

STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
STATE WATER RESOURCES CONTROL BOARD

**DIVISION OF WATER RIGHTS**

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**In the Matter of Permits 16597, 16598, 16599, and 16600  
(Applications A014858A, A014859, A019303, and A019304)**

**U.S. Bureau of Reclamation**

**ORDER APPROVING TEMPORARY URGENCY CHANGE**

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SOURCE: Stanislaus River

COUNTIES: Calaveras and Tuolumne

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**BY THE EXECUTIVE DIRECTOR:**

**1.0 INTRODUCTION**

This order approves, subject to conditions, a temporary, urgency change petition (TUCP) filed by the U.S. Bureau of Reclamation (Reclamation) on June 17, 2015, pursuant to Water Code section 1435. This Order approves a change to a condition of the water right permits for the New Melones Project, a component of the Central Valley Project (CVP), that was imposed pursuant to State Water Resources Control Board (State Water Board) Decision 1422 (D-1422) and Revised Decision 1641 (D-1641). Specifically, this Order lowers the minimum dissolved oxygen (DO) concentration requirement on the Stanislaus River below Goodwin Dam that Reclamation is required to meet, from 7.0 milligrams per liter (mg/l) to 5.0 mg/l through November 30, 2015.

To ensure that the change does not have unreasonable impacts on fish and wildlife and that the change is in the public interest, this Order includes several conditions. This Order includes a condition requiring Reclamation to develop and implement a plan approved by the Executive Director of the State Water Board for operations of New Melones Reservoir that reasonably protects fish and wildlife on the Stanislaus River this year. This Order also includes requirements that Reclamation evaluate and document the effectiveness of this year's operations to protect fishery resources. The current storage conditions in New Melones Reservoir are the result of prolonged drought and associated operational decisions. Because storage conditions in New Melones Reservoir currently are so low, there is a very real possibility that maintaining DO and other conditions needed for the protection of fish and wildlife will be an equal or greater concern next year. To ensure that these longer term issues are being planned for, this Order includes a condition that requires Reclamation, in coordination with the Department of Fish and Wildlife (DFW), National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) (collectively fisheries agencies) and the State Water Board, to develop a plan to reasonably protect fish and wildlife on the Stanislaus River next year. This Order also includes other conditions related to coordination, monitoring and reporting that will

help to ensure that the change will not have unreasonable impacts on fish and wildlife and that the change is in the public interest.

## **2.0 BACKGROUND**

### **2.1 Water Rights Permits**

Reclamation's TUCP seeks changes to the following permits to appropriate water from the Stanislaus River in Calaveras and Tuolumne counties: Permit 16597, Permit 16598, Permit 16599, and Permit 16600. Collectively, these permits authorize Reclamation to directly divert and to divert water to storage in New Melones Reservoir for purposes of irrigation, domestic use, municipal and industrial use, fish culture, recreation, water quality control, and power generation.

Term 19 of the subject permits, included pursuant to D-1422, requires Reclamation to release conserved water from New Melones Reservoir for water quality control purposes to maintain a DO concentration in the Stanislaus River as specified in the June, 1971, Central Valley Regional Water Quality Control Board's (Central Valley Regional Board) Water Quality Control Plan for the San Joaquin River Basin 5C, or as it may be amended. D-1641 subsequently replaced Term 19 in Permits 16597 and 16600 with a slightly revised condition that requires Reclamation to release water from New Melones Reservoir to maintain a DO concentration in the Stanislaus River "as specified in the Water Quality Control Plan for the Sacramento and San Joaquin river basins."

### **2.2 Dissolved Oxygen Objective**

The Fourth Edition to the Central Valley Regional Board's Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) established DO objectives based on the general needs of the fishery resource specific to a particular river or stream in the basin of interest. The Basin Plan requires that for surface water bodies outside the legal boundaries of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta or Delta), the DO concentrations shall not be reduced below the following minimum levels at any time: 5.0 mg/l for waters designated for WARM<sup>1</sup>, and 7.0 mg/l for waters designated COLD<sup>2</sup> and SPWN<sup>3</sup>. The Stanislaus River from Goodwin Dam to the San Joaquin River is identified as having warm, cold, and spawning freshwater habitat beneficial uses, and therefore, the more protective 7.0 mg/l objective is operative.

Although the 7.0 mg/l objective applies throughout the reach of the Stanislaus River from Goodwin Dam to the confluence with the San Joaquin River, Reclamation monitors and reports daily DO levels at Ripon, as required by the State Water Board. (D-1422, p. 32.) Reclamation's TUCP seeks to change the minimum DO requirement from 7.0 mg/l to 5.0 mg/l, and does not propose to limit the applicability of the new requirement to the Stanislaus River below Ripon. Nonetheless, Reclamation's analysis of the effects of the change on fish and wildlife, and the biological review submitted in support of the TUCP, indicate that Reclamation plans to operate to meet a minimum DO level of 5.0 mg/l at Ripon. Accordingly, this Order requires Reclamation

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<sup>1</sup> Beneficial uses of water that support warm water ecosystems include, but are not limited to, preservation of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

<sup>2</sup> Beneficial uses of water that support cold water ecosystems include, but are not limited to, preservation or enhancements of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

<sup>3</sup> Beneficial uses of water that support spawning include high quality aquatic habitats that are suitable for the reproduction and early development of fish.

to meet a minimum DO level of 5.0 mg/l at that location during the effective period of the change.

### **2.3 Drought Conditions**

California is experiencing its fourth consecutive year of below-average rainfall and very low snowpack. Water Year 2015 is also the eighth of nine years with below average runoff, which has resulted in chronic and significant shortages to municipal and industrial, agricultural, and refuge supplies and historically low groundwater levels. As of the end of July, 2015, over 70 percent of the state is experiencing an Extreme Drought and over 45 percent is experiencing an Exceptional Drought, as recorded by the National Drought Mitigation Center, U.S. Drought Monitor<sup>4</sup>. The state's snowpack, which provides much of California's seasonal water storage, was at critically low levels this year which has resulted in very low inflows to streams and reservoirs during the dry summer months. The reduced inflows caused by the historically low snowpack will result in very low inflows until significant precipitation events occur.

The San Joaquin River watershed, in particular, has experienced severely dry conditions for the past four years. Water Year 2012 was classified as dry and Water Years 2013, 2014, and 2015 were classified as critically dry. As of the end of July, 2015, the San Joaquin Valley 5-Station Precipitation Index was at 18.8 inches, 47 percent of average for this time of year. The lack of precipitation in the last four years has contributed to historically low reservoir storage levels throughout the watershed. Storage in New Melones Reservoir peaked at 607 thousand acre feet (TAF) on March 3, 2015, which was 25 percent of capacity (40 percent of normal for March). It has since been drawn down to 15 percent of total capacity, and 24 percent of historical average (353 TAF) for this time of year. Storage conditions this low have not been experienced since the early 1990s drought.

### **2.4 2015 Temporary Urgency Changes and the Stanislaus Operations Plan**

Separate from the requested changes approved in this Order, Reclamation and the Department of Water Resources (DWR) filed a TUCP on January 23, 2015, seeking to make other changes to their water right permits and license for the State Water Project (SWP) and CVP (collectively Projects). Reclamation and DWR sought changes to conditions imposed pursuant to D-1641 that require Reclamation and DWR to meet flow-dependent and operational water quality objectives designed to protect fish and wildlife and agricultural beneficial uses in the Bay-Delta. On February 3, 2015, the Executive Director issued an order approving in part the TUCP, subject to conditions. The Executive Director modified the February 3, 2015 Order on March 5, 2015, and on April 6, 2015. On May 21, 2015, Reclamation submitted a request to modify and renew the TUCP Order, which the Executive Director approved on July 3, 2015. The July 3, 2015 Order approved certain changes through November 30, 2015.

As discussed above, prolonged drought conditions in the San Joaquin River Basin and in the Stanislaus River sub-basin have led to very low reservoir storage levels in New Melones Reservoir which has created significant concerns about low flows, high temperatures, low dissolved oxygen conditions and other factors that have significant effects on steelhead (*Oncorhynchus mykiss*) and fall-run Chinook salmon (*Oncorhynchus tshawytscha*). The February 3, 2015 TUCP Order and subsequent modifications served to improve storage conditions in New Melones Reservoir and associated water supplies from the reservoir, in particular, by reducing San Joaquin River flow requirements. In addition, the April 6, 2015

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<sup>4</sup> Found at <http://droughtmonitor.unl.edu/Home.aspx>

TUCP Order required Reclamation to develop and implement a plan to protect fisheries resources on the Stanislaus River. Reclamation submitted a plan in compliance with this requirement on May 15, 2015, that identified projected storage conditions and expected operations. Since that time, storage levels have been higher than the predicted range specified in the plan, which limits Reclamation's ability to operate the low level outlet at New Melones Dam in order to control temperatures in the river. A condition in the July 3, 2015 Order requires Reclamation to perform additional consultation and temperature modeling to update its operations plan. According to the order, the operations plan shall identify how operations on the Stanislaus River will be managed this summer and fall to minimize impacts to fish and wildlife, including optimizing use of the low level outlet at New Melones Dam for temperature control and other operational measures. A draft of the plan was submitted on July 24, 2015. The final plan will be submitted in early August.

## 2.5 Sensitive Fish Species in the Stanislaus River

Fall-run Chinook salmon is an anadromous species that occurs in the Stanislaus River, and is listed as a Species of Concern<sup>5</sup>. Central Valley fall-run Chinook salmon are also very important to the recreational and commercial fishing industry in California and off of its coast. Fall-run Chinook salmon migrate upstream as adults from late summer through December and spawn from early October through late December. In the Stanislaus River, spawning occurs from Goodwin Dam (River Mile [RM] 58) downstream to Riverbank (RM 33)<sup>6</sup>. Newly hatched salmon (alevins) remain in the gravel for about 4–6 weeks, depending on surrounding water temperatures. Most fall-run Chinook salmon fry emerge from the gravel between February and March and are immediately dispersed into downstream feeding areas. Juvenile Chinook rearing in the Stanislaus River typically occurs from mid-December through May between Goodwin Dam (RM 58) and Riverbank (RM 33). Rearing and outmigration of fall-run Chinook salmon typically occurs between February and June, with peaks in fry outmigration occur in February and March, and smolt (>75 mm) outmigration occurs in April and May.

Central Valley steelhead, which is listed as threatened under the federal Endangered Species Act (ESA), is an anadromous species that also occurs in the Stanislaus River. In the Stanislaus River, and the entire San Joaquin Valley, steelhead populations have been extirpated from much of their historical range from dam construction, with small populations surviving in cool water refugia below dams. Information regarding steelhead numbers on the Stanislaus River is very limited and has typically been gathered incidental to existing monitoring activities for fall-run Chinook salmon. On the Stanislaus River, steelhead smolts have been captured in rotary screw traps (RST) at Caswell State Park and Oakdale each year since 1995<sup>7</sup>, but the numbers are very low, ranging from 10 to 30 annually, compared to annual catches of fall-run in the range of hundreds<sup>8</sup>. The low juvenile steelhead numbers likely indicate a much smaller steelhead population than fall-run Chinook salmon.

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<sup>5</sup> Species of Concern are species with which some concerns exists regarding the status and threats to that species, but insufficient information is available to indicate a need to list the species as threatened or endangered under the Endangered Species Act . A Species of Concern status does not carry any procedural or substantive protections under the ESA.

<sup>6</sup> Mesick, C. Studies of spawning habitat for fall-run Chinook salmon in the Stanislaus River between Goodwin Dam and Riverbank from 1994 to 1997. *In* Brown, R.L. 2001. Contributions to the biology of Central Valley Salmonids, Volume 2.

<sup>7</sup> The rotary screw traps are operated by S.P. Cramer and Associates Inc.

<sup>8</sup> S.P. Cramer and Associates, Inc. 2001 Stanislaus data report. Oakdale, California.

Juvenile steelhead reside in freshwater for at least a year, so they are more dependent on freshwater rearing habitat than fall-run Chinook salmon. Most are captured in the Stanislaus River from January to mid-April, but have been found in the smolt stage in late May at both the Oakdale and Caswell RST locations. Steelhead rearing in the Stanislaus River occurs upstream of Orange Blossom Bridge (OBB; RM 47), with the highest densities upstream of Knights Ferry<sup>9</sup> (RM 54). Adult steelhead migrate upstream to their spawning grounds primarily during the fall and winter months, with upstream migration peaking between October and February.

## **2.6 NMFS Biological Opinion**

In accordance with section 7 of the ESA, NMFS in 2009 released a final biological opinion and conference opinion on the long-term operations of the Projects (NMFS Biological Opinion). The NMFS Biological Opinion documents the effects of the operations of the Projects on listed anadromous fishes, including threatened Central Valley steelhead, and designated proposed critical habitats. Based on the best available scientific and commercial information, the Biological Opinion found that the long-term operations of the Projects are likely to jeopardize the continued existence of Central Valley steelhead, and destroy or adversely modify its designated critical habitat.

The ESA provides that if NMFS comes to a jeopardy or adverse modification conclusion, it must identify a reasonable and prudent alternative (RPA) to the proposed action that is expected to avoid the likelihood of jeopardy to the species and adverse modification of designated and proposed critical habitat. There are several ways in which water operations have adversely affected listed anadromous fish species that are addressed in the RPA. For Central Valley steelhead on the Stanislaus River, water operations have led to significant degradation of floodplain and rearing habitat, and low flows have distorted cues associated with outmigration. Accordingly, the RPA describes actions on the Stanislaus River (referred to as the Eastside Division in the RPA) to maintain suitable temperatures (Action III.1.2), maintain minimum flows (Action III.1.3), improve spawning habitat (Action III.2.1), conduct floodplain restoration (Action III.2.2), restore migratory habitat (Action III.2.3), and evaluate fish passage at New Melones, Tulloch, and Goodwin Dams (Action III.2.4). Additionally, Action III.1.1 establishes a Stanislaus Operations Group (SOG) to provide a forum for real-time operational flexibility during implementation of the actions identified above. The SOG meets on a regular basis and includes members from NMFS, Reclamation, USFWS, DFW, DWR, and the State Water Board.

## **3.0 COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT AND WATER CODE SECTION 13247**

Ordinarily, the State Water Board must comply with any applicable requirements of the California Environmental Quality Act (CEQA) prior to issuance of a temporary urgency change order pursuant to Water Code section 1435. (See Cal. Code Regs., tit. 23, § 805.) On January 17, 2014, Governor Brown proclaimed a State of Emergency due to severe drought conditions and directed the State Water Board, among other things, to consider modifying requirements for reservoir releases or diversion limitations that were established to implement a water quality control plan. Such modifications, which could be accomplished through actions on requests such as the TUCP, would enable water to be conserved in upstream reservoirs that may be needed later in the year to protect cold water pools for salmon and steelhead, to maintain water

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<sup>9</sup> Kennedy, T. and T. Cannon. 2002. Stanislaus River salmonid density and distribution survey report (2000-2001). Fishery Foundation of California. Sacramento, California.

supplies, and to improve water quality. To carry out this directive, Governor Brown also suspended CEQA, the CEQA regulations, and Water Code 13247 (requiring state agencies, including the State Water Board, to comply with water quality control plans unless otherwise directed or authorized by statute). The directive applicable to the State Water Board's action on the TUCP and suspensions of law remain in effect. On April 25, 2014, the Governor issued a Proclamation of a Continued State of Emergency providing that the provisions of the January 17, 2014 Proclamation remain in full force and effect and also adding new provisions. On December 22, 2014, Governor Brown issued Executive Order B-28-14, which extended the waiver of CEQA and Water Code section 13247 contained in the January 17, 2014, and April 25, 2014, Proclamations through May 31, 2016.

On April 1, 2015, Governor Brown issued Executive Order B-29-15, which confirmed that the suspensions of CEQA and Water Code section 13247 contained in the prior proclamations and executive order remain in effect through May 31, 2016. Absent suspension of section 13247, the State Water Board could not approve a change petition that modifies permits and licenses in a way that does not provide for full attainment of water quality objectives as required by a water quality control plan, even in a drought emergency.

#### **4.0 PROCEDURAL REQUIREMENTS CONCERNING THE TEMPORARY URGENCY CHANGE PETITION**

The State Water Board may issue a temporary urgency change order in advance of public notice. (Wat. Code, § 1438 subd. (a).) Public notice must be provided as soon as practicable, unless the change will be in effect less than 10 days. (*Id.*, § 1438 subds. (a), (b) & (c).) The State Water Board issued a notice of the TUCP on June 23, 2015. In addition to the Board providing public notice of the TUCP, Reclamation published the notice in 2 newspapers from June 30 to July 3, 2015, in accordance with Water Code section 1438, subdivision (b)(1). The State Water Board also notified interested persons on its email distribution lists.

Any interested person may file an objection to a temporary urgency change. (*Id.*, subd. (d).) The State Water Board must promptly consider and may hold a hearing on any objection. (*Id.*, subd. (e).) State Water Board Resolution 2012-0029 delegates to the Board Members individually and to the Executive Director the authority to hold a hearing, if necessary, and act on a temporary urgency change petition. (Resolution 2012-0029, ¶¶ 2.2, 4.4.1.)

#### **4.1 Comments and Objections**

To date, the State Water Board has received comments on the TUCP from Stockton East Water District (SEWD) and the Bay Institute, Natural Resources Defense Council, and Pacific Coast Federation of Fishermen's Associations (TBI et al.). SEWD supports the change and states that it believes the change will not have an unreasonable effect on other legal users of water or the environment because cold water fish species are far upstream of the Ripon location where conditions are generally more favorable. TBI et al. submitted a protest to the TUCP indicating that the environmental information submitted by the Petitioner significantly underestimates the potential adverse effects of the change on fish species in the Stanislaus and San Joaquin Rivers and the Delta. TBI et al. also indicates that previous actions by the Petitioner and the State Water Board have contributed to significantly degraded conditions on the Stanislaus River. TBI et al. recommends that Reclamation be directed to prepare and implement an operations plan for water year 2016 and following years that ensures that temperature control

and water quality objectives will be achieved before releases can be made for other purposes. The comments by SEWD and TBI et al. were considered in the development of this Order.

In addition to the above comments, the Central Valley Regional Board submitted an email in accordance with California Code of Regulations Title 23, section 794 requiring water right petitioners to consult with the appropriate Regional Water Board regarding potential effects of the proposed changes. The Central Valley Board recommends that Reclamation develop a plan to protect fishery resources on the Stanislaus River. As discussed above, this was a requirement of the July 3 TUCP Order and is also a requirement of this Order. In addition, this Order requires Reclamation to develop a plan to reasonably protect fish and wildlife next year and to evaluate the effectiveness of operations this year in protecting fish and wildlife.

The Central Valley Board also recommends that Reclamation potentially participate in the Stockton Deep Water Ship Channel aerators project and the Central Valley Board's Regional Monitoring Program (RMP). This Order does not specifically address the longer term efforts of the aerator or the RMP, but does include requirements from the July 3 TUCP Order related to consultation, modeling, monitoring and reporting.

## **5.0 REQUIRED FINDINGS OF FACT**

Water Code section 1435 provides that a permittee or licensee who has an urgent need to change the point of diversion, place of use, or purpose of use from that specified in the permit or license may petition for a conditional temporary change order. The State Water Board's regulations set forth the filing and other procedural requirements applicable to temporary urgency change petitions. (Cal. Code Regs., tit. 23, §§ 805, 806.) The State Water Board's regulations also clarify that requests for changes to permits or licenses other than changes in point of diversion, place of use, or purpose of use may be filed, subject to the same filing and procedural requirements that apply to changes in point of diversion, place of use, or purpose of use. (*Id.*, § 791, subd. (e).)

Before approving a temporary urgency change, the State Water Board must make the following findings:

1. The permittee or licensee has an urgent need to make the proposed change;
2. The proposed change may be made without injury to any other lawful user of water;
3. The proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses; and
4. The proposed change is in the public interest.

(Wat. Code, § 1435 subd. (b)(1-4).)

The State Water Board exercises continuing supervision over temporary urgency change orders and may modify or revoke temporary urgency change orders at any time. (Wat. Code, §§ 1439, 1440.) Temporary urgency change orders expire automatically 180 days after issuance, unless they are revoked or an earlier expiration date is specified. (*Id.*, § 1440) The State Water Board may renew temporary urgency change orders for a period not to exceed 180 days. (*Id.*, § 1441.)

### **5.1 Summary of the Ordering Conditions that Support the Required Findings of Fact**

As summarized and described in the introduction, this Order conditionally approves a change to

Reclamation's water rights to modify the Stanislaus River DO requirement from 7.0 mg/l to 5.0 mg/l at and below Ripon on the Stanislaus River. This Order also includes other conditions intended to ensure that the change can be made without unreasonable effects on fish, wildlife, or other instream beneficial uses and to ensure that the change is in the public interest.

Specifically, as discussed above, this Order includes conditions from the July 3 TUCP Order requiring Reclamation to develop and implement an operations plan, and evaluate and document the effectiveness of this year's operations to protect fishery resources. In addition, as discussed above, this Order includes a new condition to require Reclamation to develop a water year 2016 operations plan for New Melones. The plan is required to be reevaluated and updated monthly to reflect the current hydrology and other conditions. The plan is required to identify proposed flows and resulting temperatures and dissolved oxygen conditions that will reasonably protect fish and wildlife. The plan and updated plans are required to include temperature modeling that is prepared in consultation with the fisheries agencies and State Water Board.

This Order also includes other conditions from the July 3 TUCP Order that require Reclamation (and DWR) to: coordinate real-time operations with the State Water Board and fisheries agencies; calculate and maintain a record of the amount of water conserved through the changes authorized by this and other TUCP orders; develop monthly water balance estimates indicating actual and proposed operations through the end of the water year; and conduct necessary modeling and monitoring to inform real-time operational decisions. This Order reserves 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 and also requires compliance with federal ESA and California ESA (CESA) requirements.

## **5.2 Urgency of the Proposed Change**

Under Water Code section 1435, subdivision (c), an "urgent need" means "the existence of circumstances from which the board may in its judgment conclude that the proposed temporary change is necessary to further the constitutional policy that the water resources of the state be put to beneficial use to the fullest extent of which they are capable and that waste of water be prevented . . . ."

California is in its fourth straight year of below-average rainfall and very low snowmelt runoff (described above). As a result of these continued dry conditions, earlier this year New Melones Reservoir seasonal peak storage was at its lowest level since 1992. Current projections indicate that the end of the water year (September) storage may be as low as 259 TAF. By the end of September, inflow to the reservoir this water year is projected to be only about 300 TAF, which is the lowest in the lifetime of the reservoir. Additionally, reservoir storage may drop below the elevation needed to support power generation later this water year. Earlier this year, Reclamation, in conjunction with DWR, requested additional temporary urgency changes (discussed above) to San Joaquin River flow requirements in order to increase flexibility for managing water in the San Joaquin River basin and Stanislaus River sub-basin.

According to Reclamation, the combination of inflow to New Melones Reservoir and storage within the reservoir is no longer sufficient to meet demands, or existing permit term conditions through the remainder of this year. According to Reclamation, water deliveries to Oakdale Irrigation District and South San Joaquin Irrigation District are at the minimum contractual level, and the CVP water service contractors that receive water from New Melones are getting no water this year. Additionally, Reclamation states that it cannot meet the DO objective and retain



enough water for more critical fishery resource needs later in the year. Due to the severe magnitude and length of the drought, there is an urgent need for the proposed change to reserve critical water supplies that will be needed to provide minimal protection to the Stanislaus River fishery later in the year and for water supply purposes for various uses going into next year.

### **5.3 No Injury to Any Other Lawful User of Water**

Under Water Code section 1435, the term “injury” means invasion of a legally protected interest. (*State Water Resources Control Board Cases* (2006) 136 Cal.App.4th 674, 738-743.) Riparian and appropriative water right holders with water rights to divert water below CVP reservoirs are only entitled to divert natural and abandoned flows, and in the case of riparian water right holders, only natural flows. They are not entitled to divert water previously stored or imported and released for use downstream, including stored water that is released for purposes of meeting water quality objectives. (See *id.* at pp. 738, 743, 771.) Accordingly, legal users of water will not be injured to the extent that Reclamation releases less stored water from New Melones Reservoir as a result of the change to the DO requirement.

### **5.4 No Unreasonable Effect upon Fish, Wildlife, or Other Instream Beneficial Uses**

The proposed change will have impacts to fish and wildlife, however, given the existing low storage conditions, these impacts are not unreasonable and are also not necessarily avoidable at this point as described below. Along with the TUCP, Reclamation submitted supplemental environmental information regarding the effects of the change to the DO requirement on fishery resources in the Stanislaus River. The fisheries agencies also confirmed that the changes can be made in compliance with ESA and CESA. The environmental information submitted by Reclamation acknowledges that undesirable physiological responses can occur to salmonids at DO concentrations less than 6.5 mg/l from reduced swimming ability and growth.<sup>10</sup> As such, the environmental information indicates that the change will reduce the amount of suitable habitat available for these fish.

In order to attempt to encourage steelhead and fall-run Chinook salmon to outmigrate before temperatures, DO and other conditions degraded earlier this year, pulse flows were provided this spring pursuant to another TUCP Order. Any outmigrating fall-run Chinook salmon and steelhead leaving the system this year likely left the Stanislaus and San Joaquin Rivers before the end of June with these pulses or otherwise. However, there are still oversummering steelhead and other fish and wildlife species residing in the river that will be affected by degraded conditions, including low DO. In addition, adult fall-run Chinook salmon and steelhead will be migrating back to the river later this year to spawn. Those fish may also be affected by low flow, high temperature and low DO conditions likely to occur until conditions cool and precipitation events occur. These effects will continue downstream into the San Joaquin River and to some extent the Delta. However, the degraded conditions are primarily the result of the larger drought issues, rather than this particular change.

While there will be degraded conditions in the lower Stanislaus River related to lower DO levels, more suitable habitat should still be available upstream below Tulloch Reservoir for oversummering steelhead because Reclamation will maintain required releases pursuant to

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<sup>10</sup> Carter, K. 2005. The effects of dissolved oxygen on steelhead trout, coho salmon, and chinook salmon biology and function by life stage. North Coast Regional Water Quality Control Board. Santa Rosa, California.

NMFS Biological Opinion flow requirements. However, those flows still may not achieve desired temperature and DO levels because they are expected to be warm due to the low reservoir storage conditions in New Melones Reservoir and high air temperatures. Colder water is available deeper in the reservoir behind Old Melones Dam, but that water is not accessible until Reclamation operates the low-level outlet, which Reclamation does not plan to do until storage drops below about 300 TAF due to safety concerns. This condition will result regardless of the change. While providing more flows now might cool temperatures to some degree and improve DO conditions, it would come at the expense of that water being available later in the season for spawning steelhead and fall-run Chinook salmon.

The operations plan to protect fish and wildlife required by the July 3 TUCP Order and this Order is being developed and implemented to operate New Melones and Tulloch reservoirs to improve temperature and DO conditions in the late summer and fall once the low level outlet is usable. Implementation of that plan should help to protect fish in the Stanislaus River and fish migrating back to the river to spawn. In addition, as temperatures cool and days shorten, river temperature and DO conditions will improve.

As discussed above, to help to understand and document how effective operations were this year in protecting fish and wildlife on the Stanislaus River, this order along with the July 3 TUCP Order requires Reclamation to submit an evaluation of the effectiveness of those operations in order to inform future decisions. Further, to ensure that longer-term planning is in place to address these low storage and flow issues going into next year, this Order includes a new condition requiring Reclamation to prepare a plan to reasonably protect fish and wildlife next year. This Order also includes other requirements from the July 3 TUCP Order related to coordination, monitoring and reporting that will help to ensure that the change will not have unreasonable impacts on fish and wildlife. Further, this Order reserves 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 and also requires compliance with ESA and CESA requirements.

In conclusion, in determining whether the impact of the proposed change to fish and wildlife is reasonable, the short-term impact to fish and wildlife must be weighed against the long-term impact if the change is not approved. The effects that have occurred to the species over several years must also be considered. The persistent dry conditions (discussed above) leading into this year have resulted in adverse spawning and rearing conditions for salmonids. While maintaining the DO requirement of 7.0 mg/l (for some period of time until it is no longer possible with available storage) would provide some short-term benefits to salmonids, the overriding effects of the drought would persist. Further, meeting the DO requirement of 7.0 mg/l would reduce the storage available in New Melones Reservoir later in the year when releases would be more beneficial to spawning Stanislaus River fish species. Based on the limited water storage available and potential continuance of dry hydrologic conditions, the proposed change as conditioned will not unreasonably affect fish, wildlife, or other instream beneficial uses.

## **5.5 The Proposed Change is in the Public Interest**

The proposed changes will make the best use of limited water supplies and are accordingly in the public interest. As discussed above, hydrologic and water supply conditions in the San Joaquin River basin and the Stanislaus River sub-basin continue to be highly impacted by the drought and are inadequate to meet all the demands. Additionally, Reclamation cannot meet water quality objectives while retaining enough water for more critical fishery needs later in the year. The proposed change will allow more flexibility in the operation of New Melones Reservoir

in order to reserve critical water supplies for later in the year when fish are returning to spawn. Furthermore, the proposed changes are warranted to reduce the significant fisheries and water supply related impacts expected if conditions remain dry.

## **6.0 CONCLUSIONS**

The State Water Board has adequate information in its files to make the evaluation required by Water Code section 1435.

I conclude that, based on available evidence:

1. The permittee has an urgent need to make the proposed change;
2. The petitioned change will not operate to the injury of any other lawful user of water;
3. The petitioned change will not have an unreasonable effect upon fish, wildlife, or other instream beneficial uses; and
4. The petitioned change is in the public interest.

## ORDER

**NOW, THEREFORE IT IS ORDERED THAT:** the Petition filed by U.S. Bureau of Reclamation (Reclamation) for a temporary urgency change in Permits 16597, 16598, 16599, and 16600 is approved, subject to the conditions set forth below. This Order shall be effective until 180 days from the date of this Order. Except as otherwise provided below, all other terms and conditions of the subject permits, including those added by the State Water Resources Control Board (State Water Board) in Decision 1422 and Revised Decision 1641 shall remain in effect.

1. Through November 30, 2015, or until such time as this Order is amended or rescinded, the requirements of Decision 1422 and Decision 1641, for Reclamation to meet the water quality objective for dissolved oxygen (DO) is amended as follows: Reclamation shall release water from New Melones Reservoir for water quality purposes so as to maintain a minimum DO concentration of 5.0 milligrams per liter (mg/l) in the Stanislaus River at Ripon.
2. In consultation with the Department of Fish and Wildlife, National Marine Fisheries Service, the U.S. Fish and Wildlife Service (collectively fisheries agencies) and the State Water Board, Reclamation shall develop a water year 2016 operations plan for New Melones Reservoir by February 1, 2016. The plan shall be reevaluated and updated monthly to reflect the current hydrology and other conditions. The plan shall identify proposed flows and resulting temperatures and DO conditions that will reasonably protect the fish and wildlife beneficial uses of the Stanislaus River. The plan and updated plans shall include temperature modeling that is prepared in consultation with the fisheries agencies and State Water Board. Specifically, meteorological and hydrologic assumptions used in the analyses shall be consistent with direction from fisheries agencies and State Water Board staff.
3. Reclamation shall comply with the following requirements included in the July 3, 2015 State Water Board Executive Director Order conditionally approving a petition for temporary urgency changes in permit and license conditions requiring Reclamation and the Department of Water Resources to comply with Delta water quality objectives in response to drought conditions:
  - a. Condition 7 which states: "In consultation with the fisheries agencies, Oakdale and South San Joaquin Irrigation Districts and State Water Board staff, Reclamation shall revise its May 15, 2015 plan to reasonably protect fish and wildlife on the Stanislaus River using current hydrologic and storage information and revised temperature modeling. The assumptions for the temperature modeling shall be developed in consultation with the organizations identified above and shall be prepared as soon as practical. The plan shall identify how operations on the Stanislaus River will be managed this summer and fall to minimize impacts to fish and wildlife, including optimizing use of the low level outlet on New Melones Reservoir for temperature control and other operational measures. The plan shall be submitted to the Executive Director for approval and to the fisheries agencies by July 10, 2015, and shall be updated as necessary based on changed circumstances. Reclamation shall implement the approved plan and any changes directed by the Executive Director necessary to reasonably protect fish and wildlife."

- b. Condition 8 which states: "In consultation with the fisheries agencies, Reclamation shall prepare and submit to the State Water Board a report that evaluates and documents the effectiveness of this year's Stanislaus River operations in protecting fishery resources. Specifically, that report shall evaluate the effectiveness of New Melones blending operations between the upper and lower outlets and any other measures taken to improve temperatures, any concerns with operating the lower outlet, actual temperature conditions in the river downstream of Goodwin Dam, and observed fisheries conditions resulting from the operations. The report shall be submitted to the Executive Director and fisheries agencies by January 15, 2016."
    - c. In addition, Reclamation shall comply with conditions 2, 3, 4, and 5 of that the July 3, 2015 Order with respect to the change approved by this Order.
  4. This Order may be further modified by the Executive Director or the State Water Board based on additional public input or changed circumstances.
  5. This Order does not authorize any act that results in the taking of a candidate, threatened or endangered species, or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this Order, the Petitioners shall obtain authorization for an incidental take permit prior to construction or operation of the project. Petitioners shall be responsible for meeting all requirements of the applicable Endangered Species Act for the temporary urgency changes authorized under this Order.
  6. Petitioners shall immediately notify the Executive Director of the State Water Board if any significant change in conditions occurs that warrants reconsideration of this Order.

STATE WATER RESOURCES CONTROL BOARD



Thomas Howard  
Executive Director  
Dated: August 4, 2015