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

DIVISION OF WATER RIGHTS

In the Matter of Wastewater Change Petition 20
(WW0020)

El Dorado Irrigation District

ORDER RENEWING TEMPORARY URGENCY CHANGE

SOURCE: Deer Creek tributary to Cosumnes River

COUNTY: El Dorado County

BY THE DEPUTY DIRECTOR FOR WATER RIGHTS:

1.0 SUBSTANCE OF TEMPORARY URGENCY CHANGE PETITION

On May 5, 2015, El Dorado Irrigation District (EID) electronically filed a Temporary Urgency Change Petition (TUCP) with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) requesting approval of temporary changes to Order WR-95-9 pursuant to Water Code section 1435. The petition was incomplete until May 8, 2015 when the necessary TUCP filing fee was submitted to the State Water Board.

Order WR-95-9 allowed EID to decrease the overall quantity of treated wastewater discharge from its Deer Creek Wastewater Treatment Plant (WWTP) to Deer Creek, but also required EID to maintain certain minimum discharges to the creek throughout the year. With the TUCP, EID seeks to decrease the required minimum discharges to Deer Creek. In 2014, EID requested similar temporary changes to Order WR-95-9; the State Water Board approved that TUCP on June 5, 2014, and amended the approval on August 1, 2014.

Temporary urgency changes pursuant to Water Code section 1435 may be effective for up to180 days from the date of the Order approving the changes; the 2014 Order approving EID's TUCP was in effect through December 2, 2014.

2.0 CALIFORNIA'S ONGOING DROUGHT CONDITIONS

2.1 Governor's Proclamations of a State of Emergency due to Drought

On January 17, 2014 (January 2014 Proclamation), Governor Edmund G. Brown Jr. proclaimed a State of Emergency to exist throughout the State of California due to severe drought conditions, and on April 25, 2014, he issued an Executive Order (April 2014 Proclamation) to strengthen the State's ability to manage water and habitat effectively in drought conditions. The April 2014 Proclamation found that the continuous severe drought conditions presented urgent challenges across the State, including water shortages in communities and for agricultural production, increased wildfires, degraded habitat for fish and wildlife, threat of saltwater contamination, and additional water scarcity, if drought conditions continued into 2015

As drought conditions continued into 2015, on April 1, 2015, Governor Brown issued a new Executive Order directing the State Water Board to impose restrictions on urban water suppliers to achieve a statewide 25 percent reduction in potable urban usage through February 2016. On May 5, 2015, the State Water Board amended and readopted an emergency regulation in an effort to achieve the Governor's mandated statewide conservation goals; the emergency regulation was subsequently approved by the Office of Administrative Law on May 18, 2015.

3.0 BACKGROUND

3.1 EID's Deer Creek WWTP

EID owns and operates the Deer Creek WWTP, which was constructed in 1974. The treated wastewater discharges from the facility are currently regulated by Waste Discharge Requirements (WDR) Order R5-2014-0081, NPDES Permit No. CA0078662, issued by the California Regional Water Quality Control Board, Central Valley Region (Regional Board) on June 6, 2014. The Deer Creek WWTP serves a population of 20,000 within the service areas of Cameron Park, Shingle Springs, and Mother Lode. The WWTP has a design capacity to treat 3.6 million gallons per day (mgd).

EID annually provides one billion gallons of California Code of Regulations, title 22, division 4, chapter 3 tertiary treated recycled water from both its Deer Creek and El Dorado Hills WWTPs. The combined discharges are regulated by Master Reclamation Permit No. 5-01-146, which was also issued by the Regional Board. The reclaimed water is used for irrigation of residential front and backyard landscaping, and for commercial usage including schools, median strips, golf courses, and parks within the EID service area during summer months.

Standard Provision A(2)(o) of WDR Order R5-2014-0081 reads as follows:

> *For publicly owned treatment works, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a permanent decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code section 1211).*

3.2 Wastewater Change Petition 20 and State Water Board Order WR-95-9

Pursuant to Water Code section 1211, EID filed Waste Water Change Petition 20 (WW0020) with the State Water Board on September 14, 1992 to change the point of discharge, place of use, and purpose of use of the treated wastewater from the Deer Creek WWTP. On October 5, 1994, the Division approved WW0020 granting the petition for change allowing EID to decrease its effluent discharge from the August 1993 existing condition wastewater discharge to Deer Creek of 1.66 mgd to instead provide only supplemental wastewater discharges to allow for flows in Deer Creek of 0.5 mgd. Following issuance of the order approving the petition, the Division received at least 30 petitions for reconsideration of the order. On December 13, 1994, the State Water Board granted the petitions for reconsideration and on January 12, 1995, the State Water Board held a hearing to receive additional evidence and arguments from interested parties before taking final action on the 1994 approval order.

On May 3, 1995, the State Water Board issued Order WR-95-9 reconsidering approval of WW0020. Order WR-95-9 conditionally approved WW0020 as follows: (a) added irrigation as a purpose of the use of the treated wastewater; (b) added the service area within the El Dorado Hills Development north of Highway 50 near Cameron Park as the place of use of the treated wastewater; (c) added terms regarding minimum treated wastewater effluent discharges to Deer Creek including: 1) EID must discharge a minimum of 0.5 mgd of treated wastewater to Deer Creek whenever the Deer Creek WWTP produces less than a daily average of 2.5 mgd; and 2) EID must discharge a minimum of 1.0 mgd of treated wastewater into Deer Creek whenever the Deer Creek WWTP produces more than a daily average of 2.5 mgd.

The recycled water demand on EID's irrigation system exceeds the available recycled water supply due in part to the minimum wastewater discharge requirements of Order WR-95-9. Consequently, EID has supplemented the recycled water system with potable water for irrigation purposes. The supplemental potable water would otherwise have been used for other purposes, including indoor consumptive use.

3.3 2014 TUCP

On March 10, 2014, EID filed a TUCP regarding Order WR-95-9. With the TUCP, EID requested to discontinue its treated wastewater discharge to Deer Creek during the remainder of 2014 due to drought conditions. EID requested to instead use the treated wastewater for irrigation purposes within its service area.

As mentioned above, the State Water Board approved the TUCP with an Order dated June 5, 2014, which was then amended on August 1, 2014. However, in the approval Order, EID was not permitted to completely discontinue the treated wastewater discharge into Deer Creek. Instead, the State Water Board allowed EID to reduce its discharge to 0.43 mgd and potentially lower the discharge based on an adaptive monitoring program that allowed step-wise decreases in the wastewater discharge only after adequate documentation showing that downstream fish and wildlife have been kept in good condition with the decreased flow regimes. During the term of the temporary urgency change order, EID's discharges to Deer Creek dropped to as low as 0.32 mgd by October 2014. In its field monitoring report following the discharge drop to 0.32 mgd, EID concluded that very little change in habitat occurred due to the lowering of the average daily discharge to Deer Creek.

The approval Order also required EID to implement certain conservation measures relative to its irrigation water supply.

3.3.1 EID Compliance Reporting for 2014 TUCP

The following is a summary based on EID's reporting of its compliance with the 2014 Order, which was in effect from August 25, 2014 until February 21, 2015.

Fish and Wildlife Monitoring

The 2014 TUCP Order included requirements for a fishery monitoring plan that included monitoring the downstream fishery and riparian habitat both five days before and after reduction of treated wastewater discharges into Deer Creek. EID was required to monitor downstream water temperatures, and document and measure depths of downstream pool, riffle and run/glide habitats and evaluate whether the modified hydrologic and temperature conditions would keep fish and wildlife within certain areas downstream of the WWTP in good condition. EID was required to provide all of this information to the California Department of Fish and Wildlife (CDFW) and the Division.

CDFW was then to notify the Division and EID whether it concurred with the evaluation provided by EID and was agreeable to another step-wise flow reduction. If CDFW determined that the any of the decreased discharge rates may have resulted in unreasonable effects upon fish and wildlife, EID was then required to increase the discharge immediately to the previous authorized discharge rate and not discharge below that rate until expiration of the TUCP Order.

EID was initially allowed to reduce the wastewater discharge to 0.43 mgd and was required to remain at that discharge rate until the impacts on fish and wildlife were monitored. EID was then allowed to implement a further step-wise reduction of 25 percent in the discharge rate with the concurrence of CDFW and the Deputy Director for Water Rights. The State Water Board and CDFW ultimately allowed EID to decrease its wastewater discharge to 0.32 mgd by the expiration of the 2014 TUCP Order.

Overall, EID concluded that during the period that the 2014 TUCP approval order was in effect little change in habitat occurred during the lowering of the discharge to 0.43 and 0.32 mgd. EID indicated that the maximum depths, top-widths, and temperatures were largely unchanged from baseline conditions during both reduced discharges. Therefore, EID came to the conclusion that the adaptive flow reduction approach appeared to be protective to fish and wildlife in Deer Creek downstream of the discharge site under the 2014 drought conditions.

Water Conservation Reporting

Term 3 of the 2014 TUCP Order required EID to operate in accordance with a water demand reduction plan (Plan) with monthly reporting to the Division to ensure that EID was achieving a minimum of 20 percent water conservation. EID did not file a new Plan as they were already in the process of implementing an existing Drought Action Plan with 2014 updates (2014 DAP). By memo dated October 14, 2014, the Division determined that the 2014 DAP and subsequent email submittals filed by EID on August 21 and September 16, 2014, and EID's Board Policies and Administrative Regulations updated on July 24, 2014, satisfied the Division's minimum Plan requirements and were therefore acceptable.

Monthly status reports submitted by EID indicated that water conservation measures implemented during the drought effectively reduced water demand by more than 20 percent relative to baseline water demand, defined as the average water demand for 2013. Accordingly, no additional water conservation measures were required during the period of the 2014 TUCP Order.

On May 5, 2015, the State Water Board amended and readopted an emergency regulation in an effort to achieve the Governor's mandated statewide conservation goals; the emergency regulation was subsequently approved by the Office of Administrative Law on May 18, 2015. EID, as an urban water supplier, is required to comply with the emergency regulations.

4.0 COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

On February 4, 2014, EID's Board of Directors adopted a resolution declaring that the drought conditions constitute an emergency within the meaning of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.)), making actions taken to address those conditions exempt from CEQA's requirements. More specifically, Public Resources Code section 21080, subdivision (b)(4) and CEQA Guidelines section 15269, subdivision (c) exempt from CEQA any actions that are necessary to prevent or mitigate an emergency. CEQA Guidelines section 15359 defines "emergency" as "a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services." EID filed a notice of exemption for this project dated February 5, 2014.

The State Water Board has reviewed the information submitted by EID and has made an independent finding that CEQA is suspended for this action under the Governor's April 2015 Executive Order B-29-15 which extended directives included in the Governor's January 2014 Proclamation. Specifically, the January 2014 Proclamation ordered that "the Water Board will take actions necessary to make water immediately available, and, for purposes of carrying out Directives 5 and 8, Water Code section 13247 and Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are suspended on the basis that strict compliance with them will prevent, hinder, or delay the mitigation of the effects of the emergency." (January 2014 Proclamation, ¶ 9.) Directive 8 orders "The Water Board will consider modifying requirements for reservoir releases or diversion limitations, where existing requirements were established to implement a water quality control plan. These changes would enable water to be conserved upstream later in the year to protect cold water pools for salmon and steelhead, maintain water supply, and improve water quality." (Id., ¶ 8.)

The State Water Board will reflect this action on its website consistent with Directive 9 of the January 2014 Proclamation.

5.0 PUBLIC NOTICE OF THE TEMPORARY URGENCY CHANGE PETITION

The State Water Board will issue, as soon as practicable, public notice of the TUCP pursuant to Water Code section 1438, subdivision (a). Pursuant to Water Code section 1438, subdivision (b)(1), EID is required to publish the notice in a newspaper having a general circulation, and that is published within the counties where the points of diversion are located. The State Water Board will post the notice of the temporary

urgency change and the TUCP (and accompanying materials) on its website. The State Water Board will also distribute the notice through an electronic notification system. Pursuant to Water Code section 1438, the State Water Board may issue a temporary urgency change order in advance of the required notice.

6.0 CRITERIA FOR APPROVING THE PROPOSED TEMPORARY URGENCY CHANGE

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 TUCPs. (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:

a. The Petitioner has an urgent need to make the proposed change;

b. The proposed change may be made without injury to any other lawful user of water;

c. The proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses; and

d. The proposed change is in the public interest. (Wat. Code, § 1435, subd. (b)(1-4).)

6.1 Urgency of the Proposed Change

Under Water Code section 1435, subdivision (c), an "urgent need" means "the existence of circumstances from which the State Water 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 . . ." However, the State Water Board shall not find the need urgent if it concludes that the petitioner has failed to exercise due diligence in petitioning for a change pursuant to other appropriate provisions of the Water Code.

In their TUCP, EID states that they have an urgent need to temporarily lower the minimum wastewater discharge into Deer Creek required by Order WR-95-9. This action will preserve the potable water supply for domestic use, because it will substitute use of treated wastewater supply for the potable water currently used for irrigation. Since February 4, 2014, EID has been instituting Drought Stage 2 Actions, which currently include water use reductions of up to 28 percent.

On March 23, 2015, EID adopted Resolution No. 2015-010, declaring a continuing drought emergency.[1] EID has indicated that if the area doesn't receive significant precipitation, EID's water storage supplies will continue to be depleted, and the District may need to further limit and reduce water uses for health and safety purposes only. Therefore, EID has requested to reduce the required wastewater discharge into Deer Creek in order that more treated wastewater can be utilized in its irrigation system, which would allow it to maximize use of the potable water supply for indoor uses.

6.2 No Injury to Any Other Lawful User of Water

Objections based on injury to downstream rights must include information showing that the individual who is objecting is a legal user of water as well as his historical, current, or proposed future diversion and use of water that is reasonably necessary to determine if the proposed change will result in injury to the exercise of the individual's water right or other legal use of water. (Wat. Code, § 1703.6, subd. (c).) Subsequent to public notice of the 2014 TUCP, objections were filed on the basis of injury to downstream rights and/or

[1] For an emergency declaration to remain in effect, EID's Board must find by a four-fifths vote at each regular meeting that the need for emergency action still exists.

downstream wells but the objections did not meet the requirements of Water Code section 1703.6, subdivision (c). The objections generally alleged harm, without specifying persons that would be harmed.

Based on review of the Division's electronic water rights database, there are only riparian diverters on Deer Creek downstream of EID's wastewater discharge into Deer Creek, and upstream of any significant tributary inflows into Deer Creek. In Order WR-95-9, the State Water Board found that the wastewater EID discharges into Deer Creek primarily is supplied by water sources which are located outside the drainage area of Deer Creek. Under natural conditions, the water from these sources would not flow into Deer Creek. Thus, with Order WR-95-9, the State Water Board found that the downstream riparian diverters on Deer Creek do not have senior water rights to the treated wastewater from the Deer Creek WWTP. As such, the wastewater discharged into Deer Creek is not subject to riparian claims.

Therefore, renewal of the order approving the TUCP will not injure any other lawful user downstream of the Deer Creek WWTP.

6.3 No Unreasonable Effects upon Fish, Wildlife, or Other Instream Beneficial Uses

Renewal of the TUCP approval order will result in reduction of the treated wastewater discharge to Deer Creek. To protect fish, wildlife, or other instream beneficial uses from adverse impacts caused by the proposed change, the discharge reduction in 2014 was allowed based on an adaptive approach which required that discharge reduction impacts be evaluated on a real-time basis. CDFW was consulted on the adaptive flow management concept in 2014. As a result CDFW advised the State Water Board that, due to drought conditions, an initial discharge reduction to 0.43 mgd was acceptable. By the expiration of the order approving the 2014 TUCP, EID had reduced its discharge rate to 0.32 mgd based on approval from CDFW and the Division.

On June 4, 2015, CDFW provided comments on the proposed renewal of the 2014 TUCP. Based on their review of the results of the 2014 monitoring program, CDFW indicated that further monitoring is needed in order for them to support renewal of the TUCP. CDFW indicated that the results of the monitoring surveys from 2014 were inconclusive and recommended increased monitoring surveys if the Division were to approve the TUCP this year.

Following CDFW's June 4 comments, EID's consultants contacted CDFW staff to discuss their concerns. On June 22, 2015, CDFW then provided modified comments on the TUCP as follows:

1. *The Department would prefer an incremental reduction approach with an initial reduced rate of 0.43 mgd. However, Department staff will consider an initial rate reduction of 0.32 mgd with the inclusion of increased monitoring criteria that shall require discharge increases should exceedance of temperature thresholds or significant habitat loss occur.*

2. *The Department recommends increased temperature monitoring following initial discharge reductions. Temperature logger data shall be collected weekly and reported to the Department by COB each Monday. EID shall consult with the Department weekly regarding potential discharge increases based on temperature data. If temperature data indicates weekly collection may not be necessary, the frequency of logger data collection may be reduced in consultation with Department staff.*

3. *The Department continues to recommend increased monitoring surveys. Monitoring shall take place prior to discharge reduction, within the initial 5-days (or the least minimum time allowing the creek flows and pool levels to reach a new equilibrium condition) of a discharge reduction, and every 4-weeks following thereafter as necessary in consultation with Department staff.*

4. *Reduced wastewater discharge offers EID the opportunity to collect additional low flow data points below the WRO 95-9 for the "Deer Creek Wastewater Treatment Plant Effects on Biological Resources of Eliminating or Reducing the Minimum Discharge Requirement" report. The Department recommends that a stage-discharge pair be measured at the lowest flow available during the 2015 releases, as well as a series of water surface elevations at each*

transect throughout the model domain to be collected at the lowest flows available during the reduction for additional model validation. The model was calibrated/validated based on data collected in 2012 and 2013. Because data collection was limited to flow available within the minimum discharge requirements, no calibration or validation points were collected at the lowest flows at the stage-discharge rating curve location at Latrobe Road below 0.47 cfs. Any discharge reduction pursuant to EID's TUCP offers the opportunity to collect additional validation points.

5. *The Department continues to recommend the collection of dissolved oxygen (DO) content at each transect.*

6. *The Department continues to recommend documentation of the location where flow ceases downstream. Department staff will take into consideration reasonable access and personal safety.*

7. *Additional monitoring may be required for analysis of long term reduction request.*

CDFW indicated that it proposes increased fishery monitoring for the following reasons:

a. Following submittal of EID's 2015 TUCP, CDFW staff conducted a comparison analysis of the results from EID's two field monitoring surveys from 2014. CDFW indicated that although EID's 2014 TUCP was approved on June 5, 2014[2], EID did not begin initial discharge reductions of 0.43 mgd until August 22, 2014. A single monitoring survey was conducted 5-days later on August 27th. CDFW staff was unclear as to whether any prolonged or delayed impacts occurred as a result of the flow reduction because no further monitoring surveys were conducted during the remainder of the initial reduction. After the second discharge reduction to 0.32 mgd on October 5th, a single monitoring survey was conducted on October 9th. Further review of the field monitoring results indicate that base conditions on October 9th differed significantly from August 27th base conditions resulting in data of limited value. The disparities in the base condition data taken on the two dates were likely due to a storm system in late September, as well as declining evapotranspiration which typically occurs in late summer and early fall.

   Last year EID did not reduce its discharge to 0.32 mgd until October 5th; however this year, EID proposes to reduce the discharge to 0.32 mgd immediately following approval of the TUCP. CDFW believes additional monitoring may be necessary this year because the lower initial discharge reduction request of 0.32 mgd has the potential to occur for a prolonged period of time during the most critical part of the summer season (July-September), which did not occur last year.

b. In 2014, EID was required to install three temperature loggers in three pools downstream of the WWTP discharge five days prior to each reduction in discharge rate and download the temperature data five days following each reduction in discharge rate and provide that data to CDFW and the Division. CDFW staff stated that EID's 2014 field monitoring results showed maximum daily temperatures in Deer Creek in July approached or exceeded 82°F (upper limit of optimal temperature range for hardhead, a CA species of special concern[3]) on multiple occasions during which discharges had not yet been reduced. CDFW staff will not oppose the initial reduction to 0.32 mgd provided that EID continues to meet the requirements of EID's NPDES Permit No. CA0078662, which includes receiving water limitations, specifically Deer Creek Temperature Objectives, which for June - Sept is 81°F as a daily maximum at a point 100 feet downstream of the confluence of the secondary channel and the main stem of Deer Creek (Latitude: 38.626282° and Longitude -120.983959°). CDFW indicated concern that reduced discharges during this time period may lead to increased water temperatures. Consequently, CDFW has revised recommendations to require enhanced temperature monitoring for the 2015 TUCP, including EID downloading temperature data from Temperature

[2] The Order approving the 2014 TUCP was originally issued by the State Water Board on June 5, 2014, however EID filed a petition for reconsideration of the Order requesting certain water conservation requirements in the Order be removed. The State Water Board modified the conservation requirements and issued an amended approval Order on August 1, 2014.

[3] P. 15, "Deer Creek Wastewater Treatment Plant Effects on Biological Resources of Eliminating or Reducing the Minimum Discharge Requirement", prepared for EID by Robertson-Bryan, Inc., February 2014

Logger 3 once a week (based on consultation with CDFW), and providing the information to CDFW for review. CDFW also requested that data from Temperature Loggers 1 and 2 be downloaded and provided to CDFW for review during the transect surveys conducted after the discharge is reduced. CDFW stated they would be amenable to modifying the frequency of temperature collection if data shows no significant impacts to stream temperatures due to the reduction in discharge.

c. CDFW also recommended other monitoring that would be advantageous for future consideration of EID's proposed long-term change petition to decrease its wastewater discharge into Deer Creek. CDFW mentioned that real-time monitoring and data for model validation from discharges less than 0.5 mgd has not occurred and can only take place when EID has approval from the Division to drop its discharge below the minimum of 0.5 mgd as required by Order WR-96-9.

On July 10, 2015 CDFW staff and EID's consultants met to further discuss CDFW's requested monitoring. Revised draft terms were prepared on July 13, 2015 and circulated to CDFW and EID for concurrence. The Division's conclusions and the terms included in this order approving the TUCP reflect the July 10 revised draft terms.

Division conclusions

Reduction in Rate of Discharge

Based on the comments from CDFW, this Order will allow EID to initially reduce its discharge rate to 0.32 mgd without requiring an intermediate discharge rate of 0.43 mgd. This Order does not allow the discharge rate to drop below 0.32 mgd. As in 2014, EID will be required to monitor downstream conditions both immediately prior and following the reduction in discharge rate and provide the results of the monitoring to CDFW and the Division for review while this order is in effect.

If results from the monitoring indicate that the reduction in discharge to 0.32 mgd is resulting in an unreasonable effect upon fish and wildlife, EID will be required to increase the discharge immediately upon completion of the studies documenting such effect, to a discharge rate as requested by CDFW.

The requirements of this TUCP approval order are separate from and in addition to the Regional Board's WDRs Order R5-2014-0081, NPDES Permit No. CA0078662 for the Deer Creek WWTP.

Monitoring

Downstream Transect Monitoring

The 2014 TUCP approval Order required five days prior to the initial discharge reduction to 0.43 mgd, EID use qualified biologists to photo-document multiple pool, riffle, and run/glide habitats that exist within the initial four miles downstream of the Deer Creek WWTP. EID was also to measure depths within a subset of each of those habitat types. Five days (or the least minimum time allowing the creek flows and pool levels to reach a new equilibrium condition) following the reduction in discharge, EID was required to use qualified biologists to: 1) photo-document the same pool, riffle, and run/glide habitats that were initially assessed; 2) measure depths within the same subset of each of these habitat types initially measured; and 3) download the temperature loggers. EID was required to provide a summary of this information to CDFW and the Division, and base its request for a further reduction in discharge on whether fish and wildlife downstream within the four-mile assessment reach downstream of the Deer Creek WWTP in good condition, with an emphasis on the initial two-mile reach downstream of the Deer Creek WWTP where the majority of large pool habitats exist.

In 2014, EID was initially allowed to reduce its discharge to 0.43 mgd, and based on concurrence from CDFW and the Division, was subsequently allowed to reduce the discharge to 0.32 mgd. EID did not request to reduce its discharge lower than 0.32 mgd. Three total monitoring surveys took place in 2014 – one survey was conducted on July 10, 2014, which was prior to the discharge reduction to 0.43 mgd; one survey was conducted on August 27, 2014, which was five days following the reduction in discharge to 0.43 mgd on

August 22, 2014; and one survey was conducted on October 9, 2014, which was four days after EID's final discharge reduction to 0.32 mgd, which took place on October 5, 2014.

EID's reduction in discharges took place in late summer and early fall of 2014, so evaluation of potential impacts to fish and wildlife did not cover the warmest portion of the year, and the Division cannot be certain that reducing the discharge to 0.32 mgd throughout the summer will not be deleterious to downstream fish and wildlife. Consequently, this order includes a term requiring EID to conduct additional monitoring if CDFW determines that the results of the first two monitoring events appear to be inconclusive as to the impacts of the reduced discharge to 0.32 mgd. The increased monitoring and prompt response to any triggers identified through that monitoring is necessary for the Division staff to conclude that the approval of the reduced discharge is being done without unreasonable effects upon fish, wildlife, or other instream beneficial uses.

Temperature

As was required under the 2014 TUCP approval Order, EID will be required to place temperature loggers into three pools that exist in the reach extending from approximately 0.5 to two (2) miles downstream of the Deer Creek WWTP. As CDFW indicated, last year EID reported downstream temperatures in July that approached and/or exceeded 82°F. This temperature threshold is a concern due to the potential for downstream temperatures to exceed the 81°F receiving water limit for Deer Creek mandated in NPDES Permit No. CA0078662 (as well as a monthly average limit for July through September of 77°F)[4], in addition to the occurrence of hardhead in that stretch of Deer Creek, which has an upper limit temperature range of 82°F. Based on these concerns, this approval Order will require EID to consult with CDFW each Monday as to the need to download temperature logger data from Temperature Logger 3 for the upcoming week. If CDFW determines it is necessary to collect the data for the week, EID will report a summary of the data to CDFW by the close of business the following Monday. EID will also be required to place Temperature Loggers 1 and 2 in the same locations as last year and download data from the loggers at the same time the transect monitoring occurs following the reduction of the discharge to 0.32 mgd. The frequency of temperature monitoring may then be decreased based on monitoring results and EID's consultation with and approval by CDFW and concurrence with the Division.

Dissolved Oxygen

CDFW originally recommended dissolved oxygen (DO) measurements at each downstream monitoring transect based on their concerns with the photo-documentation of the transect locations from last year. This year EID's reduced discharge will take place during the peak of the summer heat and background flows and discharge flows will be at their lowest levels. Because these factors can contribute to low DO levels, and due to CDFW's concerns, this approval Order requires EID to conduct DO grab samples at 50 percent of the transect locations and report the information monthly to CDFW and the Division.

Recommended Monitoring for Long Term Change Petition

CDFW recommended that EID collect additional low flow data to help validate EID's consultant's modeling of Deer Creek. Specifically, CDFW recommended that during the TUCP approval period while EID can

[4] Receiving water limitations for Deer Creek were included in Deer Creek's NPDES Permit No. CA0078662 based on the Regional Board's Resolution Nos. R5-2005-0119 and R5-2003-0006 which amended the Regional Board's Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) regarding the effects of temperature on the beneficial uses of Deer Creek. Resolution No. R5-2003-0006, found in part that site-specific biological data for Deer Creek show that the resident aquatic life is fully protected by the proposed daily maximum and monthly mean temperatures that were then included as receiving water limitations in NPDES Permit No. CA0078662. Background information relative to the Basin Plan amendment for temperature thresholds in Deer Creek included the Department of Fish and Wildlife's (at that time the Department of Fish and Game) February 14, 2001 letter to the Regional Board detailing how it believed the proposed temperature criteria would be protective in the Deer Creek watershed and ecosystem. CDFW indicated that, "The abundance of studies and analysis that have been performed in the Deer Creek watershed are some of the most if not the most extensive to date for a Central Sierra Nevada foothill stream. The Department is confident the temperature recommendations are appropriate. However, if hydraulic conditions are improved enabling fall-run chinook to enter the Cosumnes River in October and early November then the temperature recommendations should be re-evaluated to ensure that they are protective during those months."

discharge below 0.5 mgd, stage-discharge pairs should be measured as well as measurements of water surface elevations at each transect of the model at the lowest flows available. CDFW indicated that this data could help validate the model for flows lower than 0.5 mgd.

Also, as noted in the modeling report, EID's model was based on steady flow simulations for all aspects of the study, whereas the flow in Deer Creek upstream of the WWTP discharge and particularly at the point of discharge varies throughout the day, and as such the flow in the creek is considered unsteady. The report further indicated, "Unsteady flow simulations were attempted, but due to the low flows simulated and the high gradient in the creek, these simulations were not able to generate reliable results."[5] In order for the Division or CDFW to be able to utilize the results from the model relative to consideration of the future long-term change petition, the model will need to accurately reflect real-life situations in Deer Creek with the reduction in discharge. Therefore, the Division believes it would be advantageous for EID to conduct monitoring during the period of the TUCP approval to validate its model for the real-life situations of unsteady, low flows in Deer Creek following reduction of the wastewater discharge, and EID should consider such monitoring based on the fact that it will be difficult for the Division to approve a long-term change without this information that cannot be obtained under normal conditions.

> However, as EID's proposed long-term change petition is beyond the scope of this approval action, additional stage-discharge pairs and measurement of water surface elevations at each transect to validate the model are not a condition of this approval.

In light of the above, I find in accordance with Water Code section 1435, subdivision (b)(4) that the proposed change will not unreasonably affect fish, wildlife, or other instream beneficial uses.

6.4 The Proposed Change is in the Public Interest

Approval of the TUCP will enable EID to reduce the amount of potable water needed to supplement the irrigation system demand for the District. It is in the public interest to conserve the potable water supply for beneficial use during the present critically dry hydrological conditions in 2015.

In light of the above, I find in accordance with Water Code section 1435, subdivision (b)(4) that the proposed change is in the public interest, including findings to support change order conditions imposed to ensure that the change is in the public interest. Pursuant to Water Code section 1439, the State Water Board shall supervise diversion and use of water under this temporary change order for the protection of all other lawful users of water and instream beneficial uses.

7.0 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 the available evidence:

1. The Petitioner 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, with the modifications described above, is in the public interest.

[5] Page 5, Robertson-Bryan, Inc., Deer Creek Wastewater Treatment Plan Minimum Flow Evaluation, February 2014.

ORDER

NOW, THEREFORE, IT IS ORDERED THAT the petition filed by EID requesting a temporary urgency changes in Order WR-95-9 is approved and effective for 180 days from the date of this order, subject to the following conditions:

1. EID is authorized to reduce its discharge of treated wastewater into Deer Creek in an adaptive manner as follows:

    a. EID may reduce the treated wastewater discharge to 0.32 mgd and shall remain at that discharge rate while it studies the impacts on fish and wildlife and CDFW and the Deputy Director for Water Rights agrees that continuation of the reduction in discharge rate to 0.32 mgd is acceptable. EID may continue the reduction in discharge rate at 0.32 mgd following submission of monitoring results to CDFW and the State Water Board and upon the concurrence of CDFW and the Deputy Director for Water Rights. The State Water Board reserves jurisdiction to evaluate any changes and may modify or eliminate any changes to the discharge amount.

    b. It is noted that EID does not have the operational infrastructure to maintain a constant discharge rate from Deer Creek WWTP throughout the day. At times the discharge rate is twice the average daily flow and there are periods when it is 20 to 30 percent of the average daily flow. While ponds located along the reach of Deer Creek between the WWTP and Latrobe Road act as natural impoundments that greatly moderate flow rates within the creek, the fluctuation in discharge flow may affect the wetted area of Deer Creek downstream of the discharge site. Therefore, for purposes of conducting the monitoring required herein, EID is required, to the maximum extent practicable given its existing operational limitations, to limit fluctuations of in the rate of discharge to no more than 20 percent from approved minimum rate while conducting monitoring activities

2. EID shall comply with the fishery monitoring plan as described in this term as well as Terms 3, 4, and 5 below. Any changes to the monitoring plan are subject to review and approval by the Deputy Director for Water Rights:

    a. At least five days prior to the flow reduction to 0.32 mgd, EID will place a temperature logger into a pool approximately 2 miles downstream of the Deer Creek WWTP. This logger will be at the location of Temperature Logger 3 from the 2014 survey work, which indicated the highest maximum temperatures of the three pools whose temperatures were monitored.

    b. In lieu of direct depth measurements, EID shall use their existing model to estimate baseline depths for multiple pool, riffle, and run/glide habitats that exist within the initial four miles downstream of the Deer Creek WWTP, based on measured RSW-001[6] flow, effluent flow, and estimated stream loss rates.

    c. EID shall consult by Monday close of business each week with CDFW as to the need to download temperature logger data for the upcoming week and submit any data collected the prior week. If necessary, EID shall collect the temperature logger data from Temperature Logger 3 that week and then report a summary of the data to CDFW and the Deputy Director for Water Rights by the close of business the following Monday. The frequency of temperature monitoring will then be triggered based on ambient temperature data in consultation with, and approval by, CDFW and concurrence with the Deputy Director for Water Rights.

[6] As noted in Deer Creek's WWTP WDRs Order R5-2014-0081, NPDES Permit No. CA0078662, RSW-001 is the gauging station upstream of the point of wastewater discharge into Deer Creek at the first bridge crossing as part of the access road to the facility, Latitude 38.629760° and Longitude -120.985131°.

3. Within 5-7 days (or the least minimum time allowing the creek flows and pool levels to reach a new equilibrium condition) following the flow reduction to 0.32 mgd and 30 days thereafter, EID shall have qualified biologists walk the 4-mile assessment reach to:

    a. Photo-document and measure maximum depths at the same pool, riffle, and run/glide habitats at cross-sections that were modeled;

    b. Measure dissolved oxygen at 50 percent of the cross-sections;

    c. Download the temperature logger data from Temperature Logger 3;

    d. Deploy temperature loggers in two additional pools that exist in the reach extending from approximately 0.5 to 2 miles downstream of the Deer Creek WWTP, at the locations of Temperature Logger 1 and Temperature Logger 2 from the 2014 survey work.

4. After the above information is collected, EID shall have qualified biologists evaluate whether the new hydrologic and temperature conditions will unreasonably affect fish and wildlife within the 4-mile assessment reach downstream of the Deer Creek WWTP, with an emphasis on the initial 2-mile reach downstream of the Deer Creek WWTP where the majority of large pool habitats exist. This information will be submitted to CDFW and the Deputy Director for Water Rights within 7 days of its field collection date. Based on this information, CDFW shall inform the Deputy Director for Water Rights and EID whether it maintains approval of the flow reduction to 0.32 mgd.

    a. Based on the results of the first two monitoring events, if CDFW believes the monitoring results to be inconclusive as to the impacts of the reduced discharge to 0.32 mgd, CDFW will consult with EID, and EID may be required to conduct additional monitoring as described in 3 (a) – (c), subject to approval by the Deputy Director for Water Rights.

    b. If CDFW determines 0.32 mgd discharge may result in unreasonable effect upon fish and wildlife, EID shall increase the discharge immediately to the level requested by CDFW (but not higher than that prescribed by State Water Board Order WR-95-9) and shall remain at that discharge amount until monitoring documents that conditions have improved and there is no longer an unreasonable effect upon fish and wildlife, or until expiration of the order, whichever comes first.

5. If CDFW determines the current discharge amount will not result in unreasonable effect upon fish and wildlife, EID may maintain the 0.32 mgd discharge until expiration of the order.

6. EID shall submit to the Deputy Director for Water Rights on a monthly basis a written report that summarizes all activities conducted to ensure compliance with the requirements of this Order. The first monthly report is due at the end of the first complete month of this Order. The report shall, at a minimum, include a description of EID's efforts to date to comply with the requirements of this Order. EID shall submit a final report no later than the final effective date of this Order.

7. 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 §§ 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). If a "take" will result from any act authorized under this Order, EID shall ensure authorization for an incidental take permit is obtained prior to operation of the project.

8. The State Water Board reserves jurisdiction to supervise the temporary urgency change under this Order and to coordinate or modify terms and conditions for the protection of vested rights, fish, wildlife, instream beneficial uses, and the public interest as future conditions may warrant.

9. The temporary urgency changes authorized under this Order shall not result in creation of a vested right, even of a temporary nature, but shall be subject at all times to modification or revocation in the discretion of the State Water Board. The temporary urgency changes approved in this Order shall automatically expire 180 days from the date of this order, unless earlier revoked.

10. All other terms of the October 8, 1994 Order approving WW0020, as amended by Order WR 95-9, remain in effect. Should EID determine that it will not proceed with the changes identified in this Order at any time during the duration of this approval, EID may instead operate in accordance with WW0020, as amended by and Order WR-95-9, and shall notify the Division within 10 days of any such determination.

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:

Barbara Evoy, Deputy Director
Division of Water Rights

Date: July 15, 2015