



### State Water Resources Control Board

### NOTICE OF PROPOSED EMERGENCY RULEMAKING

### **Readoption of Russian River Drought Emergency Regulations**

Proposed Revisions to Sections 875.5 and 875.6 within Title 23, Division 3, Chapter 2, Article 23.5 of the California Code of Regulations, and to Sections 876.1, 877.1, 877.2, 877.3, 877.4, 877.5, 878, 878.1, 879, 879.1, and 879.2 within Title 23, Division 3, Chapter 2, Article 24 of the California Code of Regulations; Proposed Addition of Section 879.3 to Title 23, Division 3, Chapter 2, Article 24; Proposed Repeal of Section 877.6 within Title 23, Division 3, Chapter 2, Article 24

May 11, 2022

#### **Required Notice of Proposed Emergency Action**

Government Code section 11346.1, subdivision (a)(2), requires that, at least five working days prior to the submission of a proposed emergency action to the Office of Administrative Law (OAL), the adopting agency must provide a notice of the proposed emergency action to every person who has filed a request for notice of regulatory action with the agency. After the submission of the proposed emergency regulation to OAL, OAL shall allow interested persons five calendar days to submit comments on the proposed emergency regulations as set forth in Government Code section 11349.6. This document provides the required notice.

#### **Proposed Emergency Action**

On April 21, 2021, Governor Gavin Newsom declared a drought state of emergency in Mendocino and Sonoma counties due to severe drought conditions in the Russian River Watershed (April 2021 Proclamation). On March 28, 2022, Governor Newsom signed an executive order acknowledging the continued drought conditions throughout the state, extending the authorities and directives of the April 2021 Proclamation, and calling for increased conservation efforts (2022 Drought Executive Order). The 2022 Russian River Drought Emergency Regulation aims to renew the State Water Board's

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emergency authority with certain amendments to the 2021 Russian River Emergency Regulation. The emergency regulation satisfies directives from the April 2021 Proclamation, in which the Governor directed the State Water Board to consider adoption of "emergency regulations to curtail water diversions when water is not available at water rights holder's priority of right or to protect releases of stored water." The Governor's April 2021 proclamation also suspended environmental review under the California Environmental Quality Act for certain activities, including the adoption of emergency regulations by the State Water Board pursuant to Water Code section 1058.5.

Water Code section 1058.5 grants the State Water Resources Control Board (State Control Board, or Board) the authority to adopt emergency regulations to prevent the unreasonable use of water, and to require curtailment of diversions when water is not available under the diverter's priority of right.

The emergency regulation that the State Water Board adopted on June 15, 2021, will expire on July 12, 2022. The 2022 Russian River Drought Emergency Regulation would renew specific drought regulation sections passed in 2021 with amendments and refinements to address feedback from the regulated community and lessons learned from administration of the 2021 Russian River drought emergency regulation. In general, Section 877.1 provides definitions used in the regulation. Sections 872.2 and 877.3 would establish processes for issuing curtailment orders and correlative sharing requirements and authorize use of a water availability analysis methodology for the Russian River watershed. Section 877.4 would authorize exceptions to curtailments for signatories to a Board-approved regional voluntary water sharing agreement in the Russian River watershed. Section 877.5 specifies the conditions when the 10,000 acrefoot reservation of water stored in Lake Mendocino, authorized under Term 23 of Sonoma Water's Permit 12947A, would be unavailable for rediversion by Sonoma County junior appropriators in the Russian River Valley. Section 878.1 includes refinements to the curtailment exemption process for those claiming critical diversions needed for minimum human health and safety needs. Section 879 details reporting requirements for water right holders that receive a curtailment order.

#### **Proposed Text of Emergency Regulations**

See the attached text of the emergency regulation adopted by the State Water Board on May 10, 2022.

#### Finding of Emergency (Gov. Code, § 11346.1, subd. (b))

The State Water Board finds that an emergency continues to exist due to the third consecutive year of severe drought conditions in the Russian River watershed, as identified in the Governor's drought emergency proclamations.<sup>1</sup> Persistent dry

<sup>&</sup>lt;sup>1</sup> Under Water Code section 1058.5, subdivision (b), the State Water Board's finding of emergency made in connection with this proposed emergency regulation is not subject to review by the Office of Administrative Law.

conditions require immediate action to extend the State Water Board's emergency authority in 2022 to most effectively administer water rights, ensure adequate reliable water supplies for minimum human health and safety needs, and prevent the unreasonable use of water in the Russian River watershed. The State Water Board must maintain emergency regulatory authority to issue water right curtailments in the Russian River watershed to prevent the diversion and use of water unavailable at diverters' priority of right—including releases of stored water—and to prevent the diversion and use of water that threatens the availability of water for minimum human health and safety needs. Emergency action also is needed to ensure adequate carryover storage in Lake Mendocino to ensure continued access to water for minimum human health and safety in the event of prolonged drought conditions.

The State Water Board is unable to address the situation through non-emergency regulations because the need for this regulation has arisen due to the current drought emergency and would not be appropriately addressed by non-emergency regulations. More detailed information regarding the State Water Board's finding of emergency can be found on pages 1 to 5 of the Emergency Regulation Digest available at the hyperlink provided below.

#### Authority and Reference (Gov. Code, § 11346.5, subd. (a)(2))

Water Code section 1058 and 1058.5 provide authority for the emergency regulation. The regulation implements, interprets, or makes specific Article X, section 2 of the California Constitution, and sections 100, 100.5, 104, 105, 106.3, 109, 174, 187, 275, 348, 1051, 1052, 1055, 1058.5, 1253, 1825, 1831, and 1841 of the Water Code. The regulation also interprets and implements the State Water Board's authority to prevent the unreasonable use of water, described in *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463, and *Stanford Vina Ranch Irrigation Co. v. State of California* (2020) 50 Cal.App.5th 976.

Additional detail regarding the authority and references associated with the regulation can be found under each section of the regulation text available at the hyperlink provided below.

#### Informative Digest (Gov. code, § 11346.5, subd. (a)(3))

Immediate action is needed to renew the State Water Board's authority to prevent the unreasonable use of water in the Russian River watershed in light of severely limited water availability during the third consecutive year of drought. The State Water Board will continue to curtail water diversions in response to decreased natural or abandoned flows so that water is available for: (1) senior water right users; (2) minimum flow requirements for fish and wildlife, aligned with minimal flows for threatened and endangered fish species; and (3) minimum human health and safety needs. Where natural and abandoned flows are present but insufficient to satisfy all water rights, the State Water Board may need to curtail junior diversions to protect senior water right holders and to protect releases of stored water.

Under existing law, a water right holder is prohibited from diverting from a watercourse unless flows are sufficient to satisfy all more senior water right holders first. Water right holders are not entitled to redivert releases of another water right holder's previously stored water, such as flows released from an upstream reservoir. During times of shortage, the State Water Board ensures that the water that senior water right holders are entitled to divert remains available by curtailing junior appropriators in reverse order of priority (curtailing the most junior water rights first). Although Water Code section 106.3 declares a state policy that every human being has the right to safe, clean, affordable, and accessible water for human consumption, cooking, and sanitation purposes, ordinary application of the water right priority system does not make an exception allowing minimal diversions for basic human needs to continue notwithstanding curtailment.

The 2022 Russian River Drought Emergency Regulation would provide the State Water Board's Division of Water Rights and users within the Russian River watershed with a clear methodology for determining the extent to which water is unavailable for diversion at water users' priority of right. It also would authorize the Deputy Director to issue curtailment orders requiring recipients to cease or reduce diversions unless and until (1) they have authorization to continue diverting pursuant to one of the exceptions enumerated in the regulation, or (2) they receive notice that curtailment has been lifted. The renewal of the emergency regulation will thus make the necessary curtailments during the drought emergency more effective and enforceable by defining when water is available under water right priorities—an issue of fact frequently contested in traditional curtailment enforcement proceedings—and by making the requirement to cease diversions in response to a curtailment order a regulatory requirement regardless of the curtailed user's basis of right. The regulation also will promote the human right to water codified in Water Code section 106.3 by establishing procedures for important exceptions to curtailments based on minimum human health and safety needs.

The emergency regulation would continue to provide the State Water Board's Deputy Director for the Division of Water Rights with authority to implement curtailment actions when flows are insufficient to support all water right priorities. The regulation also defines non-consumptive uses and minimum human health and safety needs. Section 878 provides a pathway to allow for continued diversions for non-consumptive uses. Section 878.1 provides procedures for authorizing continued diversion to meet minimum human health and safety needs. Section 879 establishes reporting requirements for water right holders issued a curtailment notice.

There is no comparable federal statute or regulation. The regulation is not inconsistent or incompatible with existing state regulations.

More detailed information regarding existing laws, the need for the regulation, and the anticipated effect of the regulation can be found on pages 5 to 17 of the Emergency Regulation Digest available at the hyperlink provided below.

#### Other Matters Prescribed by Statute (Gov. Code, § 11346.5, subd. (a)(4))

The emergency regulation would be adopted to prevent unreasonable use of water, to require curtailment of diversion when water is not available under the diverter's priority of right, and in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports. The emergency regulation would be adopted in response to conditions which exist, or are threatened, in a critically dry year immediately preceded by two or more consecutive below normal, dry, or critically dry years or during a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions.

#### Local Mandate (Gov. Code, § 11346.5, subd. (a)(5))

The emergency regulation does not impose a mandate on local agencies or school districts because it does not mandate a new program or a higher level of service of an existing program. The regulation is generally applicable to public and private entities, and is not unique to local government. No state reimbursement is required by part 7 (commencing with section 17500) of division 4 of the Government Code.

#### Estimate of Cost or Savings (Gov. Code, § 11346.5, subd. (a)(6))

The fiscal effects resulting from the emergency regulation are the costs that would be incurred by state and local government agencies to respond to any requirements therein, pursuant to Government Code section 11346 et seq. The Fiscal Impact Statement has been prepared in accordance with State Administrative Manual 6600-6616.

The two fiscal effects incurred by state and local government agencies as a result of the emergency regulation would include the costs (1) to complete and submit ongoing diversion reporting, and (2) to State agencies associated with the review of water substitutions under section 878.

As documented in the Fiscal Impact Statement, the State Water Board estimates the total cost to all state and local (including city, county, schools and publicly owned water suppliers) agencies due to the emergency regulation as \$69,600. The total cost is broken down as \$54,000 to local agencies and \$15,600 to State agencies. No reimbursable expenses were identified.

Due to the limited timeframe the emergency regulation will be in effect, there will be no fiscal impacts to any state, local, or federal agency beyond the expiration of the

emergency regulation one year after adoption. Impacts are assumed to be limited to Fiscal Year 2022-2023.

More detailed information regarding the cost or savings of the emergency regulation can be found in the Fiscal Impact Statement at the end of the Emergency Regulation Digest available at the hyperlink provided below.

The Emergency Regulation Digest is available on the State Water Boards' Russian River Drought Response webpage below and can be found by expanding the "Emergency Regulation" header:

https://www.waterboards.ca.gov/drought/russian\_river/

#### Emergency Curtailment Regulation to Protect Water Supplies in the Russian River Watershed

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Revise Sections 875.5 and 875.6 within Title 23, Division 3, Chapter 2, Article 23.5 of the California Code of Regulations, and Sections 876.1, 877.1, 877.2, 877.3, 877.4, 877.5, 878, 878.1, 879, 879.1, and 879.2 within Title 23, Division 3, Chapter 2, Article 24 of the California Code of Regulations, add Section 879.3 to Title 23, Division 3, Chapter 2, Article 24, and repeal Section 877.6 within Title 23, Division 3, Chapter 2, Article 24 to read:

#### Article 23.5. Klamath River Watershed Drought Emergency Requirements

#### 875.5 Priority for Curtailments in the Scott River and Shasta River Watersheds

- (a) Scott River
  - (1) Regarding curtailment orders in the Scott River watershed:

(A) Curtailment orders in the Scott River watershed to meet drought emergency minimum fisheries flows in the Scott River shall be issued taking into account water right priority, in groupings from lowest to highest priority, as follows:

(i) All post-Scott River Adjudication appropriative water rights.

(ii) Surplus Class Rights in all schedules of the Scott River Adjudication.

(iii) All Post-1914 Appropriative water rights in the Scott River Adjudication, <u>ShaklefordShackleford</u> Adjudication, and French Creek Adjudication, collectively.

(iv) Diversions in Schedule D4 of the Scott River Adjudication.

(v) Diversions in Schedule D3 of the Scott River Adjudication.

(vi) Diversions in Schedule D2 of the Scott River Adjudication.

(vii) Diversions in Schedule D1 of the Scott River Adjudication.

(viii) Diversions in French Creek Adjudication, the ShaklefordShackleford Adjudication, and Schedule B of the Scott River Adjudication, collectively.

(ix) Diversions in Schedule C of the Scott River Adjudication, and overlying groundwater diversions not described in the Scott River Adjudication. (B) Surface diversions from the Scott River, Big Slough, Etna Creek, or Kidder Creek and described in Scott River Adjudication Schedules D2, D3, D4, B18, B23, and B26 that have moved from surface water to groundwater diversions as permitted under Scott River Adjudication, Paragraph 44, will be curtailed in priority grouping (a)(1)(A)(ix), rather than under (a)(1)(A)(iv), (a)(1)(A)(v), (a)(1)(A)(vi), or (a)(1)(A)(viii).

(C) Domestic and Livestock Water Uses during the non-irrigation season by diverters in Scott River Adjudication Schedules A, B, C, and D, under paragraph 36 shall follow the priority groups under (a)(1)(A)(iv) through (a)(1)(A)(viii), as applicable.

(D) To the extent that curtailment of fewer than all diversions in the groupings listed in (a)(1)(A)(i) and (a)(1)(A)(iii) through (a)(1)(A)(viii) would reliably result in sufficient flow to meet drought emergency minimum fisheries flows, the Deputy Director shall maintain the authority to issue, suspend, reinstate, or rescind curtailment orders for partial groupings based on the priorities in the applicable adjudication or through the appropriative right priority date, as applicable. Any partial curtailment of groups (a)(1)(A)(ii) and (a)(1)(A)(ix) shall be correlative, except that the Deputy Director may issue curtailments to groundwater diverters in (a)(1)(A)(ix) first to diversions closest to surface waterbodies, or use other reliable information to determine which diversions have the highest potential impact on surface flows.

(E) Diversions under Paragraph 39 of the Scott River Adjudication shall be curtailed with the group defined in (a)(1)(A) that corresponds to the schedule in which the diversion would be placed if the right were defined in the adjudication. If partial curtailment of the group is issued, suspended, reinstated, or rescinded under (a)(1)(D), these rights will be subordinated to the other rights in that schedule.

(F) Diversions under paragraph 41 of the Scott River Adjudication shall be curtailed with the group defined in (a)(1)(A) that corresponds to the schedule in which the diversion would be placed if the right were defined in the adjudication. If partial curtailment of the group is issued, suspended, reinstated, or rescinded under (a)(1)(D), these rights shall be treated as subordinate to first priority rights in the schedule, and senior to second priority rights in that schedule.

(G) Diversions under paragraph 42 of the Scott River Adjudication shall be curtailed with the group defined in (a)(1)(A) that corresponds to the schedule in which the diversion would be placed if the right were defined in the adjudication. If partial curtailment of the group is issued, suspended, reinstated, or rescinded under (a)(1)(D), these rights shall be treated as first priority rights compared to downstream rights in that schedule, and subordinate to all upstream rights in that schedule. (H) Diversions under paragraph 43 of the Scott River Adjudication shall be curtailed with the group defined in (a)(1)(A) that corresponds to the schedule in which the diversion would be placed if the right were defined in the adjudication. If an order for partial curtailment of the group is issued, suspended, reinstated, or rescinded under (a)(1)(D), these rights shall be treated as first priority rights in that schedule.

(I) Diversions under paragraphs 49 and 61 of the Scott River Adjudication shall be curtailed with the group defined in (a)(1)(A)(viii). If an order for partial curtailment of the group is issued, suspended, reinstated, or rescinded under (a)(1)(D), these rights will be treated as first priority rights in the schedule for the appropriate tributary.

(2) Curtailment orders in the Scott River watershed for lack of water availability at a diverter's priority of right shall be issued:

(A) First to appropriative rights that were initiated after the relevant adjudication, in the <u>ShaklefordShackleford</u> Creek watershed, the French Creek watershed, and the Scott River Stream System as defined in paragraph 2 of the Scott River Adjudication,

(B) Then in accordance with the priorities set forth in the Scott River, ShaklefordShackleford Creek, and French Creek Adjudications, as applicable, and

(C) Then correlatively to unadjudicated overlying groundwater diversions.

#### (b) Shasta River

(1) Curtailment orders in the Shasta River Watershed to meet drought emergency minimum fisheries flows shall be issued taking into account water right priority, in groupings from lowest to highest water right priority, as follows:

(A) Appropriative diversions initiated after the Shasta Adjudication. Appropriative surface water diversions obtained after the Shasta Adjudication in priority of the issuance date specified in the permit or license by the State Water Board. Groundwater appropriations have a priority date from when the well was constructed and water first used. For the purposes of this article, an appropriative groundwater right is distinguished from an overlying groundwater right when the diverter: 1) does not own land overlying the basin, 2) owns overlying land but uses the water on non-overlying land, or 3) sells or distributes the water to another party.

(B) Post-1914 and pre-1914 water rights under the priorities and quantities set forth in the Shasta Adjudication. Groundwater appropriations initiated prior to the Shasta Adjudication in priority of when the well was constructed and water first used.

(C) Riparian diversions and overlying groundwater diversions. The Deputy Director may limit overlying groundwater curtailment orders to larger diversions or diversions with the highest potential impact on surface flows.

(i) If there is insufficient natural flow to furnish all rights of equal priority, then the available natural flow in excess of the minimum instream flow established in section 875, subdivision (c)(2) shall be distributed proportionally among the rights of the priority in question.

(ii) Water released from storage or bypassed pursuant to a Water Code section 1707 Order is not available to downstream users.

(c) Definitions: For the purposes of this section:

(1) "Scott River Adjudication" shall refer to the Decree entered on January 30, 1980 in Siskiyou County Superior Court Case No. 30662, In the Matter of Determination of the Rights of the Various Claimants to the Waters of Scott River Stream System, Except Rights to Water of Shackleford Creek, French Creek, and all Streams Tributary to Scott River Downstream from the U.S. Geological Survey Gaging Station, in Siskiyou County, California, and all supplements thereto.

(2) "ShaklefordShackleford Adjudication" shall refer to the Decree entered on April 3, 1950 in Siskiyou County Superior Court Case No. 13775, In the Matter of the Determination of the Rights of the Various Claimants to the Waters of ShaklefordShackleford Creek and its Tributaries in Siskiyou County, California, and all supplements thereto.

(3) "French Creek Adjudication" shall refer to the Judgement entered on July 1, 1959 in Siskiyou County Superior Court Case No. 14478, Mason v. Bemrod, and all supplements thereto.

(4) "Shasta Adjudication" shall refer to the Judgement and Decree entered on December 29, 1932 in Siskiyou County Superior Court Case No. 7035, In the Matter of the Determination of the Relative Rights, Based Upon Prior Appropriation, of the Various Claimants to the Waters of Shasta River and its Tributaries in Siskiyou County, California, and all supplements thereto.

Authority: Sections 101, 103,174, 186, Water Code

Reference: Sections 1058, 1058.5, Water Code; *Hudson v. Dailey* (1909) 156 Cal. 617; Shasta River Adjudication; Shackleford Adjudication; French Creek Adjudication; Scott River Adjudication; *Stanford Vina Ranch Irrigation. Co v. State of California* (2020) 50 Cal.App.5th 976.

#### 875.6 Curtailment Order Reporting

(a) All water users or water right holders issued a curtailment order under this article are required, within the timeframe specified by the Deputy Director, but not less than seven (7) days, to submit under penalty of perjury a certification of one or more of the actions enumerated below, taken in response to the curtailment order. The Deputy Director may grant additional time for the submission of information regarding diversion and use of water upon a showing of good cause. The water user or water right holder shall certify, as applicable, that:

(1) Diversion under the identified water right(s) has ceased;

(2) Any continued use is under other water rights not subject to curtailment, specifically identifying those other rights, including the basis of right and quantity of diversion;

(3) Diversions under the identified water right(s) continue only to the extent that they are non-consumptive, for which a certification for continued diversion has been submitted as specified in section 875.1;

(4) Diversions under the identified water right(s) continue only to the extent that they are necessary to provide for minimum human health and safety needs as identified in section 875.2, a certification has been filed as authorized under Article 24, section 878.1, subdivision (b)(1), and the subject water right authorizes the diversion in the absence of a curtailment order;

(5) Diversions under the identified water right(s) continue only to the extent that they are necessary to provide for minimum livestock watering needs and a certification has been filed as identified in section 875.3, and the subject water right authorizes the diversion in the absence of a curtailment order.

(6) Diversions under the water right(s) continue only to the extent that they are consistent with a petition filed under Article 24, section 878.1, subdivision (b)(2)  $\frac{1}{2}$  or under section 875.3, subdivision (d) and diversion and use will comply with the conditions for approval of the petition; or

(7) The only continued water use is for instream purposes.

(b) All persons who are issued a curtailment order and continue to divert out of order of the priority established in section 875.5, as authorized under sections 875.1, 875.3, or Article 24, section 878.2, are required to submit, under penalty of perjury, information identified on a schedule established by the Deputy Director as a condition of certification or petition approval. The required information may include, but is not limited to, the following: (1) The water right identification number(s), well information, or, if not applicable, other manner of identifying the water right under which diversions continue. For wells, this includes the location (GPS coordinates) and depth to groundwater.

(2) How the diverter complies with any conditions of continued diversion, including the conditions of certification under section 875.3 or Article 24, section 878.1, subdivision (b)(1).

(3) Any failures to comply with conditions, including the conditions of certification under section 875.3 or Article 24, section 878. 1, subdivision (b)(1), and steps taken to prevent further violations.

(4) Conservation and efficiency efforts planned, in the process of implementation, and implemented, as well as any information on the effectiveness of implementation.

(5) Efforts to obtain alternate water sources.

(6) If the diversion is authorized under an approved petition filed pursuant to section 875.3 or Article 24, section 878.1 , subdivision (b)(2), progress toward implementing the measures imposed as conditions of petition approval.

(7) If the diversion is authorized under section 875.3, or <u>that cannot be</u> <u>quantified on the basis of amount per person per day under</u> Article 24, section 878.1, subdivision (<u>db</u>):

- (A) The rate of diversion if it is still ongoing;
- (B) Whether the water has been used for any other purpose; and
- (C) The date diversion ceased, if applicable.

(8) The total water diversion for the reporting period and the total population served for minimum human health and safety needs. The total population must include actual or best available estimates of external populations not otherwise reported as being served by a diversion, such as individuals receiving bulk or hauled water deliveries for indoor water use.

(9) The total water diversion for the reporting period and the total population of livestock watered to meet minimum livestock watering needs identified in section 875.3.

(10) Diversion amounts for each day in acre-feet per day, maximum diversion rate in cubic feet per second, pumping rate in gallons per minute, and anticipated future daily diversion amounts and diversion rates.

(c) The Deputy Director, or delegee, may issue an order under this article requiring any person to provide additional information reasonably necessary to assess their compliance with this article. Any person receiving an order under this subdivision shall provide the requested information within the time specified by the Deputy Director, but not less than five (5) days.

Authority: Sections 1058, 1058.5, Water Code

Reference: Sections 100, 187, 275, 348, 1051, 1058.5, 1841, Water Code

#### Article 24 Curtailment of Diversions Due to Drought Emergency

#### 876.1 Emergency Curtailments Due to Lack of Water Availability in the Sacramento-San Joaquin Delta Watershed

(a) This section applies to direct diversions and diversions to storage, of natural and abandoned flows, in the Delta Watershed as defined in section 877.1. This section also applies to the rediversion of water released from storage in the Delta Watershed, except to the extent authorized by a water right or contract.

(b) After the effective date of this regulation, when flows are determined to be insufficient to support all diversions, the Deputy Director as defined in section 877.1 may issue curtailment orders as defined in section 877.1 to water right holders and claimants in the Delta Watershed in order of water right priority, requiring the curtailment of water diversion under designated water rights and claims, except as provided in sections 878, 878.1, and 878.2 and 879.1 subdivision (b). Before issuing curtailment orders to water right holders and claimants in the Legal Delta, the Deputy Director will consult with and obtain the concurrence of the Delta Watermaster.

(c) Initial orders requiring curtailment or reporting will be mailed to each water right holder, claimant, or the agent of record on file with the State Water Board, Division of Water Rights within the Delta Watershed. The initial orders will require reporting in accordance with section 879, subdivision (dc)(1) and will either require curtailment or will instruct the water right holder, claimant, or agent of record regarding procedures for potential future curtailments. The water right holder, claimant, or agent of record is responsible for immediately providing notice of the orders to all diverters exercising the water right or claim covered by the orders. Communications regarding changes in water availability, including notification of when curtailments of water diversions are required and when curtailments are temporarily suspended or reimposed, will be provided by email to the State Water Board's Delta Drought email distribution list and by posting on the State Water Board's drought webpage. Notice provided by email and by posting on the State Water Board's drought webpage shall be sufficient for all purposes related to required curtailments and reporting pursuant to this section and section 879.

(d) In determining whether water is unavailable under a water right holder or claimant's priority of right and whether to order curtailment of water diversions under specific water rights, the Deputy Director will consider:

(1) Relevant available information regarding date of priority, including but not limited to claims of first use in statements of water diversion and use, judicial and State Water Board decisions and orders, and other information contained in the Division of Water Rights' files. Absent evidence to the contrary, riparian water rights are presumed senior to appropriative water rights for the purposes of curtailments pursuant to this section.

(2) Monthly water right demand projections based on reports of water use for permits and licenses, or statements of water diversion and use, from calendar years 2018, 2019, or 2020.

(3) Monthly water right demand projections based on information submitted in response to an informational order issued under section 879, subdivision (d<u>c</u>).

(4) Water supply projections based on the following sources of forecasted supply data:

(A) Monthly full natural flow forecasts contained in the Department of Water Resources' California Cooperative Snow Surveys Bulletin 120 Water Supply Forecast, where available;

(B) Daily full natural flow forecasts from the California Nevada River Forecast Center, where data is not available in the Bulletin 120 Water Supply Forecasts; and

(C) Other available and reliable data on projected or actual precipitation and runoff events that may inform water availability at a monthly or sub-monthly scale.

(5) Relevant available information regarding stream system disconnection where curtailing diversions would not make water available to serve senior downstream water rights or claims, including seasonal or temporary disconnections.

(6) The Deputy Director may also consider any other pertinent, reliable, and publicly available information when determining water right priorities, water availability, water supply projections, and demand projections.

(7) Evaluation of available water supplies against demands may be performed using the Water Unavailability Methodology for the Delta Watershed, or comparable tools. The Water Unavailability Methodology for the Delta Watershed is described in the Water Unavailability Methodology for the Delta Watershed report dated July 23, 2021, which is hereby incorporated by reference. Evaluation of available supplies against demands may be performed at the Hydrologic Unit Code level 4 Sacramento and Hydrologic Unit Code level 4 San Joaquin River watershed scale, or at the subwatershed scale. Subwatersheds within the Delta Watershed are defined in the Water Unavailability Methodology for the Delta Watershed report dated July 23, 2021, and were established based on Hydrologic Unit Code level 8 watersheds.

(e) Upon receipt of an initial order pursuant to this section, a water right holder or claimant may submit information to the Deputy Director to: support a proposed correction to the water right priority date of the right for which the order was issued; or propose that curtailment may not be appropriate for a particular diverter or in a specific stream system as demonstrated by verifiable circumstances, such as a system that has been adjudicated and is disconnected and curtailment would not make water available to serve senior downstream water rights or claims. Any such proposals and all supporting information and analysis shall be submitted to the Deputy Director within 14 days of receipt of the initial order. Proposals, supporting information, and analyses submitted more than 14 days after receipt of an initial order may be considered to support corrections in advance of future curtailments. The Deputy Director will review timely-provided proposals and supporting information and analyses as soon as practicable, make a determination regarding the proposal, and inform the affected water right holder or claimant of any appropriate update for purposes of water diversion curtailment orders. Before making any determinations within the Legal Delta, the Deputy Director will consult with the Delta Watermaster.

(f) Water right holders and claimants in the Delta Watershed must either subscribe to the Delta Drought email distribution list referenced in subdivision (c) or frequently check the State Water Board's drought webpage to receive updated information regarding water diversion curtailment and reporting orders and water unavailability.

(g) The Deputy Director will temporarily suspend curtailments for some diverters, in order of water right priority, when water availability increases or is projected to increase due to precipitation and runoff events or due to reductions in demand, and the Deputy Director determines that such increased water availability warrants a suspension. The Deputy Director will consider the best available information, such as water supply forecasts from the California Department of Water Resources and other similarly reliable sources, to determine the geographic scope and duration of suspension. By no later than October 1, 2021, and by no more than every 30 days thereafter, the Deputy Director will consider reliable and publicly available information that supports suspension, extension of suspension, or reimposition of curtailments of water diversions, and will publicly issue an update explaining any decisions resulting from the consideration of that information.

(h) All curtailment orders issued under this section shall be subject to reconsideration under article 2 (commencing with section 1122) of chapter 4 of part 1 of division 2 of the California Water Code.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 275, 1058.5, Water Code; *El Dorado Irrigation Dist. v. State Water Resources Control Board* (2006) 142 Cal.App.4th 937; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463; *Stanford Vina Ranch Irrigation Co. v. State of California* (2020) 50 Cal.App.5th 976.

#### 877 [Reserved]

#### 877.1 Definitions

(a) "Curtailment Order" refers to an order from the Deputy Director of the Division of Water Rights ordering a water right holder to cease diversions reduce or cease diversions. A curtailment order may require the recipient to monitor and comply with a curtailment status list if curtailments are not required immediately upon issuance of the order.

(b) "Deputy Director" refers to the Deputy Director of the Division of Water Rights, or duly authorized designee, at the State Water Resources Control Board. "Curtailment Status List" refers to a list published by the Deputy Director with the current status of curtailments noticed under a curtailment order.

(c) "Flood Control District" refers to the Mendocino County Russian River Flood Control and Water Conservation Improvement District. "Delta Watermaster" has the same meaning as in Water Code section 85230.

(d) "Lower Russian River" refers to the surface waters, including underflow and subterranean streams, of the Russian River downstream of the confluence of Dry Creek and the Russian River. "Delta Watershed" or "Sacramento-San Joaquin Delta Watershed" refers to the Hydrologic Unit Code level 4 Sacramento and the Hydrologic Unit Code level 4 San Joaquin subregions, as defined using the U.S. Geological Survey Hydrologic Units Dataset.

(e) "Lower Russian River Watershed" refers to the area in Sonoma County that drains towards Dry Creek and the area downstream of the confluence of the Russian River and Dry Creek that drains towards the outlet of the Russian River to the Pacific Ocean. "Deputy Director" refers to the Deputy Director of the Division of Water Rights, or duly authorized designee, at the State Water Resources Control Board.

(f) "Mainstem of the Upper Russian River" refers to the surface waters, including underflow and subterranean streams, of the Upper Russian River downstream of Lake Mendocino and upstream of the confluence of Dry Creek and the Russian River. "Informational Order" refers to an order issued by the Deputy Director which orders reporting of water diversion and use information in the Delta Watershed to inform water unavailability determinations and to support the curtailment process described in section 876.1.

(g) "Legal Delta" has the same meaning as the Sacramento-San Joaquin Delta, as defined in Water Code section 12220.

(<u>gh</u>) "Minimum human health and safety needs" refers to the amount of water necessary for prevention ofto prevent adverse impacts to human health and safety, for which there is no feasible alternate supply. "Minimum human health and safety needs" include:

(1) Indoor domestic Domestic water uses including water for human consumption, cooking, or sanitation purposes. For the purposes of this article, water provided outdoors Further, domestic water uses include incidental uses necessary for human consumption, cookinghousehold animals or sanitation purposes, including but not limited to facilities for unhoused persons or campgrounds, shall be regarded as indoor domestic sustenance such as small vegetable gardens. As necessary to provide for indoordomestic water use, water diverted for minimum human health and safety needs may include water hauling and bulk water deliveries, so long as the diverter maintains records of such deliveries and complies with the reporting requirements of Section 879 of this article, and so long as such provision diversion and use is consistent with a valid water right.

(2) For Urban Water Suppliers, water uses consistent with demand reduction actions required by the strictest stage of that supplier's adopted Water Shortage Contingency Plan as part of its Urban Water Management Plan, which actions must achieve at least a 50% reduction in water use as described by Water Code Section 10632 and the 2020 Urban Water Management Plan Guidebook.

(23) Water supplies necessary for energy sources that are critical to basic grid reliability, as identified by the California Independent System Operator, California Public Utilities Commission, California Energy Commission, or a similar energy grid reliability authority.

(<u>34</u>) Water supplies necessary to prevent tree die-off that would contribute to fire risk to residences, and for maintenance of ponds or other water sources for fire fighting, in addition to water supplies identified by the California Department of Forestry and Fire Protection or another appropriate authority as regionally necessary for fire preparedness.

(4<u>5</u>) Water supplies identified by the California Air Resources Board, a local air quality management district, or other appropriate public agency with air quality expertise, as necessary to address critical air quality impacts to protect public health.

 $(\underline{56})$  Water supplies necessary to address immediate public health or safety threats, as determined by a public agency with health or safety expertise.

(67) Other water uses necessary for human health and safety which a state, local, tribal or federal health, environmental, or safety agency has determined are critical to public health and safety or to the basic infrastructure of the state. Diverters wishing to continue diversions for these uses must identify the health and safety need, include approval or similar relevant documentation from the appropriate public agency, describe why the amount requested is critical for the need and cannot be met through alternate supplies, state how long the diversion is expected to continue, certify that the supply will be used only for the stated need, and describe steps taken and planned to obtain alternative supplies.

(i) "Upper Russian River" refers to the surface waters, including underflow and subterranean streams, of the Russian River upstream of the confluence of the Russian River and Dry Creek and includes both the East and West Forks of the Russian River "Russian River Watershed" refers to the area located in Mendocino and Sonoma Counties that drains towards the outlet of the Russian River at the Pacific Ocean.

(j) "Upper Russian River Watershed" refers to the area located in Mendocino and Sonoma Counties that drains towards the confluence of Dry Creek and the Russian River. "State Water Board" refers to the State Water Resources Control Board.

(k) "Delta Watershed" or "Sacramento-San Joaquin Delta Watershed" refers to the Hydrologic Unit Code level 4 Sacramento and the Hydrologic Unit Code level 4 San Joaquin subregions, as defined using the U.S. Geological Survey Hydrologic Units Dataset. "Urban Water Supplier" has the same meaning as defined in Water Code section 10617.

(I) "Legal Delta" has the same meaning as the Sacramento-San Joaquin Delta, as defined in Water Code section 12220.

(m)"Informational Order" refers to an order issued by the Deputy Director which orders reporting of water diversion and use information in the Delta Watershed to inform water unavailability determinations and to support the curtailment process described in section 876.1.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art., X § 2; Sections 100, 100.5, 104, 105, 106.3, 275, 1058.5, Water Code; *Environmental Defense Fund v. East Bay Muni. Util. Dist.* (1980) 26 Cal.3d 183.

#### 877.2 Emergency Curtailments Determining Curtailment Statuses and Correlative Sharing Requirements Due to Lack of Water Availability in the Lower-Russian River Watershed.

(a) This section applies 877.2 and sections 877.3, 877.4, and 877.5 apply only to water diversion and use within the Lower-Russian River Watershed.

(b) After the effective date of this regulation, when flows in the Lower Russian River Watershed are insufficient to support all diversions, the Deputy Director may issue curtailment orders to water right holders requiring the curtailmentlimitation or cessation of water diversion. Curtailment orders shall be effective the day after issuance. Curtailment orders issued to a riparian claimant may establish a maximum allowable diversion in the form of an assigned water budget based on the information in subdivision (d), below. Such assigned water budgets will form the basis for correlative reductions in diversions pursuant to riparian claims of right.

(c) The Deputy Director will publish and regularly update a curtailment status list showing all water rights for which diversions must cease or be reduced correlatively, either because flows in the Russian River Watershed are insufficient to support diversions or where, as informed by the National Marine Fisheries Service or California Department of Fish and Wildlife, the Deputy Director determines continued diversions would unreasonably interfere with augmented stream flows or releases made as part of Voluntary Drought Initiative projects in four priority tributaries to the Russian River (Dutch Bill Creek, Green Valley Creek, Mark West Creek, and Mill Creek). Updates to the curtailment status list shall be construed as binding orders from the State Water Board to cease or limit diversions accordingly and shall be effective the day after posting. The State Water Board finds that diversion of surface water where augmented stream flows or releases are occurring as part of Voluntary Drought Initiative projects in association with the National Marine Fisheries Service or the California Department of Fish and Wildlife constitute an unreasonable use of water.

(ed) In determiningWhen updating the curtailment status list to reflect the extent to which water is available under a diverter'swater user's priority of right-or when rescinding curtailment orders, the Deputy Director shall consider:

(1) Relevant available information regarding date of priority, including but not limited to claims of first use in statements of water diversion and use, judicial and State Water Board decisions and orders, and other information contained in the Division of Water Rights files; (2) Monthly water right demand projections based on reports of water diversion and use for permits and licenses, or statements of water diversion and use, from 2017 through 2019. Monthly water demand projections based on 2017 to 2019 data in reports of water diversion and use for permits and licenses and in statements of water diversion and use, or alternative information timely received from the water user in accordance with section 877.3, as applicable.

(3) Water availability projections based on one or more of the following:

(A) Outputs from a United States Geological Survey's Precipitation Runoff Modeling System model, calibrated by State Water Board staff to estimate current or historical natural cumulative runoff throughout the watershedRussian River Watershed, as well as forecasts of monthly supplies;

(B) Climatic estimates of precipitation and temperature from the Parameter-elevation Regressions on Independent Slopes Model, commonly referred to as PRISM;

(C) Historical periods of comparable conditions with respect to daily temperatures, precipitation, or surface flows;

(D) Outputs from the Santa Rosa Plain Hydrologic Model developed by United States Geological Survey; or

(E) Stream gage data, where available.

(4) The Deputy Director may also consider additional pertinent and reliable information when determining water right priorities, water availability, and demand projections.

(5) Evaluation of available supplies against demands Final calculations of water availability may be performed at the downstream outlet of either the Upper Russian River or Lower Russian River, or at a smaller subwatershed scale using the Drought-Water Rights Allocation Tool, or comparable tools. Use of the Drought Water Rights Allocation Tool will be in accordance with the formulations document for the Drought Water Rights Allocation Tool (March 2, 2020) and Drought Water Right Curtailment Analysis for California's Eel River (November 20, 2017), which are hereby incorporated by reference. The Water Rights Allocation Tool automates these calculations via mathematical formulation of sub-watershed supplies; user demands and dates of priority; and maximization of water Rights Allocation Tool (January 2022), which is hereby incorporated by reference.

(de) Water users and water right holders are responsible for checking the State Water Board's drought announcements website and signing up for the

email distribution list referenced in subdivision (ef)(2) to receive updated water supply forecasts. It is anticipated that forecasts of water supplies available to meet water rights demands will be updated on a monthly basis until cumulative rainfall of greater than 0.5 inches occurs as measured at Healdsburg, California. Following this precipitation event, it is anticipated that forecasts of supplies will be updated on a weekly basis until rescission of all curtailment orders under this section.updates to the curtailment status list.

(e<u>f</u>)

(1) Initial curtailment<u>Curtailment</u> orders will be sent to each water right holder, <u>claimant</u>, or the agent of record on file with the Division of Water Rights. The water right holder or agent of record<u>recipient</u> is responsible for immediately providing notice of the curtailment order(s) to all diverters exercising the water right(s) covered by the curtailment order(s).

(2) The State Water Board has established an email distribution list for issuing drought notices, water supply forecasts, and updates regarding curtailments to the curtailment status list. Notice provided by email or by posting on the State Water Board's drought web page shall be sufficient for all purposes related to drought notices and updates regarding curtailment orders and the curtailment status list.

(f) Rescission of curtailment orders shall be announced using the email distribution list and web page described in subdivision (e).

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 275, 1058.5, Water Code; *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463; *Stanford Vina Ranch Irrigation Co. v. State of California* (2020) 50 Cal.App.5th 976.

#### 877.3 Emergency Curtailment Where Insufficient Flows are Available in the Upper Russian River Watershed.Curtailments Affecting Water Users Claiming Riparian Rights in the Russian River Watershed

(a) This section applies to water diversions in the Upper Russian River Watershed.

<del>(b)</del>-

(1) The Deputy Director may issue a curtailment order upon a determination that the conditions in subdivision (c) are occurring. Curtailment orders shall be effective the day after issuance.

(2) If maintaining minimum flows required for the protection of minimum human health and safety needs, fish and wildlife, or further preserving stored water in Lake Mendocino for human health and safety needs would require curtailment of uses otherwise exempt from curtailment under this article, then the Deputy Director shall consider whether those uses should be allowed to continue based on the most current information available regarding fish populations, human health and safety needs, and the alternatives available to protect both human health and safety and threatened or endangered fish. Curtailment of water uses under this subdivision (b)(2) and any updates regarding such curtailments shall be noticed as described in subdivision (d).

(c) When storage levels in Lake Mendocino are below those specified in section 877.4, and Sonoma County Water Agency is making Supplemental Storage Releases to satisfy Inbasin Uses, diversion of water within the Upper Russian River Watershed that does not meet an exemption identified in section 878 or section 878.1 constitutes an unreasonable use of water and is prohibited.

(1) Inbasin Uses are defined as diversions from the Mainstem of the Upper Russian River to meet minimum human health and safety needs, Reach Losses, and minimum flows required for protection of fish and wildlife as required by a water right permit or license term, including any enforceable modifications of the foregoing. Export diversions, deliveries scheduled by the Flood Control District pursuant to License 13898, and Reach Losses associated with those exports and deliveries are specifically excluded from the definition of Inbasin Uses.

(2) Supplemental Storage Releases are defined as water released from Lake Mendocino which is in excess of inflows to Lake Mendocino, as calculated on a daily basis, to satisfy Inbasin Uses.

(3) Reach Losses are defined as water that is lost from the Mainstem of the Upper Russian River due to riparian habitat, evaporative losses, or percolation to groundwater.

<del>(d)</del>-

(1) Initial curtailment orders will be sent to each water right holder or the agent of record on file with the Division of Water Rights. The water right holder or agent of record is responsible for immediately providing notice of the curtailment order(s) to all diverters exercising the water right(s) covered by the curtailment order(s).

(2) The State Water Board has established an email distribution list that water right holders may join to receive drought notices, water supply forecasts, and updates regarding curtailments. Notice provided by email or by posting on the State Water Board's drought web page shall be sufficient for all purposes related to drought notices and updates regarding curtailment orders.

(a) Uncoordinated diversions of surface water under riparian claims of right within the Russian River Watershed during drought conditions constitute an unreasonable use of water. To prevent this unreasonable use, diversions of surface water pursuant to riparian claims of right shall be incorporated into the water availability analysis described in section 877.2 and may be issued curtailment orders accordingly. A water user claiming a riparian right who has been issued a curtailment order shall cease or reduce diversions correlatively in accordance with that curtailment order and the updated curtailment status list.

(b) Water users claiming a riparian right who disagree with the assigned water budget provided in their curtailment order may, within 14 days of the effective date of the curtailment order, inform the Deputy Director of their actual planned diversion and use pursuant to the claimed riparian right. The Deputy Director may accept, accept with revisions, or reject a riparian claimant's submittal under this section. The information submitted must be in the form specified by the Deputy Director and must include, at minimum, the following items:

(1) Estimates of planned diversion quantities, by month, for the next twelve months.

(2) A summary of the uses of the water.

(3) Previous water usage data, which shall be used to evaluate the reasonableness of the proposed diversion amounts.

(c) Water users claiming a riparian right who fail to inform the Deputy Director of their planned diversions and have failed to report diversion and use for 2017 through 2019 shall be subordinated to a junior-most priority while this regulation remains in effect. Nothing in this section 877.3 shall be construed as a basis for defining or circumscribing the existence or scope of a riparian right for purposes other than implementation of this regulation.

(d) Until the Deputy Director renders a decision on a request submitted under subdivision (b), the water right holder shall remain subject to the curtailment order and updated curtailment status list.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 275, 1058.5, Water Code; *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419; *Light v. State* 

Water Resources Control Board (2014) 226 Cal.App.4th 1463; Stanford Vina Ranch Irrigation Co. v. State of California (2020) 50 Cal.App.5th 976.

# 877.4 Lake Mendocino Storage Levels Exceptions to Curtailment for Voluntary Water Sharing Agreements

Curtailment orders for diversions in the Upper Russian River Watershed shall not be issued unless storage levels in Lake Mendocino fall below the following levels prior to the specified dates:

- (a) 29,315 acre-feet before July 1.
- (b) 27,825 acre-feet before July 15.
- (c) 26,109 acre-feet before August 1.
- (d) 24,614 acre-feet before August 15.
- (e) 22,745 acre-feet before September 1.
- (f) 21,251 acre-feet before September 15.
- (g) 20,000 acre-feet on any date while the regulation is in effect.

(a) Water right holders in the Russian River Watershed may propose a voluntary water sharing agreement that, upon approval by the State Water Board and while said agreement remained in effect, would authorize an exception to curtailment for signatories in accordance with subdivision (b) of this section. Approval of the proposed agreement requires that the State Water Board find that it will not adversely affect the availability of water for non-signatories and that the proposed agreement includes support from prospective signatories in both Mendocino and Sonoma Counties. The State Water Board may, in its discretion, accept, accept with revisions, or reject a proposed voluntary water sharing agreement.

(b) After an agreement described in subdivision (a) has been approved by the State Water Board, a signatory whose water rights are listed on the updated curtailment status list may continue to divert in compliance with the limitations and requirements of that agreement, provided the signatory indicates the water rights enrolled under that agreement using the online portal identified in their curtailment order.

(c) If the Deputy Director determines, based on stream gage data and other relevant information, that an agreement approved under this section 877.4 is adversely affecting or threatens to adversely affect the availability of water for non-signatories, the Deputy Director will provide written notice to signatories that the exception to curtailment identified in section 877.4, subdivision (b), no longer applies. Within 14 days of the Deputy Director issuing such notice, signatories shall reduce or cease diversions in accordance with their curtailment orders and the updated curtailment status list.

(d) Diversion by a non-signatory of water made available by a signatory pursuant to an approved agreement described in subdivision (a) is an unreasonable use of water and is prohibited.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 275, 1058.5, Water Code; *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419; *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224; <u>Light v. State Water Resources Control Board</u> (2014) 226 Cal.App.4th 1463; Stanford Vina Ranch Irrigation Co. v. State of California (2020) 50 Cal.App.5th 976.

#### 877.5 Rescission of Curtailment Orders in Upper Russian River Watershed.Availability of 10,000 Acre-Foot Reservation for Water Previously Stored in Lake Mendocino

(a) Following issuance of curtailment orders pursuant to section 877.3, the Deputy Director will notify water right holders of the extent to which curtailment orders will be rescinded following a determination by the Deputy Director that Sonoma County Water Agency is no longer making Supplemental Storage Releases to satisfy Inbasin Uses and natural or abandoned flows are available.

(b) In determining the extent to which water is available under a diverter's priority of right when rescinding curtailment orders, the Deputy Director shall consider:

(1) Relevant available information regarding date of priority, including but not limited to claims of first use in statements of water diversion and use, judicial and State Water Board decisions and orders, and other information contained in the Division of Water Rights files;

(2) Monthly water right demand projections based on reports of water diversion and use for permits and licenses, or statements of water diversion and use, from 2017 through 2019.

(3) Water availability projections based on one or more of the following:

(A) Outputs from a United States Geological Survey's Precipitation Runoff Modeling System model, calibrated by State Water Board staff to estimate current or historical natural cumulative runoff throughout the watershed, as well as forecasts of monthly supplies.

(B) Climatic estimates of precipitation and temperature from the Parameter-elevation Regressions on Independent Slopes Model, commonly referred to as PRISM.

(C) Historical periods of comparable conditions with respect to daily temperatures, precipitation, or surface flows.

(D) Outputs from the Santa Rosa Plain Hydrologic Model developed by United States Geological Survey; or

(E) Stream gage data, where available.

(4) The Deputy Director may also consider additional pertinent and reliable information when determining water right priorities, water availability and demand projections.

(5) Evaluation of available supplies against demands may be performed at the downstream outlet of either the Upper Russian River or the Lower Russian River, or at a smaller sub-watershed scale using the Drought Water Rights Allocation Tool, or comparable tool. Use of the Drought Water Rights Allocation Tool will be in accordance

with the formulations document for the Drought Water Rights Allocation Tool (March 2, 2020) and Drought Water Right Curtailment Analysis for California's Eel River (November 20, 2017), which are hereby incorporated by reference.

(c) Water users and water right holders are responsible for checking the State Water Board's drought announcements website and signing up for the email distribution list referenced in section 877.3, subdivision (e)(2), to receive updated water supply forecasts. It is anticipated that forecasts of water supplies available to meet water rights demands will be updated on a monthly basis until cumulative rainfall of greater than 0.5 inches occurs as measured at Ukiah Municipal Airport precipitation stations within the watershed. Following this precipitation event, it is anticipated that forecasts of supplies will be updated on a weekly basis until rescission of all curtailment orders under this section.

(d) Rescission of a curtailment order shall be announced using the email distribution list and web page described in section 877.3, subdivision (e)(2).

(a) Water users within Sonoma County may not redivert water previously stored in Lake Mendocino pursuant to the 10,000 acre-foot reservation described in Permit 12947A, Term 23, if any of the following conditions occurs:

(1) 25 cubic feet per second is the applicable minimum instream flow requirement upstream of the confluence of Dry Creek and the Russian River under Term 20 of Permit 12947A, including modifications from an approved temporary urgency change petition, and Lake Mendocino storage has fallen below the following levels prior to the specified dates:

(A) June 1: 39,000 AF

(B) July 1: 35,000 AF

(C) August 1: 29,000 AF

(D) September 1: 24,000 AF

(E) October 1 or thereafter: 20,000 AF

(2) 75 cubic feet per second is the applicable minimum instream flow requirement upstream of the confluence of Dry Creek and the Russian River under Term 20 of Permit 12947A, including modifications from an approved temporary urgency change petition, and Lake Mendocino storage has fallen below the following levels prior to the specified dates:

(A) July 1: 44,000 AF

(B) August 1: 35,000 AF

(C) September 1: 27,000 AF

(D) October 1 or thereafter: 20,000 AF

(3) If an accounting report submitted to the Deputy Director by Sonoma County Water Agency and the Mendocino County Russian River Flood Control and Water Conservation Improvement District pursuant to their March 21, 2022 Memorandum of Understanding includes information indicating the stored water reserved by Term 23 of Permit 12947A has been depleted or must be retained to maintain instream flows, the Deputy Director may determine that rediversion of water pursuant to that reservation must cease. Such a determination will be announced on the State Water Board's website and via the State Water Board's email distribution list and shall take effect the following day.

(b) Water users who intend to redivert water previously stored in Lake Mendocino pursuant to the 10,000 acre-foot reservation described in Term 23 of Permit 12947A as an alternate water source must submit a claim using a form prescribed by the Deputy Director documenting their right to use the reserved stored water no later than 14 days from issuance of a curtailment order. A claim submitted under this subdivision is only required for rediversions pursuant to said 10,000 acre-foot reservation during the effective period of this regulation.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 275, 1058.5, Water Code; *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463 *Stanford Vina Ranch Irrigation Co. v. State of California* (2020) 50 Cal.App.5th 976; <u>State Water Resources Control Board Decisions 1030 (Aug. 1961) & 1610 (April 1986); State Water Resources Control Board Order WR 74-30.</u>

#### 877.6 Rediversion of Water Previously Stored in Lake Mendocino.

- (a) Rediversion by the Flood Control District of previously stored water released from Lake Mendocino shall be an unreasonable use of water and subject to the enforcement provisions described in section 879.2 unless such rediversion meets the requirements of this section.
- (b) The Flood Control District shall schedule all deliveries of water pursuant to License 13898 at least one week in advance of release of the water.
- (c) The timing of rediversion activities relative to release of water shall be based on a travel time of water along the Russian River agreed upon between the Flood Control District and Sonoma County Water Agency.
- (d) The Flood Control District shall provide a monthly schedule of rediversions by the first day of each month and shall confirm by noon on Friday of each week whether those diversions will occur in the following week or have changed.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 275, 1058.5, Water Code; National Audubon Society v. Superior Court (1983) 33 Cal.3d 419; Light v. State Water Resources Control Board (2014) 226 Cal.App.4th 1463; City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224.

#### 878 Non-Consumptive Uses

Diversion and use described in this sectionNon-consumptive uses under any valid basis of right may continue after issuance of a curtailment order without further approval from the Deputy Director, subject to the conditions set forth in this section. Diversions described in For the purposes of this sectionmay not be required to curtail in response to, a curtailment order under this article if their non-consumptive use is one for which direct diversion and use of water does not decrease downstream flows or the availability of water for downstream water users. Any diverter wishing to continue diversion under this section must submit to the Deputy Director a certification, under penalty of perjury, which describes the non-consumptive use of water and explains, with supporting evidence, how the diversion and use do not decrease downstream flows in the applicable watershed. The Deputy Director may request additional information or disapprove any and may invalidate any non-consumptive use certification if the information provided is insufficient to support the statementeligibility or if more convincing evidence contradicts the claims in the certification. If a certification submitted pursuant to this section is disapproved invalidated, the diversions are subject to any curtailment order issued for that basis of right.

This section applies to:

(a) Direct diversions solely for hydropower if discharges are returned to the source stream or its tributaries and water is not held in storage.

(b) Direct diversions dedicated to instream uses for the benefit of fish and wildlife pursuant to Water Code section 1707, including those that divert

water to a different location for subsequent release, provided the location of release is hydraulically connected to the source stream.

(c) ForDirect diversions subject to curtailment orders issued under sections 877.2 and 877.3 where the Deputy Director, the California Department of Fish and Wildlife, and the Executive Officer of the North Coast Regional Board have approved a substitution of releases of either stored water or groundwater into the Russian River or a tributary thereof for the benefit of fish and wildlife such that there is not a not decrease in stream flow as a result of the diversion at the next USGS gage. The rate of releases made pursuant to this subdivision must be measured daily using a device or measurement method approved by the Deputy Director and provided to the Deputy Director on a monthly basis. Proposals involving the release of groundwater shall provide sufficient data and information to reasonably quantify any depletions of surface water caused by the groundwater pumping, the potential time lags of those depletions, and if additional groundwater releases beyond the diversion amounts are able to offset those depletions. The release of water does not have to be conducted by the owner of the water right proposed for the continued diversions, provided an agreement between the water right holder and the entity releasing the water is included in the proposal.

(d) Other direct diversions solely for non-consumptive uses, if those diverters file with the Deputy Director a certification under penalty of perjury demonstrating that the diversion and use are non-consumptive and do not decrease downstream flows in the watershed <u>or the availability of water for downstream water users</u>.

(e) Direct diversions located within the Legal Delta used exclusively to irrigate lands entirely below sea level when comparison of diversion and drainage records provide substantial evidence that continued irrigation of those lands does not increase net channel depletions.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 187, 275, 348, Water Code

#### 878.1 Minimum Human Health and Safety Needs.

(a) Diversions described in this section under any valid basis of right may be authorized to continue after issuance of anotwithstanding curtailment orderof that right, subject to the conditions set forth in this section. A diversion that would otherwise be subject to curtailment may be authorized if:

(1) The diversion is necessary for minimum human health and safety needs; and therefore,

(2) The diversion is necessary to further the constitutional policy that the water resources of the state be put to beneficial use to the full extent they are capable, and that waste and unreasonable use be prevented, notwithstanding the effect of the diversions on more senior water rights or instream beneficial uses.

(b)

(1) Diversions for minimum human health and safety needs under any valid basis of right of not greater than 55 gallons per person per day may continue after issuance of anotwithstanding curtailment orderof that right without further approval from the Deputy Director, subject to the conditions set forth in this section. Any diverter wishing to continue diversion under this subdivision must submit to the Deputy Director certification, under penalty of perjury, of compliance with the requirements of subdivisions (b)(1)(A)-(E), below. The Deputy Director may request additional information or set additional requirements on continued diversion.

(A) Not more than 55 gallons per person per day will be diverted under all bases of right.

(B) The diversion is necessary to serve minimum human health and safety needs as defined in section 877.1, subdivision (gh), after all other alternate sources of water have been used. To the extent other water sources are available, those sources will be used first and the total used will not exceed 55 gallons per person per day.

(C) The diverter and all end users of the diverted water <u>have</u> <u>implemented all available conservation measures and</u> are operating under the strictest existing conservation <del>regimeplan</del> for that place of use, if such a plan exists for the area or service provider<del>, or shall be</del> <del>operating under such regime within 30 days</del>. If additional approvals are required before implementation of the conservation regime, the diverter must certify that all possible steps will be taken immediately to ensure prompt approval.

(D) If the diverter is distributor or anyone using water under the diverter's basis of right of a public water is an Urban Water Code sections 350 et seq., that Supplier, it has declared a water shortage emergency condition and either already has adopted regulations and restrictions on the delivery of water or will adopt conservation and water delivery restrictions and regulations within a timeframe specified by the Deputy Director as a condition of certification.

(E) The diverter has either pursued steps to acquire other sources of water, but has not yet been completely successful, as described in an attached report, or the diverter will pursue the steps in an attached plan to identify and secure additional water. (2) To the extent that a diversion for minimum human health and safety needs requires more than 55 gallons per person per day, or cannot be <u>quantified on the basis of gallons per person per day</u>, continued diversion of water after issuance of anotwithstanding curtailment order for<u>of</u> the <u>diversionapplicable water right</u> requires submission of a petition demonstrating compliance with the requirements of subdivisions (b)(<u>1)(B)-(E) above and (b)(2)(</u>A)-(F) below, and approval by the Deputy Director. The Deputy Director may condition approval of the petition on implementation of additional conservation measures and reporting requirements. Any petition to continue diversion to meet minimum human health and safety needs of more than 55 gallons per person per day must:

(A) Describe the specific circumstances that make the requested diversion amount necessary to meet minimum human health and safety needs, if a larger amount is sought.

(B) Estimate the amount of water needed.

(C) Certify that the supply will be used only for the stated need.

(D) Describe any other additional steps the diverter will take to reduce diversions and consumption.

(E) Provide the timeframe in which the diverter expects to reduce usage to no more than 55 gallons per person per day, or why minimum human health and safety needs will continue to require more water.

(F) As necessary, provide documentation that the use meets the definition of minimum human health and safety needs provided in subdivision (g) of section 877.1 section 877.1, subdivision (h). For water supplies necessary for fire prevention or firefighting purposes, substantiating documentation, such as guidance from the local fire department, local city or county ordinances, or equivalent local requirements, may be requested by the Deputy Director.

(c) For public water systems with 15 or greater connections and small water systems of 5 to 15 connections, gallons per person per day shall be calculated on a monthly basis and the calculation methodology shall be consistent with the State Water Board's Percentage Residential Use and Residential Gallons Per Capita Daily Calculation (PRV and R-GPCD Calculation), dated September 22, 2020, which is hereby incorporated by reference.

(d) Diversions for minimum human health and safety needs that cannot be quantified on the basis of an amount per person per day require a petition and approval from the Deputy Director. The Deputy Director may approve a such a petition under this subdivision or subdivision (b)(2) upon a finding that the petition demonstrates that the requested diversion is in furtherance of the

constitutional policy that the water resources of the state be put to beneficial use to the full extent they are capable, and that waste and unreasonable use be prevented, notwithstanding the effect of the diversion on senior water rights or instream beneficial uses, and may condition approval as appropriate to ensure that the diversion and use are reasonable and in the public interest.

(e) For water supplies necessary for electrical power generation critical to grid reliability, substantiating documentation, such as a letter of support from California Independent System Operator, California Public Utilities Commission, California Energy Commission, or a similar energy grid reliability authority, must be provided.

(e) To the extent necessary to resolve immediate public health or safety threats, a diversion subject to curtailment may continue while a petition under subdivision (b)(2) is being prepared and is pending. The Deputy Director may require additional information to support the initial petition, information on how long the diversion is expected to continue, and a description of other steps taken or planned to obtain alternative supplies.

(f) Notice of certifications, petitions, and decisions under this section and section 878 will be posted as soon as practicable on the State Water Board's drought webpage. The Deputy Director may issue a decision under this article prior to providing notice.

(g) <u>Notwithstanding California Code of Regulations, Title 23, section 1064, a</u> petition pursuant to Water Code section 1435 or 1725 solely for the provision of water for minimum human health and safety, as defined by section 877.1, subdivision (h), shall be accompanied by a filing fee of \$250.

(<u>gh</u>) Diversion and use within the Russian River Watershed or Delta Watershed, including Mill Creek and Deer Creek, that deprives water for minimum human health and safety needs in 20212022, or which creates unacceptable risk of depriving water for minimum human health and safety needs in 20222023, is an unreasonable use of water. The Deputy Director shall prevent such unreasonable use of water by implementing the curtailment methodology described in section 877.2 for diversions in the Lower Russian River Watershed, sections 877.3, 877.4, 877.5, and 877.6 for diversions in the Upper Russian River Watershed, sections 877.2, 877.3, 877.4, and 877.5 for diversions in the Russian River Watershed, section 876.1 for diversions in the Delta Watershed, and section 876.5 for diversions in the Mill Creek and Deer Creek Watersheds.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 100, 100.5, 104, 105, 106.3, 275, 1058.5, Water Code; *Environmental Defense Fund v. East Bay Muni. Util. Dist.* (1980) 26 Cal.3d 183; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463; *Stanford Vina Ranch Irrigation Co. v. State of California* (2020) 50 Cal.App.5th 976.

#### 879 Reporting

(a) All water right holders issued a curtailment order under section 876.5, 877.2, or 877.3 are required, within seven calendar days of the date of the curtailment order, to submit under penalty of perjury a certification of one or more of the following actions taken in response to the curtailment order, certifying, as applicable, that:

(1) Diversions under the water right(s) identified have ceased;

(2) Any continued use is under other water rights not subject to curtailment, specifically identifying those other rights, including the basis of right and quantity of diversion;

(3) Diversions under the water right(s) identified continue only to the extent that they are authorized in accordance with section 878.4 or are non-consumptive uses for which a certification for continued diversion has been submitted as specified in section 878;

(4) Diversions under the water right(s) identified continue only to the extent that they are to provide for minimum human health and safety needs, a certification has been filed as authorized under section 878.1, subdivision (b)(1), and the subject water right authorizes the diversion in the absence of a curtailment order; or

(5) Diversions under the water right(s) identified continue only to the extent that they are consistent with a petition filed under section 878.1, subdivision (b)(2) or (d), and diversion and use will comply with the conditions for approval of the petition.

(b<u>a</u>) All water users or water right holders whose continued diversion may be authorized under section 878.1 are required to submit, under penalty of perjury, information identified on a schedule established by the Deputy Director as a condition of certification or petition approval pursuant to section 878.1. The required information may include, but is not limited to, the following:

(1) The water right identification numbers under which diversions continue;

(2) <u>The public water system identification number for any public water</u> system served by the diversions.

(23) How the diverter complies with any conditions of continued diversion, including the conditions of certification under section 878.1, subdivision (b)(1);

 $(3\underline{4})$  Any failures to comply with conditions, including the conditions of certification under section 878.1, subdivision (b)(1), and steps taken to prevent further violations;

(4<u>5</u>) Conservation and efficiency efforts planned, in the process of implementation, and implemented, as well as any information on the effectiveness of implementation;

(56) Efforts to obtain alternate water sources;

 $(\underline{67})$  If the diversion is authorized under an approved petition filed pursuant to section 878.1, subdivision (b)(2), progress toward implementing the measures imposed as conditions of petition approval;

 $(7\underline{8})$  If the diversion is authorized under section 878.1, subdivision  $(\underline{d})(\underline{b})(\underline{2})$ :

- (A) The rate of diversion if it is still ongoing;
- (B) Whether the water has been used for any other purpose; and
- (C) The date diversion ceased, if applicable.

(8<u>9</u>) The total water diversion for the reporting period and the total population served for minimum human health and safety needs. The total population must include actual or best available estimates of external populations not otherwise reported as being served by the water right holder, such as individuals receiving bulk or hauled water deliveries for indoor water use.

 $(9\underline{10})$  Diversion amounts for each day in acre-feet per day, maximum diversion rate in cubic feet per second, and anticipated future daily diversion amounts and diversion rates.

(e<u>b</u>)The Deputy Director, or delegee, may issue an order under this article requiring any person to provide additional information reasonably necessary to assess their compliance with this article. Any person receiving an order under this subdivision shall provide the requested information within the time specified by the Deputy Director, but not less than <u>five (5) ten (10)</u> days <u>after issuance</u>.

(ec) This subdivision applies to Delta Watershed curtailment orders and enhanced reporting to inform water unavailability determinations and the curtailment process described under section 876.1.

(1) All water right holders and claimants issued an initial order pursuant to section 876.1 are required, within the deadlines specified in the initial order but no sooner than seven calendar days following issuance of the order, to submit under penalty of perjury a certification that they have and will continue to take actions needed to comply with section 876.1, including the following actions:

(A) Regularly reviewing information posted on the State Water Board's drought webpage to determine when curtailments are required and when curtailments are suspended or reimposed, or subscribing to the State Water Board's Delta Drought email distribution list to receive updates directly; and

(B) Ceasing diversions of natural and abandoned flow when curtailments are ordered, except to the extent that continuing diversions are authorized in accordance with section 878, 878.1, or 878.2879.1 subdivision (b), and ceasing rediversions of water released from storage, except to the extent authorized by a water right or contract.

(2) In addition to the requirements identified under subdivision  $(\underline{dc})(1)$ , the Deputy Director may require water right holders and claimants who have been issued an initial order under section 876.1 and whose water right or claim has a total authorized face value or recent annual reported diversion amount of one thousand acre-feet or greater to report the following information by the date specified by the Deputy Director, but no earlier than seven days after receipt of the reporting order and as specified thereafter:

(A) Prior diversions, unless otherwise reported in annual reports of water diversion and use, including direct diversions and diversions to storage. Diversion volumes shall be provided in a daily, weekly, or monthly format, as identified in the order.

(B) Demand projections for subsequent months through October 1, 20222023, including direct diversions and diversions to storage. Diversion volumes shall be provided in a daily, weekly, or monthly format, as identified in the order.

(C) Before issuing orders issued pursuant to subdivision  $(\underline{dc})(2)$  to water right holders and claimants in the Legal Delta, the Deputy Director will consult with and obtain the concurrence of the Delta Watermaster.

(3) In order to inform curtailment decisions, the Deputy Director, or the Delta Watermaster for rights in the Legal Delta, may issue informational orders under subdivision (c) of this section requiring a water right holder, diverter, or user to provide additional information related to a diversion or use of water in the Delta Watershed, including but not limited to: additional reporting of water diversions and use; the basis of right with supporting documents or other evidence; property patent date for the place of use; the date of initial appropriation; anticipated or actual water transfer amounts; or any other information relevant to forecasting

demands and supplies and determining compliance with curtailment orders in the current drought year or in contingency planning for continuation of the current drought emergency. Informational orders may require reporting of diversions made in prior months and diversions anticipated during subsequent months on a recurring, monthly basis.

(4) Any water right holder or claimant receiving an order under subdivision ( $d\underline{c}$ ) of this section shall provide the requested information within the deadlines specified therein, including any recurring deadlines associated with ongoing reporting requirements as applicable. The Deputy Director, or the Delta Watermaster for rights in the Legal Delta, may grant additional time for submission of information upon substantial compliance with the specified deadline and a showing of good cause. Information provided pursuant to subdivision ( $d\underline{c}$ ) of this section shall be submitted in an online form maintained by the State Water Board and accessible through its website, or in an electronic format as specified by the Deputy Director or Delta Watermaster.

(5) Failure to provide the information required under subdivision ( $\underline{dc}$ ) of this section within the deadlines specified in the order or any time extension granted by the Deputy Director, or the Delta Watermaster for rights in the Legal Delta, is a violation subject to civil liability of up to \$500 per day for each day the violation continues pursuant to Water Code section 1846.

(6) In determining whether to impose reporting requirements under subdivision (4c) of this section, the Deputy Director and Delta Watermaster will consider the need for the information for purposes of informing curtailment decisions and the burden of producing it, and will make reasonable efforts to avoid requiring duplicative reporting of information that is already in the <u>State Water</u> Board's possession.

(7) All orders issued under subdivisions  $(\underline{dc})(2)$  and  $(\underline{dc})(3)$  shall be subject to reconsideration under article 2 (commencing with section 1122) of chapter 4 of part 1 of division 2 of the California Water Code.

Authority: Sections 1058, 1058.5, Water Code

Reference: Sections 100, 187, 275, 348, 1051, 1058.5, 1841 Water Code.

#### 879.1 Conditions of Permits, Licenses and Registrations.

(a) Compliance with this article, including any conditions of certification or approval of a petition under this article, shall constitute a condition of all water right permits, licenses, certificates and registrations for diversions from any watershed identified in this article.

(b) Diversions may continue after the issuance of a curtailment order to the extent the maintenance of a mechanism allowing for the bypass of natural or abandoned flow is not conditioned in a water right permit, license, stockpond certificate, or registration not exceeding a total authorized face value of ten acre-feet per year.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 275, 1253, 1058.5, Water Code; *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419.

#### 879.2 Compliance and Enforcement.

(a) A <u>diverterwater user</u> must comply with a curtailment order issued under this article, any <u>updates to the curtailment status list, all</u> conditions of certification or approval of a petition under this article, and <u>anyall</u> water right conditions under this article, notwithstanding receipt of more than one curtailment order. To the extent of any conflict between applicable requirements, the diverter must comply with the requirements that are the most stringent.

(b) Diversion or use of water in the Upper Russian River Watershed or the Delta Watershed in violation of this article constitutes an unreasonable use of water and is subject to any and all enforcement proceedings authorized by law. When conducting an inspection to assess a diverter's compliance with this article, the State Water Board may obtain an inspection warrant pursuant to the procedures set forth in Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure where access is not granted by the property owner.

(c) Diversion or use of water in the Lower Russian River Watershed or the Delta Watershed in violation of this article is a trespass under Water Code section 1052 and shall constitute evidence of diversion or use in excess of a water user's rights. Failure to meet the requirements of this article or of any order issued thereunder constitutes a violation subject to civil liability pursuant to Water Code section 1846, and an infraction pursuant to Water Code section 1058.5, subdivision (d), each of which can carry a fine of up to five hundred dollars (\$500) for each day in which the violation occurs.

(d) All violations of this article shall be subject to any applicable penalties under Water Code section 1058.5. Nothing in this section shall be construed as limiting the enforceability of or penalties available under any other applicable provision of law.

Authority: Sections 1058, 1058.5, Water Code

Reference: Cal. Const., Art. X, § 2; Sections 275, 1052, 1055, 1058.5, 1825, 1831, 1846, Water Code; <u>Sections 1822.50 et al.</u>, <u>California Code of Civil Procedure</u>; *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419.

#### 879.3 Redelegation of Authorities

Authorities delegated to the Deputy Director under this article may be redelegated.

Authority: Sections 1058, 1058.5, Water Code

Reference: State Water Resources Control Board Resolution No. 2012-0029

# DROUGHT WATER RIGHTS ALLOCATION TOOL January, 2022

# **RIPARIAN FORMULATION**

# $0 \leq P_k \leq 1$

for all basins, k

Basin proportions *Pk* are between 0 and 1.

# $A_i = P_k u_i$

for all *i* users, in each basin *k* 

Each user's allocation  $A_i$  is user *i*'s basin proportion  $P_k$ , of *i*'s demand  $u_i$ .

# $A_k = P_k U_k$

### for all k basins

Basin demand  $U_k$  is the sum of all user demand  $u_i$  in each basin k. Basin allocation  $A_k$  is the basin proportion  $P_k$  of basin demand  $U_k$ .

$$\sum_{i\in k}A_i\leq v_k-e_k$$

for all i users that are within each basin k

Mass Balance: within every basin k, the sum of all users' allocations are less than or equal to flow  $v_k$  in basin k, less any environmental instream flow requirement  $e_k$ .

# $P_j \leq P_k$

## for all basins *j* and all basins *k*

Upstream basin proportions  $P_j$  cannot exceed downstream basin proportions  $P_k$ .

$$w_k = \frac{n_k}{n_{k, system outlet}}$$

for all basins, k

A basin penalty  $w_k$  is applied that increases with the ratio of the number of basins  $n_k$  upstream of basin k, to the total number of basins in the watershed.

# **Riparian Objective Function:**

Maximize 
$$z = \sum_{i} A_{i} - \sum_{k} A_{k} w_{k}$$

For all users *i*, and all basins, *k* 

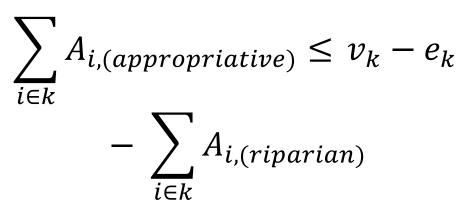
Maximize total user allocations  $A_i$  less the sum of downstream penalty  $w_k$  weighted basin allocations  $A_k$ .

# **APPROPRIATIVE FORMULATION**

# $0 \leq A_i \leq u_i$

for all users, *i* 

Each appropriative user's allocation  $A_i$  must be between 0 and her reported demand  $u_i$ 



for all users i, in all upstream basins k

Mass Balance: the sum of all appropriative allocations  $A_{i,appropriative}$  that are in basin k, must be less than or equal to available flow vk, less any environmental instream flow requirement  $e_k$ , less the sum of all upstream riparian allocations,  $A_{i,riparian}$ .

# **Appropriative Objective Function:**

Minimize 
$$z = \sum_{i} p_i (u_i - A_i)$$

for all users, *i* 

Minimize the difference between demand and allocation, or shortage,  $(u_i - A_i)$  weighted by the inverse of the priority of user *i*.

### **PRU and R-GPCD Calculation**

#### September 22, 2020

This document contains suggested methods for estimating Percentage Residential Use (PRU), and explains how daily residential per capita water use (R-GPCD) is calculated by Water Board staff. As of October 1<sup>st</sup>, 2020, the R-GPCD is automatically calculated in the reporting tool. The methodology outlined here has not changed since the initial guidance was developed for the emergency conservation regulations.

When estimating PRU, we recommend using billing data to determine the volume of water provided to residential customers as a percentage of Total Monthly Potable Water Production. In cases where billing periods are not based on calendar month, the urban water supplier should use discretion in selecting the most comparable and appropriate billing period. PRU, rather than residential use volume, is requested in the monthly conservation report because it can be calculated using the previous year's data if current billing data is not available.

### Example PRU Calculation: Using recent billing data to estimate PRU

Total Production (T): 1543.98 Acre-feet (AF)

Commercial Agriculture (C): 20 AF

Residential Use (R)<sup>1</sup>: 1001.42 AF

#### 1. Subtract Commercial Agriculture (if any) from Total Production Total Production, minus Agriculture (TPA) = T - CTPA = 1543.98 - 20 = 1523.98 AF

2. Divide Residential Use by (Total Production – Commercial Agriculture)

$$PRU = \frac{R}{TPA} \times 100$$
$$PRU = \frac{1001.42}{1523.98} \times 100 = 65.71\%$$

If you do not have billing data for the current reporting month, use last year's data (**BOTH** residential use and total potable production) for the month that corresponds to the reporting month. For example, if you do not currently have October 2020 billing data available, use October 2019 data. **This calculated PRU using last year's data should be entered in the "Preliminary" column when submitting a report.** 

<sup>&</sup>lt;sup>1</sup> When estimating "Residential Use," we recommend using billing data to determine the volume of water provided to residential customers. In cases where billing periods are not based on calendar month, the urban water supplier should use discretion in selecting the most comparable and appropriate billing period.

### **PRU and R-GPCD Calculation**

September 22, 2020

Once you have current billing data, re-calculate the PRU using current numbers and enter the new value in the "Final" column of the edited report.

Example PRU Calculation: Bi-Monthly Billing Cycle Initial Estimate

Total Production (T) Over Billing Cycle: 3002.15 AF

Commercial Agriculture (C) Over Billing Cycle: 35 AF

Residential Use (R) Over Billing Cycle: 1900.23 AF

Length of Billing Cycle: 61 days

Reporting Month: May

Days in May: 31 days

1. Subtract Commercial Agriculture (if any) from total production

2. Calculate Residential Use for Reporting Month (RM) and Total Production for Reporting Month (TPM)

$$TPA \text{ for } May (TPM) = \frac{TPA \times days \text{ in } May}{days \text{ in } billing \text{ cycle}}$$
$$TPM = \frac{2967.15 \times 31}{61} = 1507.90 \text{ AF}$$
$$R \text{ for } May (RM) = \frac{R \times days \text{ in } May}{days \text{ in } billing \text{ cycle}}$$
$$RM = \frac{1900.23 \times 31}{61} = 965.69 \text{ AF}$$

3. Divide Residential Use for Reporting Month by (Total Production – Commercial Agriculture) for Reporting Month

$$PRU = \frac{RM}{TPM} \times 100$$
$$PRU = \frac{965.69}{1507.90} \times 100 = 64.04\%$$

**Please note in the "Qualification" box that the billing data is bi-monthly.** As with the previous PRU calculation example, if you do not have billing data that encompasses the current reporting month, please use billing data from the previous year to estimate PRU and enter the value in the "Preliminary" column.

#### Example Residential Gallons Per Capita Daily (R-GPCD) Calculation

The updated reporting tool automatically calculates the monthly R-GPCD value. The calculation methodology is outlined below.

Original Units	Conversion Factor (CF) from Original Units to Gallons
Gallons (G)	1
Million Gallons (MG)	1000000
Hundred Cubic Feet (CCF)	748.052
Acre Feet (AF)	325851

Total Production (T): 1543.98 AF

Commercial Agriculture (C): 20 AF

#### Percentage Residential Use (PRU): 65.71%

Population (P): 69078 people

Month: May

Days in Month: 31 days

#### Conversion Factor (CF): 325851

1. Subtract Commercial Agriculture (if any) from Total Production

Total Production, minus Agriculture (TPA) = T - CTPA = 1543.98 - 20 = 1523.98 AF

2. Convert (Total Production-Commercial Agriculture) to Gallons, using the Conversion Factor

$$TPA$$
 in Gallons  $(TG) = TPA \times CF$ 

$$TG = 1523.98 \times 325851 = 496590407 G$$

 Multiply the Total Production Gallons by Percentage Residential Use to get Residential Use in Gallons

Residential Use in Gallons (RG) = 
$$TG \times \frac{PRU}{100}$$
  
RG = 496590407  $\times \frac{65.71}{100}$  = 326313708 G

4. Divide Residential Use by (Population x Days in Month) to get R-GPCD

$$R - GPCD \text{ for } May = \frac{RG}{P \times days \text{ in } May}$$
$$R - GPCD \text{ for } May = \frac{326313708}{690798 \times 31} = 152.38 \text{ GPCD}$$

### **PRU and R-GPCD Calculation**

September 22, 2020