 7 and was as high as 20,000 cfs two days later, the pulse downstream of Keswick was less than 5000 cfs, and was back to a the minimum release of just of 3000 in two days. Salmon and steelhead immediately downstream of valley rim dams, the major spawning areas on regulated rivers, receive no direct flow benefit from storms when reservoirs are storing all inflow possible. The absence of designed flow releases from Sacramento Valley rim dams timed to take advantage of the natural flow increases due to accretion further downstream leaves salmonids without benefit from natural events. In the Sacramento system, this can be partially mitigated by trucking hatchery fish downstream to points where tributary inflow is substantial.

In the San Joaquin system, there is little significant tributary inflow downstream of rim dams; peak flow at Vernalis increased to just over 1260 cfs after on February 10 while flows at in the Sacramento were over 30,000 cfs. More extensive transport of salmon juveniles from the Merced River Fish Hatchery and the upper San Joaquin program to Suisun or San Pablo bays may be needed this year, and capture of wild fish may need to be considered.¹² Delta pumping during outmigration of the remaining San Joaquin system salmon will be particularly harmful this year, particularly if pulses are exported, as they were in 2014.

In fact, exporting storm-fed pulse flows have already been permitted twice this winter, once in early December and once in early February, to the detriment of Delta smelt and Winter-run and Spring-run salmon. Each of these events had major consequences to the Delta and its low salinity zone. The two storm events brought considerable freshwater inflow to the West Delta at Jersey Point. However, the salinity response at Jersey Point lagged and salinity actually increased slightly on he ascending limb of the flow pulse. The reason is that, on the ascending limb of the flow pulse, a precipitous increase in exports drew water from the West and Central Delta. The low salinity zone, which had been located between Antioch and Jersey Point on the lower San Joaquin River was drawn eastward (upstream) into Old River. Flow across the Northern to the Central Delta is limited because the Delta Cross Channel is closed during winter to protect Sacramento River salmon from being diverted into the Central Delta. There was a lag in salinity response to the increased freshwater flows. The expected EC response at Collinsville didn't show up until 10 February, several days after the storm pulse reached Freeport. Unfortunately, Delta exports were allowed to increase prior to the flushing of the low salinity zone west of the Delta. Increases in Delta exports following storm events should not be allowed until storm pulses have pushed the low salinity zone into the West Delta.

D-1641 Delta Outflow Standards Do Not Comport With Actual Measured Outflow

The Net Delta Outflow Index (NDOI) relied upon by the State Water Board in establishing outflow standards protecting fish is based upon flawed calculations and is significantly different that the measured outflow at United States Geological Survey (USGS) gages that record

¹² Escapement to the Merced and Tuolumne rivers in 2014 was in the hundreds; to the Stanislaus less than 3000.

cumulative Delta outflow (Attachment 4, *Delta Smelt on the Scaffold*, pp. 3-7). At times, particularly during periods of low flow, this discrepancy is substantial. For example, during May 2014, the NDOI calculated Delta outflow at 3,805 cfs while the measured outflow was a minus 45 cfs. The agencies have long known that the NDOI does not reflect actual outflow.¹³ Relaxing standards and reducing Delta outflow requirements to levels that are likely to result in negative outflow will lead to unreasonable and potentially irreversible effects upon fisheries and cannot serve the public interest. The State Water Board must develop Delta outflow standards that accurately reflect actual Delta outflow.

Continuing Violations of Interior Delta Salinity Standards are Ignored in the Order

The Order is strangely silent regarding the chronic violations of D-1641 interior Delta salinity standards. For example, between 13 January and 11 February 2015, salinity continually exceeded the salinity standard of 1.0 mmhos/cm at Brandt Bridge and Old River Near Tracy. There were frequent violations of standards at Vernalis and Old River Near Middle River. DWR and the Bureau are under a Cease & Desist Order issued by the State Water Board that requires notification of exceedences and a description of measures that are being taken to alleviate violations. However, the relaxation of flow requirements requested in the TUCP and provided in the Order will only exacerbate salinity levels and increase violations. As the temporary increase in streamflow from recent rains subsides, salinity concentrations are likely to significantly increase. Salinity standards protect numerous beneficial uses including agriculture and aquatic life, and simply ignoring these long-established standards is contrary to law, cannot be in the public interest, and represents an unreasonable adverse impact to fisheries and Delta agriculture.

Chronic Relaxation of Promulgated Standards Because Water Agencies Refuse to Pursue Reasonable Measures to Address Drought Emergencies that Occur 40% of the Time Cannot be in the Public Interest

The State Water Board has now relaxed Bay-Delta standards established to protect fisheries and water quality in each of the last three years. In March 2014, CSPA chronicled the habitual pattern of mismanagement by the state and federal water project operators at a Board workshop (Attachment 4, *CSPA Presentation*). We pointed out that California experiences drought conditions 40% of the time, yet the state and federal projects continue to operate and deliver water as if there is no tomorrow. The projects draw down reservoir storage under the assumption that the coming year will be wet, providing little reserve storage in the event the following year is dry. In the event of another dry year, they endeavor to maximize deliveries in the hope that it will rain next year. This pattern has repeated itself for decades, most recently during the 2007-2000 and 2013-2015 droughts. Project operators have refused to adjust to the state's Mediterranean climate and over-subscribed water delivery system. They count on the Board to bail them out by relaxing standards and reducing water flows crucial to healthy and reproducible fisheries. And the Board has obliged the projects by relaxing standards thereby encouraging them to continue to operate on the edge of crisis while fisheries, hanging on the lip of extinction, pay the price.

¹³ http://www.water.ca.gov/dayflow/docs/2014_comments.pdf

The Bay-Delta ecosystem is a national treasure similar to the Everglades, Chesapeake Bay, Great Lakes or Puget Sound. It is a public trust resource – a property right - owned by all of the citizens of the state and nation. Since the State Water Project became operational, population abundances of the estuary’s native pelagic and salmonid fisheries and associated lower trophic orders have declined by one to two magnitude. Listed Delta smelt abundance has plunged to historic lows each of the last two years. The continuing collapse of fisheries is a continuing indictment of the Board and fishery agencies to fulfill their public trust mandates. Yet, the State Water Board has again relaxed minimal standards developed for drought conditions even as Sacramento Valley rainfall is near or above normal and Sacramento Valley Reservoirs contain more than a million acre-feet more water than they did last year.

It cannot serve the public interest to sacrifice species that evolved over millennia in one of the great natural ecosystems on the planet simply to provide a marginal increase in water delivery to projects that have repeatedly refused to adjust an over-subscribed water delivery system to the reality of available water supply. It cannot serve the public interest to continue to encourage water project operators to take reckless risks under the assumption that the Board can be counted upon to waive standards and bail them out from the consequences of their mismanagement. It cannot serve the public interest to choose almonds over salmon and exports to junior water rights holders over sustainable Delta agriculture.

The TUCP and the Responding Order are Contrary to Law

While the State Water Board has been granted water quality permitting authority pursuant to the federal Clean Water Act, establishment and modification of water quality criteria must be approved the U.S. EPA. The Board has said on several occasions that it does not necessarily agree with this requirement but petitioners believe the Board to be in error and a failure to seek approval for the present waiver of standards would represent a serious violation of the Clean Water Act. In any case, the Order violates the federally promulgated Estuarine Habitat Criteria for the Bay/Delta estuary at CFR 131.37.¹⁴ This federal criteria requires that salinity shall not exceed 2640 micromhos/cm specific conductance at 25 degrees Centigrade (measured as a 14-day moving average) at the confluence of the Sacramento and San Joaquin Rivers at specific locations near Roe and Chipps Islands for a specified number of days each month between 1 February and 20 June depending on the 8-River Index. Specifically, for February, the 2650 micromhos/cm standard at Chipps Island must be maintained throughout the month under all historical 8-River Index values for January. Other federal criteria include Stripped Bass spawning criteria between 1 April and 31 May and Suisun marsh criteria. The Board has consistently ignored these federally issued criteria and we believe failure to enforce these criteria has contributed to plummeting fish populations.

For all of the reasons herein, we believe the evidence would show that the proposed TUCP, and the Order to the degree that it grants the measures requested in the TUCP, violate state and federal laws, including but not limited to:

The California public trust case law;

¹⁴ http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.22.131&rgn=div5#se40.22.131_137

Article 10, Section 2 of the California Constitution;
The California Water Code;
SWRCB D-1641;
SWRCB D-990;
The California Endangered Species Act;
Section 5937 of the California Fish and Game Code;
Section 7 of the Federal Endangered Species Act;
The Federal Clean Water Act;
The Federal CVPIA doubling standard for salmon and steelhead; and
The Governor's 2014 Declaration of Drought Emergency.

As the Board knows from previous drought proceedings, petitioners believe the overwhelming evidence of violation of these statutes by the Bureau and DWR is arbitrary and capricious, and the Board's refusal to hold evidentiary hearings violates our due process rights under both the state and federal constitutions.

Specific Comments on the Responding Order

We present below a point-by-point response to sections of the Order Approving in Part and Denying in Part DWR and the Bureau's January 23, 2015 Temporary Urgency Change Petition.

The allowance of continued exports of 1,500 cfs when outflows are below 7,100 cfs and exports up to D-1641 limits when outflows of 7,100 cfs are maintained (but not additional Table 4 requirements) was made to mitigate to some extent the significant water supply reductions to municipal, industrial, and agricultural water users that are likely to occur due to the drought. The water supply considerations discussed above are considered urgent due to the significant impacts to water supplies that occurred last year and the associated severe economic impacts in some communities, especially given that foregone opportunities to conserve storage for later use cannot be regained. (Order, p. 16)

Comment: We recognize the urgency, but the urgency for the fish is just as important and needs to be discussed on an equal level by the Board. The water that would be delivered or temporarily stored pursuant to TUCP, while needed for other beneficial uses, but it is absolutely essential for the survival of fish and other Bay-Delta public trust resources.

As discussed above, dry conditions during this winter are expected to adversely affect spawning and rearing conditions for delta smelt and longfin smelt, and migration conditions for winter-run Chinook salmon, spring-run Chinook salmon, steelhead trout, and North American green sturgeon. While maintaining the D-1641 Delta outflows and San Joaquin River flow requirements would provide some short term benefits to these species, the overriding effects of the drought would persist. (Order, p. 17)

Comment: We disagree that the benefits of maintaining standards are "short term benefits;" failure to survive is not a short-term issue. Relaxing standards would add further to the burden on fish by taking away what little is left of the freshwater essential to the Bay-Delta Estuary. The effects of drought were greatly exacerbated in January when the Low Salinity Zone was

pulled upstream into the Delta because of a combination of high volume January exports and inflow diminishing to very low levels.¹⁵ This already created a prolonged period of high mortality. The augmented exports requested in the TUCP (though so far denied in the Order) would allow a repeat of these conditions, which are not allowed in February and March under D-1641.

With respect to the DCC Gates, the Petitioners propose to open the gates as necessary to reduce intrusion of high salinity water into the Delta while preserving limited storage in upstream reservoirs and reducing impacts to migrating Chinook salmon through use of the DCC Gate triggers and consultation with the RTDOMT. The principal benefit of opening the DCC Gates in February and March is to move more fresh water to the interior Delta, using less storage releases than would be needed to achieve the same salinity with the gates closed. This freshening of the Delta will maintain water quality at the CVP and SWP export pumps and the intakes of Contra Costa Water District that are needed for the protection of public health and safety. (Order, p.18)

Comment: The reality is that opening the DCC gates as requested would not save reservoir storage, but would be required to enable higher exports without at the same time pulling saltwater into the West Delta. Higher storage releases would be necessary to control salinity intrusion with the higher exports requested in the TUCP. Maintaining minimum exports will alleviate the need to open the DCC.

With the DCC Gates open, there is potential for decreased survival of Sacramento River-origin species as they move through the central Delta. Potential hazards include increased entrainment, predation, and salvage. These impacts will be reduced by implementing the DCC Gate closure criteria proposed in the TUCP. Further, the tradeoff with maintaining upstream storage will also reduce impacts to other uses as discussed above. The State Water Board concludes that the potential for impairment to instream beneficial uses from this temporary change is not unreasonable considering the potential impacts to agricultural and municipal water supplies and potentially fish and wildlife that could occur if the temporary change is not approved. (Order, p. 18)

Comment: The impacts of DCC gate opening will not be mitigated by implementing gate closure criteria (e.g., temporary gate openings and the following closures). Fish that have already moved through the gates will be trapped in the interior Delta. Monitoring is insufficient to assess any real risks to the populations from DCC openings. Sudden opening and closure of the gates causes large scale shifts in Delta hydrodynamics that affect fish survival and migration success.

With respect to the export limits, as stated in the TUCP and discussed above, unlike Water Year 2014, winter-run Chinook salmon and delta smelt are currently at an elevated risk of entrainment impacts due to their spatial distribution, abundance, and productivity, as well as

¹⁵ Standards for February and March call for the LSZ to be centered around Collinsville in eastern Suisun Bay and not upstream in the Delta.
http://cdec.water.ca.gov/jsplot/jspPlotServlet.jsp?sensor_no=8873&end=02%2F09%2F2015+10%3A52&geom=huge&interval=120&cookies=cdec01

predicted storm events later in the week. Spring-run Chinook and steelhead are also predicted to have an increased risk of entrainment in the south Delta as their migration increases through February and March. Given this heightened concern, this Order does not approve the requested interim pumping level of 3,500 cfs when NDOI is at least 5,500 cfs. This Order does allow for exports of 1,500 cfs when NDOI is at least 4,000 cfs, regardless of whether the DCC Gates are open. This Order also allows for exports of natural and abandoned flows above Flow and salinity objectives in the Bay-Delta Plan and D-1641 were developed based on historic hydrologic conditions. Provisions for the extreme dry conditions currently being experienced were therefore not considered in either the Bay-Delta Plan or D-1641. (Order, p. 18)

Comment: The situations for fish are surprisingly similar between winters 2014 and 2015. We appreciate the Board’s greater awareness of these conditions following what happened in 2014. We are astounded that the fisheries agencies do not appear to share the Board’s “heightened concern.” Despite last year’s lessons, NMFS appears to believe that the TUCP will conserve Shasta storage. The 2014-year class of winter-run and spring-run was lost because of storage releases for water supply and not for releases to maintain Delta standards. A real benefit to winter-run would accrue from keeping exports to a minimum and not dropping outflow to 4000 cfs; thus enabling more winter-run to the Bay and Ocean. Finally, there is nothing in any record that supports the contention by Executive Director Howard, made in a workshop last year and now repeated in the Order, that provisions for extreme conditions were not considered in the Bay-Delta Plan or D-1641.

These approvals are consistent with export levels approved in 2014, which balanced water supply needs with the need to protect of fish and wildlife. While there may be impacts to fish and wildlife from entrainment and associated effects associated with the approved export levels, these changes are reasonable given the extremely limited water supply conditions that water supply contractors and wildlife refuges are likely to face this year and the prolonged depletions of groundwater resources that have occurred associated with the drought. (Order, p. 19)

Comment: The “approvals” and “changes” are not balanced. They are one-sided, even when unchanged from 2014 or D-1641. The fish and the Bay-Delta ecosystem are again being asked to bear the burden of drought with little consideration or benefit in order to add a very small increment of water for water supply (less than the amount of added water stored in Shasta in one day from the recent storms). These changes are not “reasonable.” Allocating some of the added Shasta storage for fish would be reasonable.

With respect to the interim export level, there is not currently adequate information to indicate that this export level is reasonable given the current status of species and their distribution in the Delta and the potential additional risk of entrainment from the interim pumping level on various species, especially given the precipitation events that are projected this week, which may increase turbidity and associated entrainment risks as discussed above and in the Biological Reviews. While the TUCP and Biological Reviews state that additional monitoring will be conducted to evaluate this issue, it is not clear if that monitoring would be adequate to avoid entrainment impacts given the concerns with the accuracy of entrainment estimates due to the extensive amount of water hyacinth in the vicinity of the export facilities, especially for eggs and larvae. Further, the water supply tradeoffs are not clear given the unknown water contract

allocations that will occur this year. This matter will be further discussed at the Board's workshop on February 18, 2015. If adequate information is developed to determine that the interim pumping level could be allowed in a way that would not have unreasonable impacts on fish and wildlife, this Order may be amended to allow for the interim pumping level. (Order, p. 19)

Comment: The export levels of 2500-3500 cfs to date in February and the export of 4000-6000 cfs in January were entirely “unreasonable” given current conditions. Not only is monitoring “unclear” but it is also after-the-fact. As to “adequate information,” we present what we believe is adequate in our attachments to these comments. We fear that the Board will receive a chorus of arguments and counter-arguments at the workshop on subjects that have been argued in many forums over the past several decades to no avail. There is no “adequate information” that will change the consequences of last year’s actions and the fisheries disasters of the last twenty years: the listed species and many other species are at record lows even under full D-1641 protections. Now is not the time to reduce even these minimal protections.

Based on the above, the State Water Board concludes that the potential for impairment to instream beneficial uses from the approved temporary changes is not unreasonable considering the impacts to agricultural, municipal and wildlife refuge supplies or fish and wildlife that could occur if the temporary changes are not approved. (Order, p. 19).

Comment: We disagree with the conclusion that the approved changes are “not unreasonable”. The impacts to fish of reduced outflow and opening the DCC gates is not a reasonable burden to place on the fish populations and the Bay-Delta ecosystem. On the contrary, further actions are necessary to protect these public trust resources.

The population of delta smelt, which is listed as threatened under both ESA and CESA, has reached record low numbers, as measured by the Fall Midwater Trawl (FMWT), which began in 1967, and the first survey of the Spring Kodiak Trawl (SKT). (Order, p. 9)

Comment: The Board recognizes that the FMWT 2014 index of delta smelt is at a record low, as is the catch level in the January 2015 SKT survey. Equally relevant are the record low index from 2014 Summer Towntown Survey and previous record low indices from these surveys from the 2007-2009 and 2012-2013 drought years.

Further, according to the Biological Reviews submitted with the TUCP, monitoring has not detected any delta smelt in the Cache Slough and Liberty Island complex, a location that in previous years has been considered a spatial refuge for delta smelt, especially from the effects of entrainment and the Project pumping facilities. According to the Biological Reviews, this has shifted the centroid of the delta smelt population distribution south and closer to the Project export facilities, making the condition of and risks to the delta smelt in the lower Sacramento River and San Joaquin River of greater importance to the overall status of the species. (Order, p. 9)

Comment: Adult delta smelt were found in the north Delta in the Ship Channel. Since the January SKT survey, “early warning monitoring” with Kodiak trawls has only occurred in the

Lower San Joaquin River from Jersey Point and Prisoners Point, with adult delta smelt collected at both locations, thus indicating the potential for substantial smelt spawning in the Central and South Delta. Regardless, larval smelt spawned in north Delta remain vulnerable to south Delta exports via Three Mile Slough and False River.

Storm events in December are thought to have stimulated a pre-spawning migration of delta smelt that has expanded the population west and east of its centroid, which led to increased entrainment at Project facilities this water year that was not observed last water year. Further, delta smelt captured in trawl surveys during 2014 were reported to have been in relatively poor condition and of smaller size than in previous years, which indicates a potential for lower fecundity and survival of offspring in 2015. (Order, p. 9)

Comment: Spawning in the central Delta, subsequent poor condition, and smaller size are just some of the risk factors facing the fish during drought conditions. Contributing to such risk by reducing outflow and allowing exports is not reasonable.

Because of elevated water temperatures from the drought and the pre-spawn migration that has occurred, an early spawning event is expected this year, which will expose both adult delta smelt and eggs to the changes considered under the TUCP. (Order, p. 9)

Comment: This is equally true for larval and juvenile smelt.

The Smelt Working Group (SWG) expects that delta smelt will remain in the central and south Delta in preparation for spawning as long as conditions remain turbid during February and March (SWG notes, January 5, 2015). (Order, p. 9)

Comment: Adult smelt will spawn upstream of the Low Salinity Zone in freshwater. Exports (pulling freshwater from the north Delta toward the south Delta export pumps), opening the DCC, and the salinity barriers under consideration will if allowed freshen the central and south Delta, stimulating spawning in these extremely dangerous locations.

Continued minimal reservoir releases proposed in the TUCP are expected to cause the centroid of the delta smelt population to shift inland, exposing a greater proportion of the population to entrainment if the distribution does not shift back into the Sacramento River in response to lower outflow and higher water transparency. Potential impacts from entrainment are expected to be higher in February than March because more delta smelt will be spawning in February than in March. (Order, p. 9)

Comment: January and February exports, not minimal reservoir releases, have moved the Low Salinity Zone upstream into the Delta. The pool of freshwater from the December storms has been removed by exports. It will take time for the new storm water to flush the Delta again, although increased exports will now limit such flushing¹⁶, because exports are allowed based on

¹⁶ Exports as of February 11, 2015 are greater than 6000 cfs.
http://cdec.water.ca.gov/jsp/plot/jspPlotServlet.jsp?sensor_no=8873&end=02%2F09%2F2015+10%3A52&geom=hu&interval=120&cookies=cdec01

inflow, not on real outflow, X2, or EC at Collinsville, Emmaton, or Jersey Point. Entrainment risks to delta smelt will be high into the summer.

According to the Biological Reviews, with the DCC Gates closed it is expected that adult delta smelt entrainment will be low if NDOI is between 4,000 cfs and 5,500 cfs and pumping remains at 1500 cfs. However, under turbid conditions, if pumping increases on the ascending limb of the hydrograph in response to increased NDOI between 5,500 and 7,100 cfs, model results indicate that if delta smelt are east of Franks Tract, upward of 70 percent of adults are at risk of entrainment. (Order, p. 10)

Comment: Any adult or juvenile smelt unlucky enough to find itself in Frank's Tract or other areas of the central and south Delta will likely not survive.

However, according to the Biological Reviews, the December and January SKT surveys showed that the majority of Delta smelt were distributed around Decker Island and the confluence of the Sacramento and San Joaquin Rivers. (Order, p. 10)

Comment: Delta outflow was near 15,000 cfs or higher during these surveys. Saltwater subsequently intruded upstream of these areas as outflows fell to 5000 cfs or below by mid-January, when adult smelt were detected at Prisoners Point well upstream in the central Delta.

As such the Biological Reviews conclude that adult delta smelt would only be expected to shift their distribution towards the south Delta if another rain event occurs and turbidity is dispersed again into the southern Delta. The Biological Reviews conclude that as long as the proposed operations do not draw delta smelt into the San Joaquin River in the vicinity of Prisoner's Point, it is unlikely that delta smelt distribution will change in a way that increases their entrainment risk. The Biological Reviews call for continued monitoring and evaluation to inform real-time operations. As discussed above, rain events are expected later this week that may increase turbidity in the Delta. (Order, p. 10)

Comment: With outflow at 7000 cfs and exports at 2500 cfs, any increase in Delta inflow unless very substantial would be exported, since the limit is 45% of Delta inflow. If inflow increases to 15,000 cfs from the present 10,000 cfs, exports would increase to 6750 cfs, while outflow would increase to only 8250 cfs. Such conditions in February would be dire for delta smelt, longfin smelt, and Chinook salmon, as they were in December and early January. A strengthening of D-1641 standards is needed to protect fish; relaxation of the existing protections will make things worse.

Longfin smelt, which is listed as threatened under CESA and is a candidate for listing as threatened or endangered under ESA, experienced its second lowest FMWT index in 2014. According to the Biological Reviews, reductions in flows associated with the TUCP are expected to shift the centroid of the longfin smelt population inland, which will expose a greater proportion of the adult population to entrainment at the Project facilities. The primary concern for entrainment however is for larval and juvenile longfin smelt. Based on the current longfin smelt distributions, a reduction in outflows is expected to result in an elevated risk of entrainment of larvae and juveniles during February and March.

Comment: The same risks occur for delta smelt larvae and juveniles in February and March, but were not mentioned in the section of the Order that discusses delta smelt.

The strong and consistent relationship between outflows and survival of juvenile to age-1 longfin smelt, also supports the conclusion that reductions in outflows this year will reduce the survival of these fish (Jassby et al. 1995, Kimmerer 2002, McNally et al. 2010). However, detection of larval longfin smelt in the Cache Slough Complex and the current distribution of adults indicate that the larval population is likely to be widely dispersed during February and March. (Order, p. 10)

Comment: the first Larval Smelt Survey (early January) shows larval longfin smelt were concentrated in the Low Salinity Zone in the west Delta. Subsequent reductions of outflow have moved this zone into the central Delta, where longfin larvae are at high risk of entrainment due to export operations.

Therefore, operations are not expected to affect the species population as heavily as may be the case with delta smelt unless a greater percentage of the population migrates into the lower San Joaquin River. (Order, p. 10)

Comment: Significant numbers of longfin smelt larvae were already identified in the January Larval Smelt Survey in the Lower San Joaquin River portion of the western Delta.

The Biological Reviews conclude that entrainment risk of adult longfin smelt is likely to be low unless their distribution narrows and shifts further into the interior and south Delta, which may occur as a result of the expected precipitation. (Order, p. 10)

Comment: This risk factor was already apparent in late January and early February. Expected precipitation and associated higher exports will only worsen the risk.

The endangered winter-run Chinook salmon is of particular concern during dry years. Winter-run inhabit the upper reaches of the Sacramento River below Keswick Dam and are entirely dependent on adequate temperature and flow conditions below the dam for their survival. Despite temperature modeling that indicated that temperatures could be maintained below 56 degrees throughout the 2014 temperature control season immediately below the dam under the conditions that existed last year, temperature control was lost several weeks before the end of the egg incubation life stage last year. As a result, the 2014 winter-run brood year (BY) is estimated to have experienced 95 percent mortality. This is of particular concern given winter-run's endangered status and extremely limited distribution, reducing the resilience of this species to withstand impacts, especially during a prolonged drought. (Order, p. 10)

Comment: Absent substantial increase in storage levels at Lake Shasta and/or dedication of adequate storage to instream uses, conditions and risks will be no different this year.

According to the Biological Reviews, it is currently estimated that 95 percent of the surviving winter-run are in the Delta and rearing extensively in the lower Sacramento River and Delta with some fish in the south Delta waterways.

Comment: If 95% of the year class already perished, and 95% of the remaining 5% is now in the Delta, what is the possible justification for cutting outflow, opening the DCC, and (as requested) increasing exports?

The 2014 spawning run of spring-run Chinook salmon returning to the upper Sacramento River also experienced significant impacts due to drought conditions as well as from sedimentation resulting from rain events in late October through December that covered eggs leading to mortality. According to the Biological Reviews, the run was lower in four of seven locations compared to the 2013 escapement,8 with considerably lower escapement observed in the Butte Creek and Feather River Hatchery. Spring-run eggs in the Sacramento River underwent significant, and potentially complete, mortality due to high water temperature downstream of Keswick Dam starting in early September when water temperatures exceeded 56 degrees Fahrenheit. Extremely few juvenile spring-run Chinook salmon have been observed this year migrating downstream on the Sacramento River during high winter flows, when spring-run originating from the upper Sacramento River, Clear Creek, and other northern tributaries are typically observed, which presents a significant concern for the population. Based on the currently available data, the majority (80-90 percent) of yearling spring-run are estimated to be in the Delta, while less than 5 percent remain upstream of Knights Landing on the upper Sacramento River and less than 15 percent have already exited the Delta. Up to half (25-50 percent) of young of the year spring-run are estimated to be in the Delta, while 50-75 percent remain upstream, and less than 5 percent are estimated to have already exited the Delta. (Order, p. 11)

Comment: The Delta is an important rearing area. If many salmon move with the storm flows into the Delta under conditions of higher exports and negative flows at cross Delta sloughs, they will die at the pumps or on their way to the pumps. The excellent pool of fresh and low salinity water provided by the December storms is now gone. If anything, some young salmon have likely moved upstream from Suisun Bay into the Delta during January. If 100% of the Sacramento River year class of spring-run have already perished, and 50-75% of the surviving juveniles from the few remaining tributaries are now in the Delta, what is the possible justification for cutting outflow, opening the DCC, and (as requested) increasing exports?

Steelhead and green sturgeon have also likely been affected by the drought, but given the difficulty in sampling for these fish it is problematic to determine exactly how the species have been affected. Impacts to other species, including commercially important fall-run are also expected to be realized as a result of the drought. If these impacts are severe enough they could result in significant impacts to the commercial and recreational fishing industry.” (Order, p. 11)

Comment: Adult and juvenile abundance of these listed species is monitored. Runs are down. Hatchery returns of steelhead are very low this year. Budgets for the hatchery programs have been decimated. Funds are needed to continue trucking hatchery fall-run smolts to the Bay; otherwise hatchery production will simply be dumped into the rivers to experience low drought

flow to and through the Delta. The prognosis for commercial and sport fishing for salmon, steelhead, sturgeon, shad, striped bass, and other Central Valley fish is indeed poor.

According to the Biological Reviews, both positive and negative effects of the TUCP are expected on salmonids and green sturgeon during February and March. The TUCP changes are expected to affect the abundance and spatial distribution of juvenile winter-run and spring-run Chinook salmon, steelhead, and green sturgeon. The modifications to outflows and DCC Gate operations may affect the spatial distribution and abundance of adult winter-run Chinook salmon and green sturgeon. Life history diversity of steelhead may be affected due to reduced survival through the San Joaquin River migration corridor. The modification of outflow, exports, and Vernalis flows may reduce survival of juvenile listed salmonids, steelhead and green sturgeon, and may modify their designated critical habitat. The modification of juvenile winter-run and spring-run Chinook salmon and steelhead survival due to changes in outflow would occur primarily in migratory corridors in the north Delta due to increased entrainment into the interior Delta. Steelhead survival may also be reduced along the mainstem of the San Joaquin River downstream of the Stanislaus River leading to increased entrainment of steelhead toward the Project pumping facilities. (Order, p. 11)

Comment: The Order correctly notes that the conservation of water in storage is essentially a water supply benefit. We see no “positive effects” to fish of the variances allowed in the Order. The lower San Joaquin River flows (from 700 cfs to 500 cfs) will cause lower tributary flows and lower survival to and through the Delta for San Joaquin salmon and steelhead.

There may be impacts from opening the DCC Gates on Sacramento River origin salmonids from straying and entrainment. However, the Biological Reviews conclude that those effects will be minimized due to compliance with the DCC Gate operations matrix which limits opening of the DCC when migrating ESA-listed salmonids are present in the lower Sacramento River region. Further, during the period the gates are open, exports are proposed to be limited to 1,500 cfs. This export limit along with the implementation of the DCC Gate Triggers Matrix is expected to minimize entrainment of existing rearing fish in the interior and south Delta. (Order, p. 12)

Comment: The Delta is a significant rearing habitat under low inflow/outflow and low exports. Opening the DCC will move more young salmon into the interior Delta to rear. They will be more likely to survive if exports are kept low. However, if the projects subsequently close the DCC and increase exports when inflows increase (usually at Freeport on the Sacramento River), the fish rearing in the interior Delta will not survive in the absence of a positive QWEST (positive San Joaquin River outflow). USFWS studies have shown very poor survival of salmon rearing in the interior Delta following closure of the DCC.

While there may be impacts from modifications to outflows, San Joaquin River flows and opening of the DCC on salmonids and other species, the Biological Reviews conclude that these effects would be offset by increased storage in Project reservoirs which will help to maintain water temperatures necessary for Chinook salmon, steelhead, and green sturgeon over the summer and fall of 2015. (Order, p. 12)

Comment: There is need for storage releases only to meet the requested higher exports that the Order does not allow. Storage releases are and can remain at the minimums required by tailwater requirements, which include spring-summer water temperature maintenance in the Sacramento River. Low storage last summer was a direct consequence of downstream export/diversion requirements for water supply, not water released to meet Delta standards. Increased storage must come from limiting exports, transfers of stored water and in-basin diversions. Trading between one and the other doesn't help. For example, last year summer water transfers via south Delta exports were exempt from Delta standards. Water released from Shasta to maintain water temperature in the Sacramento River for salmon went eventually to water contractors not the Bay. The only way to save the cold water pool in Shasta is to reduce allocations for exports to water contractors. Reducing requirements for Delta outflow provides little water, saves little or none of the coldwater pool in Shasta, and causes severe stresses to the Bay-Delta ecosystem and all the listed fish species.

The Biological Reviews conclude that without the changes to outflows, the low reservoir storage conditions are likely to result in extremely high egg mortality or even complete failure of natural BY 2015 spring-run Chinook and winter-run Chinook below Keswick Dam due to high water temperatures. Relaxation of Delta outflow requirements and San Joaquin River flow requirements, while still continuing to meet required tributary releases from Oroville, Folsom, and New Melones, is projected to enhance the opportunities for summertime cold water management across Project reservoirs in 2015.” (Order, p. 12)

Comment: The D-1641 standards allow for relaxation of Delta outflow standard of 7100 cfs for February and March to conserve reservoir storage. Reducing this outflow standard in February and March will not improve Shasta reservoir storage absent subsequent reductions in water supply deliveries. So far in February, no added reservoir releases have been necessary to meet this outflow standard. However, allowing the full 45% export limit under the standard could require additional reservoir releases, which would affect Shasta storage.

With respect to the proposed modifications to exports, the Biological Reviews find that unmeasured mortality of salmonids in the south Delta region may increase as a result of increased entrainment towards the Project facilities under the proposed intermediate export rate of 3,500 cfs when NDOI is between 5,500 and 7,100 cfs. (Order, p. 12)

Comment: The Water Board concedes that operations since mid-January of 5000 cfs exports with only 5000 cfs outflow resulted in unnecessary increased mortality of juvenile salmonids that had moved into the Delta during the December storms. Given present salmonid population levels, increased though not precisely quantifiable mortality provides ample justification to conclude that higher exports and reduced outflow results in unreasonable effects to salmon and smelt.

The Biological Reviews also find that mortality may increase due to long transit times on the San Joaquin River where exposure to degraded habitat and predaceous species is constant. The Biological Reviews conclude that under exports of 1,500 cfs with NDOI of 5,500 or less, reduced entrainment and salvage of listed species at the Project fish collection facilities adjacent to the

South Delta export facilities would be expected due to increased positive flows in the south and central Delta. (Order, pp. 12-13)

Comment: Exports of 1500 cfs would lead to “reduced entrainment and salvage” as compared to greater exports, but to increased entrainment and salvage as compared to D-1641 required outflow, because flows in the south and central Delta would continue to be negative, not “increased positive”. Exports of 1500 cfs and with outflow of 4000 cfs would continue to put salmonids and other fish populations at risk in the Delta.

In determining whether the impact of the proposed changes on fish and wildlife is reasonable, the short-term impact to fish and wildlife must be weighed against the long-term impact to all beneficial uses of water, including irrigated agriculture, municipal and industrial use, use by wildlife refuges, salinity control in the Delta, and other fish and wildlife uses, if the changes are not approved. Further, the effects that have occurred to the species over several years must be considered.” (Order, p. 17)

Comment: The key question that the State Water Board must address is whether the Order is reasonable. The fisheries agencies submitted concurrence letters on January 29 (NOAA) and January 30 (USFWS and DFW) indicating that the changes proposed in the TUCP are in compliance with ESA and CESA requirements; however, as the Order states, these concurrences did not address the question of whether impacts to fish and wildlife would be unreasonable. In addition, the fisheries agencies concurred with the TUCP based on the unfounded assumption that the following statement from the TUCP was true: *“While maintaining flows consistent with unmodified D-1641 outflow requirements would provide some short-term support for these species, the reduced storage concomitant with these outflows would lead to substantially worse impacts later in the year. Conversely, while a modified D-1641 which reduces outflows may decrease Delta survival of the salmonids during winter, it will conserve reservoir storage which will lead to increased cold water pool available later in the year to provide upstream fishery benefits.”* (Attachment 1 of TUCP, p. 10). In 2014, D-1641 flows were reduced, but the assumed benefits of increased storage were undermined by exports and deliveries to settlement contractors. The resulting insufficient storage in Lake Shasta led to a 95% population loss of endangered winter-run salmon and a historic low for Delta smelt. Given the present population levels of both pelagic and anadromous species, increased reservoir storage must come from reduced exports and water deliveries, and not at the expense of eliminating fundamental biological requirements for fish.

Specific Comments on the January 23, 2015 TUCP

The following are CSPA’s comments on details of the proposed changes and supporting rationale presented in Attachment 1 of DWR and the Bureau’s January 23, 2015 Temporary Urgency Change Petition.

Comments on Proposed Changes:

1. *DWR and Reclamation request a Delta outflow of 4,000 cubic feet per*

second (cfs),

Comment: February and March Delta outflow requirements are provided to protect many aspects of the Delta environment not the least winter run Chinook passage through the Delta, upstream adult winter and spring run Chinook on their spawning runs, steelhead smolt emigration through the Delta, adult steelhead spawning runs, and longfin and delta smelt spawning and early rearing. One critically important function of outflow is estuary productivity including the pelagic organism food web concentrated in the Low Salinity Zone (LSZ). An outflow of 4000 cfs greatly reduces estuary productivity from San Francisco Bay into the Delta. With proposed moderate exports the LSZ will be subject to direct exports from the South Delta and general degradation by high inflows of reservoir water needed to meet the export demands. The proposed outflow of 4000 cfs is to be measured by the standard NDOI, a notoriously poor predictor of true Delta outflow, particularly at low outflow levels. Such a low and unpredictable outflow will put Delta and longfin smelt at added risk of extinction by greatly increasing their vulnerability to south Delta exports and degrading their pelagic habitat within the Delta. Such low outflows and proposed exports may cause more smelt to spawn in the central and south Delta, essentially sacrificing this production to the south Delta exports (Smelt Working Group discussions¹⁷). Both species are already at record low levels from three years of drought and previous TUCs. Adding this new and unprecedented combination of changes would put these species at extreme risk of extinction. Winter-run Chinook have been devastated by these same three years of drought, causing Interior to raise and release more hatchery smolts at Redding to replace lost production. Reducing smolt survival through the Delta will put the population at further unnecessary risk. Last year, deliveries to water contractors diminished critically needed outflow and at the same time depleted the Shasta cold-water pool. The State Board should require that Shasta water releases first meet outflow and achievable temperature requirements and meet water delivery requirements as a benefit of meeting temperature requirements; not the other way around. Providing winter storage releases to provide higher survival for downstream migrating young winter run may be, on balance, just as important as maintaining summer water temperatures. Regardless, given the state of fisheries, both of these needs should have priority over demands for water contractors from Shasta in spring and summer.

2. San Joaquin River at Airport Way Bridge, Vernalis river flow of 500 cfs

Comment: Reducing the winter flow requirement of the San Joaquin from an already low level of 700 cfs to 500 cfs will simply further burden the San Joaquin salmon and steelhead populations by reducing tributary flows needed for spawning and rearing, as well as survival of smolts through the Delta. All the efforts toward salmon recovery in the San Joaquin system will simply go for naught if winter flows continue to be reduced.

3. Modify the closure requirement of the Delta Cross Channel gates (DCC) to address Delta water quality concerns consistent with fish protections necessary as determined by the RTDOT,

Comment: Allowing the opening of the DCC during February and March to reduce salinity levels in the South Delta will simply allow higher export levels while increasing the probability

¹⁷ http://www.fws.gov/sfbaydelta/cvp-swp/smelt_working_group.cfm

that emigrating winter and spring run Chinook salmon and steelhead will be diverted into the Central and South Delta to die. These fish will not be able to complete their emigration as they will succumb to the many forms of mortality in the Delta including loss to the export pumps. The closure of the DCC in winter has long been a key element of the salmon and steelhead recovery plans as well as being an essential element of the historic 1995 Delta Agreement and D-1641 Standards.

4. *Allow higher export rate that reflects an appropriate balance between competing beneficial needs in light of the drought.*

Comment: The existing requirement that no more than 35% of Delta inflow may be exported from the Delta in February and March is a key provision of D-1641. A January limit of 65% has devastated the Delta in many dry years, showing clearly that not including January in the 35% criteria was a mistake. D-1641 already allows the standard to be increased to 45% in droughts. Allowing the exports to reach 50% or higher of total Delta inflow puts all the listed species at further increased risk and would further degrade the pelagic organism habitat of the LSZ and other zones of the estuary. Not only does it encourage higher exports, but it also releases of what little reservoir storage that remains upstream, because higher allowed exports would increase demands on Shasta reservoir storage by water contractors south of the Delta.

Comments on Supporting Rationale

“These changes will allow management of reservoir releases on a pattern that will conserve upstream storage for fish and wildlife protection and Delta salinity control while allowing for critical water supply needs exports.” (Attachment 1, p. 1)

Comment: The proposed changes will increase Central Valley reservoir releases and Delta exports, while devastating already stressed Central Valley and Bay-Delta ecosystems and populations of listed fish species.

“As set forth in the 2015 DCP, critical operational considerations for these and other changes includes providing essential human health and safety needs to CVP and SWP service areas throughout 2015 and 2016 if drought conditions continue, reducing critical economic losses to agriculture, municipal and industrial uses, maintaining protections for endangered species and other fish and wildlife resources, providing water for state, federal and privately managed wetlands, and maximizing operational flexibility within existing law and regulations. These critical operational considerations are detailed further in the 2015 DCP.” (Attachment 1, p. 2)

Comment: Early last year the Board determined that “essential health and safety needs” could be met by exports less than 1500 cfs. The TUCP levels would be well above these levels to provide more water for water contractors during the present drought. Continuing such higher exports will put the future availability of water for health and safety exports at risk. The proposed changes will not maintain protections for endangered species and other fish and wildlife resources. Higher exports and demands on reservoir storage will put all of the Central Valley fish and wildlife at greater risk.

“Upstream Reservoirs: Upstream reservoirs will be operated through the winter and spring to preserve and build storage. Upstream reservoir storage, while improved from end of September 2014 storage, remains extremely low in the early part of WY 2015. Reclamation and DWR will be trying to develop cold water resources in the winter and spring in those reservoirs where temperature management is needed later in the year. This may include working with the Sacramento River Settlement Contractors to shift early spring demand later into the year to conserve water in Shasta Reservoir, if warranted.” (Attachment 1, p. 5)

Comment: The TUCP changes will increase demands on reservoirs, reducing “cold water resources” in Shasta and Folsom reservoirs. Shifting demands of Settlement Contractors will make more water available for planned summer water transfers that increase risks to smelt as well as winter run salmon in summer.

Water Supply: Throughout dry conditions, CVP and SWP systems will be operated to lessen critical economic losses to agricultural, municipal, and industrial uses due to water shortages through project water deliveries and by facilitating voluntary water transfers and exchanges to the extent possible, while balancing the needs of upstream storage, fishery and wildlife resource protection, and operational flexibility. A key to minimizing water supply shortages for economic purposes will be to take advantage of opportunities to export natural or abandoned flow in the winter and spring while maintaining Delta water quality and minimizing adverse effects to listed fish. Release of stored water in summer and fall will be managed to concurrently benefit in-stream temperature objectives, wildlife objectives, meet Sacramento Valley in-basin needs, and preserve carry over storage to meet objectives in WY 2016. (Attachment 1, p. 5)

Comment: The existing standards have already “balanced” needs while providing far from needed resource protections over the past 20 years. The TUCP asks to remove what little protections exist. Taking advantage of “opportunities to export natural or abandoned flow” is an ominous statement of the true intent of the TUCP. There are no natural or abandoned flows into, through and out of the Delta, only those that have been painstakingly negotiated over the past several decades. These conditions are termed “in balance”. Removing these protections will permanently setback recovery of Delta and Central Valley river systems and their protected resources.

D-1641 Related Actions: Reclamation and DWR may seek adjustments under D-1641, including: (1) triggers for modified X2 criteria to balance upstream storage and fish protection, (2) triggers for moving Western Delta Ag compliance point (i.e., Emmaton to Three-Mile Slough), (3) San Joaquin flows at Vernalis, (4) Rio Vista flow requirements, and (5) Net Delta Outflow requirements. Additionally, Reclamation and DWR may exercise the flexibility provided in D-1641 to adjust the E/I ratio’s averaging period for sporadic storm events (similar to 2014). (Attachment 1, p. 6)

Comment: This is an ominous statement suggesting the further removal of limited protections from D-1641 in upcoming TUCPs. We will specifically address any such requests when they are formally proposed.

Preferential Pumping: The projects will consider a facility shift in exports in April and

May so that minimal pumping will occur at the SWP's Banks Pumping Plant and the majority will occur at the CVP's Jones Pumping Plant. This export shift will increase survival of salmonids through these facilities, since fewer fish will enter the SWP, where loss is higher due to substantial pre-screen mortality associated with Clifton Court Forebay. Combined exports would remain the same. The amount of shifted pumping from Banks to Jones would be made available to the SWP. (Attachment 1, p. 6)

Comment: In January the projects did the opposite: they shifted exports to Banks to reduce the salvage count of smelt as it approached its federal BO take limit. Banks “takes” less smelt because smelt do not make it through Clifton Court Forebay to be salvaged and counted as take. Exports from Banks are far worse because water is taken directly from the north and west Delta via the central Delta, thus having greater probability of involving salmon and smelt and the LSZ. Loss of salmon and smelt in Clifton Court Forebay prior to the fish salvage facilities is 70-90% or higher. Therefore, focusing exports at Banks not only limits the total take count, but also has a greater effect on smelt and their critical habitat. However, there is considerable evidence that “take” at the federal facility is underreported, and this should also be addressed.

Temporary Emergency Drought Barriers: If hydrologic forecasts show there will be insufficient water in upstream reservoirs to repel the saltwater and meet health and safety and other critical needs, then installation of Emergency Drought Barriers will be considered to lessen water quality impacts. Excessive salinity increases in the Delta could render the water undrinkable for 25 million Californians and unusable by farms reliant upon this source. Temporary rock (riprap) Emergency Drought Barriers may be installed at up to three locations in the Delta during drought conditions in 2015, or in a subsequent year if necessary, to manage salinity in the Delta when there is not enough water in upstream reservoirs to release to rivers to repel the saltwater. Consultation on installation and operation of the barriers will be conducted on the barriers prior to installation and may require additional adjustments to D-1641. (Attachment 1, p. 6)

Comment: Again, an ominous statement for the future, which bears some immediate response. Drought barriers on Sutter and Steamboat Slough would degrade over 30 miles of designated critical habitat for endangered species (salmon, smelt, sturgeon, and steelhead) in Sutter, Steamboat, Cache, and Miners sloughs by making the sloughs “dead-end” with little or no flow, more invasive aquatic plants, warmer water temperatures, and lower concentrations of dissolved oxygen. At present, the sloughs pass over 20 percent of the Sacramento River inflow to the Delta, more than 1000 cfs in each channel. Blocking these channels will force this flow down the main Sacramento channel into the interior Delta. With the DCC open (as proposed in the TUCP), more of the inflow will flow into the central Delta and be available for exports. Higher exports could then be achieved without higher inflows (reservoir releases). Simply put, the projects would export more water than presently available for the same reservoir releases. That water will come from reduced Delta outflow (also proposed in TUCP). In addition, less fresh water would enter the 30+ miles of sloughs and mixes into the critical habitats of the lower Yolo Bypass (Cache Slough, Liberty Island, and Ship Channel). The third barrier on False River would do the same: higher exports could be achieved with the same Delta inflow, because salinity from False River would no longer enter Old River and the south Delta on incoming tides.

Hatchery Operations: Livingston Stone National Fish Hatchery (LSNFH) managers will coordinate with Delta Operations for Salmonids and Sturgeon (DOSS) to time the hatchery release of winter-run Chinook salmon to coincide with favorable hydrologic conditions, and to track their movement down the Sacramento River into and through the Delta utilizing acoustically-tagged winter-run Chinook salmon released at approximately the same time and real-time acoustic receivers deployed in the Sacramento River and Delta at various locations. DOSS will review the real-time acoustic tag data to determine the likely migration timing and distribution of the hatchery winter-run in the Sacramento River and into the Delta, and advise NMFS and Water Operations Management Team (WOMT) of potential risks to hatchery winter-run salmon. (Attachment 1, p. 6)

Comment: With the DCC opening, higher exports, and lower Delta outflow, significant numbers of winter-run Chinook salmon are unlikely to survive transit to and through the Delta to the Bay and Ocean. There will be no “favorable hydrologic conditions” under the TUCP. Hatchery winter-run should be trucked and barged to the Bay. Reclamation should fund this provision. These winter-run hatchery smolts will have as little chance of survival as the 60,000 spring run Chinook hatchery smolts released in 2014 in the San Joaquin River (few if any survived).

Transfers and Exchanges: Reclamation and DWR will continue to facilitate water transfers and exchanges. If these transfers or exchanges are conveyed through the Delta outside the transfer window described in the 2008 and 2009 BiOps (July-September), Reclamation and DWR will consult with USFWS and NMFS prior to conveyance of the transfer water and DWR will request a consistency determination from CDFW. (Attachment 1, p. 7)

Comment: Transfers within and outside the “transfer window” will occur under the TUCPs to move water through the Delta from the north to the south. Transfers are exempt from rules and allow substantial added exports as well as reservoir releases in drought years. Transfers are devastating to the delta smelt in the summer of drought years. Any transfers involving storage releases are devastating to all listed fish species as well as future water supplies. Transfers outside the “summer window” could be devastating to other species such as winter-run and spring-run Chinook. To date, all transfer requests have been approved with little environmental review or affects assessment.

Throughout dry conditions, CVP and SWP systems will be operated to lessen critical economic losses to agricultural, municipal, and industrial uses due to water shortages through project water deliveries and by facilitating voluntary water transfers and exchanges to the extent possible, while balancing the needs of upstream storage, fishery and wildlife resource protection, and operational flexibility. (Attachment 1, p. 5)

Comment: To date, no formal “balancing” has occurred.

The proposed export limits are intended to provide additional water deliveries while not exceeding proportional regulatory standards regarding exports (e.g. E/I). The proposed DCC gate operations balance risks to both water quality and outmigrating anadromous fish during February and March, in the event of the extreme low Delta inflows. Hence, this proposal seeks to

balance the short-term and long-term habitat needs of some of the covered anadromous and pelagic species during the entirety of WY2015. (Attachment 1, p. 10)

Comment: The proposed changes are not “proportional”. The present constraints are minimal at best at protecting the listed species. Opening the DCC in winter will kill listed salmon and steelhead. Reductions in outflow will kill listed pelagic species. The “take” will not be observable except in future population counts and in sport and commercial fisheries. The TUCP provides no “balancing.” It simply takes more of what little is left.

Unlike WY2014, winter-run Chinook salmon and Delta Smelt are currently at an elevated risk of entrainment impacts, due to their spatial distribution, abundance, and productivity. (Attachment 1, p. 11)

Comment: With its drought conditions, TUCP changes, and summer water transfers, WY2014 was a great debacle leading to devastation of winter run and delta smelt: Delta smelt had record low indices (see Order, p. 9). Because of the 2014 orders, the species are already at elevated risk and exposure, which will hinder future potential recovery of their populations. Adding to these conditions, as proposed in the TUCP, would have huge environmental and economic consequences far beyond what is considered in the TUCP or the Temporary Barriers EIS/EIR.

Spring-run Chinook and steelhead are predicted to have an increased risk of entrainment in the South Delta as their migration increases through February and March. Green sturgeon are typically exposed to a broad spectrum of flows and exports over the course of the year, and thus not likely to have increased risk of entrainment due to changes in flows. Increased monitoring and coordination, extending from the interagency drought response efforts in WY2014, is intended to support management of key entrainment risk indicators in the Interior and South Delta as part of the proposed operations. The evidence for the risk of entrainment for each species of concern will be considered as part of the biological review being conducted to support the Endangered Species Act consultation process.” (Attachment 1, p11)

Comment: Fisheries already have an increased risk during the February-March migration period. The TUCP proposes to increase that risk by adding higher exports, lower outflows and DCC openings. These are “the key entrainment risk indicators.” Adult delta smelt were being collected in January and February at all the key indicator stations, and little was done to protect them. The Smelt Working Group appeared confused and was not unanimous in its review, warnings, or recommendations. Apparently, there was little concern that the LSZ was moving into the Delta with its population of larval longfin smelt. The absence of January fishery protections was devastating to fish populations and their critical habitats. The TUCP seeks to remove the slightly stronger but limited February-March D-1641 protections. The primary purpose is to preserve reservoir storage for higher exports and contractor deliveries and not to provide storage that benefits the Bay-Delta ecosystem and its listed fish species.

Specific comments on the USFWS Concurrence Letter¹⁸

¹⁸http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/fws2usbr_pitts013015.pdf

“Reclamation has determined that the proposed drought actions will result in no additional adverse effects on Delta Smelt or its critical habitat for the months of February and March 2015 beyond those previously analyzed in the 2008 BiOp. The Service accepts Reclamation's determination.” (Letter.)

Comment: It is incredible that the Service would state that 1) 4000 cfs outflow with 1500 cfs exports, and 2) 5500 cfs outflow and 3500 cfs exports would not cause adverse effects on Delta Smelt or its critical habitats. It is particularly vexing given their subsequent statements on the positive relationship between population abundance and winter-spring Delta outflow.

“The smelt supporting information document includes an analysis of the effects of the actions on larval Delta Smelt production using the recently published new information in the Interagency Ecological Program (IEP) Management, Analysis, and Synthesis Team's (MAST) An Updated Conceptual Model of Delta Smelt Biology technical report. The MAST report may provide valid new information that spring outflow has a positive impact on the relative abundance of Delta Smelt surviving to the early juvenile phase of their life cycle.” (Letter)

Comment: It is further incredible that the Service acknowledges that science points to a positive relationship between outflow and smelt abundance, but treats it as “new science” worthy of consideration in future assessments of the effects of TUCPs. Yet they are fine with lower outflow and higher exports, and concur with the TUCP changes.

Comments On The NMFS Concurrence Letter¹⁹

“As mentioned above, winter-run eggs and juveniles in broodyear 2014 experienced approximately 95% temperature related mortality of the egg and fry life history stages last year. NMFS included this high mortality rate in its JPE, and estimated that approximately 124,521 wild juvenile winter-run from brood year 2014 are expected to enter the Delta. Based on discussions at the Delta Operations for Salmonids and Sturgeon Technical Work Group, >95% of young-of-year winter-run are currently rearing in the Delta, and <5% have exited the Delta (past Chipps Island).” (Letter, p. 5)

Comment: NMFS shows concern for summer river temperature conditions (need to maintain storage and cold-water pool), but recognizes that most of the 2014 wild smolt production is already in the Delta and subject to the harmful consequences of the TUCP's proposed changes.

“In addition, Livingston Stone National Fish Hatchery increased its winter-run broodstock collection in 2014 by three-fold, and is currently rearing approximately three times (current estimate is 610,000) the typical hatchery production of juvenile winter-run, awaiting release into the upper Sacramento River in February. The hatchery winter-run are an important component of broodyear 2014, and therefore, are important to track as they migrate down the Sacramento River, and enter and exit the Delta.” (Letter, p. 5)

¹⁹http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/nmfs_stelle012915.pdf

Comment: NMFS shows concern for these hatchery smolts that have yet to pass through the Delta but appears to be less concerned that these smolts will be adversely impacted by the TUCP's proposed increased exports, reductions in outflow and opening of DCC.

“Inherent in the interim contingency plan is the objective to meet multiple needs with limited water resources. Most of the adverse effects to species identified in the Biological Review (e.g., the potential for reduced survival of outmigrating salmonids from the Sacramento Basin due to modifications to outflow criteria in D-1641) are the consequences of actions intended to result in conditions (e.g., greater Shasta Reservoir storage and a greater cold water pool) that will preempt more severe adverse effects to species (e.g., potentially running out of cold water in Shasta Reservoir to meet the needs of winter-run and spring-run egg incubation throughout the temperature management season). Some adverse effects to species identified in the Biological Review (e.g., the potential for increased entrainment of salmonids in the South Delta region due to modifications to export limits that allow above-minimum exports when outflow is at least 5,500 cfs, but less than the requirement in footnote 10 of Table 3 of D-1641) are the consequences of actions intended to result in conditions (e.g., greater south-of-delta storage) that will pre-empt adverse effects to non-fish-and-wildlife beneficial uses of CVP and SWP project water (e.g., municipal and agricultural purposes).” (Letter, p. 6)

Comment: NMFS assumes that the TUCP actions will save upstream storage when in fact the minimal conserved storage will largely benefit of exports and water deliveries. Maintaining 7000 cfs outflow with 1500 cfs exports is clearly preferable to 5500 outflow and 3500 cfs exports under the same minimum allowed reservoir releases.

“In conclusion, NMFS concurs that Reclamation's Project Description is consistent with Action 1.2.3.C and meets the specified criteria for an interim contingency plan. We are making this finding based on both the Biological Review attached to Reclamation's letter, which describes the additional adverse effects of the drought and drought operations, and our conclusion that the potential effects of the types of operations proposed in the interim contingency plan were considered in the underlying analysis of the CVP/SWP Opinion, which considered that droughts would occur and concluded that implementation of the RPA, including Action 1.2.3.C, is not likely to jeopardize the continued existence of Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, California Central Valley steelhead, the Southern Distinct Population Segment of North American green sturgeon, and the Southern Resident killer whales, and will not result in the destruction or adverse modification of their designated critical habitats. Furthermore, the best available scientific and commercial data indicate that implementation of the interim contingency plan will not exceed levels of take anticipated for implementation of the RPA specified in the CVP/SWP Opinion.” (Letter, p. 7)

Comment: We disagree that lower outflows and higher exports in February and March are not likely to further jeopardize the listed salmonids or negatively affect their designated critical habitats. Lower outflow in February and March from the present 7000 cfs to 4000 cfs would have adverse effects to winter-run and spring-run salmon survival to and through the Delta. Exports of 3500 cfs at relaxed outflow (5500 cfs outflow) would have adverse effects on salmon and their designated critical habitats in the Delta. Opening the DCC when exports are below 1500 cfs will result in increased take. Because these changes would have little or no benefit to

preserving the storage or cold-water pools in upstream reservoirs, there are no beneficial tradeoffs.

Under what conditions may this Objection and Petition for Reconsideration be disregarded and dismissed?

The TUCP should be denied and the Order rescinded.

In its place, the Board should order the following short-term measures to protect fish and wildlife:

1. Allow only minimum exports when EC Collinsville >2.64 mmhos or when outflow is less than 7100 cfs as determined by daily average Delta outflow from the USGS gages at Rio Vista, Three Mile Slough, Jersey Point, and Dutch Slough. Minimum exports are 1500 cfs or lower if less is needed for Health and Safety. We recommend this action be taken to preserve the listed species and their critical habitat in the Delta. The action is consistent with the original intent of D-1641 to protect public trust resources in the Bay and Low Salinity Zone, because the location of X2 (2.64 EC) was found to and continues to be related to the success of many Bay-Delta fishes and the quality of many Bay-Delta estuary habitat features.
2. If inflow increases from storms and unbalanced Delta conditions occur, then exports should only be allowed up to the D-1641 35% of Delta inflow, provided the conditions in #1 above are met. All existing OMR restrictions per the OCAP BOs must apply. During the ascending and descending limbs of storm derived high outflows, exports should be ramped up and down, respectively to (1) preserve habitat integrity (e.g., habitat gradients of salinity and temperature) within the interior Delta most influenced by exports, and (2) to reduce risks to any localized concentrations of special status fish species.
3. Hatchery programs should be enhanced to ensure maximum production and survival to the ocean during the drought. Hatchery operators should truck or, preferably, barge hatchery produced salmon and steelhead to the Bay to ensure maximum survival. If possible, such transport should occur before April 1. Winter-run and spring-run hatchery Chinook smolts should be trucked to the lower Sacramento River near Knights Landing and then barged to the Bay. This would greatly enhance survival and minimize straying. This approach is already being developed by East Bay MUD with fall-run on the Mokelumne. A similar approach should be adopted at the Feather and American hatcheries for the respective runs of salmon raised at these facilities, as well as any planned releases of San Joaquin River spring-run salmon. The Bureau and DWR should be required to fund any added costs associated with these enhanced hatchery practices.
4. The Board should require management of delta hydrology through EC and gauged outflow, not NDOI. EC recorders and USGS gauges located throughout the river, Delta, and Bay provide a better management tool than the estimated NDOI.
5. The Bureau and DWR should install the Head of Old River Barrier to increase migration success of San Joaquin salmon young.
6. The projects should release 200 cfs into the Yolo Bypass through the Fremont Weir, Colusa Basin Drain, and Sacramento Ship Channel to minimize poor habitat conditions in the Cache Slough lower bypass region of the north Delta. This would alleviate the

negative net flows occurring in the area from local diversion demands that threaten rearing salmon and smelt.

7. DWR should use the Montezuma Slough salinity control weir to sustain Low Salinity Zone habitat in Montezuma that would be present under proposed conditions (#1 above).
8. The Board should require the RTDOMT to operate the Delta Cross Channel gates in real time to minimize export losses of smelt and San Joaquin salmonids during periods of high Delta inflows to minimize negative OMR and improve positive QWEST flows.
9. The Board should require the DWR and the Bureau to adjust exports to the natural monthly tidal cycle to minimize negative effects on Delta hydrology and fish habitat and entrainment risk conditions.
10. The Board should require DWR and the Bureau to shift exports to Tracy facility to minimize effects of exports. Per unit of export, Banks impacts appear to be greater than Tracy impacts.
11. The Board should require pulse flow releases timed to coincide with storms to stimulate outmigration of fish directly below rim dams and to improve and sustain benefits of natural high flow events.
12. The Board should require the projects to reduce exports during higher flows (if any) from San Joaquin. The Board should not allow exports greater than 1500 cfs exports during San Joaquin pulses. The Board should not allow export of San Joaquin pulses as is currently allowed under D-1641 Critically Dry year standards and as was allowed regardless of Delta outflow last year.
13. At no time in the December-March period should OMR flows exceed the -5,000 cfs limit. At no time should they exceed -2,000 cfs when EC at Jersey Point exceeds a daily average of 500.
14. The Board must hold an evidentiary hearing on the requested TUCP and on necessary measures to protect gravely threatened fish species during current drought and depleted storage conditions.

A true copy of this protest has been served upon the petitioners by e-mail (see below).

Date: February 13, 2015

Chris Shutes, Water Rights Advocate
California Sportfishing Protection Alliance



Bill Jennings, Executive Director
California Sportfishing Protection Alliance



Barbara Vlamis, Executive Director
AquAlliance



Carolee Krieger, Executive Director
California Water Impact Network



Michael Jackson
Counsel to California Sportfishing Protection Alliance,
AquAlliance, and
California Water Impact Network

/s/ Michael Jackson

Attachments:

Att. 1, Summer 2013

Att. 2, Summer 2014

Att. 3, 2014 FMWT

Att. 4, Demise of Winter-run 2014

Att. 5, Delta Smelt on the Scaffold

Att. 6, CSPA Presentation 2014

Pursuant to the January 27, 2015 Notice of Temporary Urgency Change Petition, we have filed this protest, objection, petition for reconsideration and petition for hearing, on 13 February, via e-mail to: Rich.Satkowski@waterboards.ca.gov

Also pursuant to the January 27, 2015 Notice of Temporary Urgency Change Petition, we have served this protest, objection, petition for reconsideration, and petitions for hearing, on 13 February, via e-mail to the following:

Department of Water Resources, c/o James Mizell: P.O. Box 942836; Sacramento, CA 94236-0001; James.Mizell@water.ca.gov

Regional Solicitor's Office, c/o Amy Aufdemberge: Room E-1712; Cottage Way; Sacramento, CA 95825; Amy.Aufdemberge@sol.doi.gov