D R A F T

Informational Order
Emergency Regulations Digest

December 3, 2015

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Title 23, Division 3, Chapter 2, Article 24, amend Section 879, subdivision (c) to read:

§ 879. Reporting

(c)(1) The Deputy Director may issue an informational order, as provided in paragraph (2), in any of the following circumstances:

(A) Upon receipt of a complaint that staff determines to merit investigation alleging interference with a water right by a water right holder, diverter or user;

(B) Where a water right holder, diverter or user asserts a right to divert under a pre-1914 or riparian right in response to an investigation, curtailment order or any notice of curtailment, and no Statement of Water Diversion and Use for such right was on file with the Board as of January 17, 2014;

(C) Where a water right holder, diverter or user fails to respond ~~responds~~ to an investigation, curtailment order or any notice of curtailment, or responds by asserting a right to divert under a contract or water transfer for which the Board has not approved a change petition and for which no record has been filed with the Board; or

(D) Upon receipt of information that indicates actual or threatened waste, unreasonable use, unreasonable method of diversion, or unlawful diversions of water by any water right holder, diverter or user.

(2) The Deputy Director may issue an order under this article requiring a water right holder, diverter or user to provide additional information related to a diversion or use described in (c)(1), including the claim of right; property patent date; the date of initial appropriation; diversions made or anticipated during the current drought year; basis or right and amount of water transfer not subject to approval of the Board or Department of Water Resources; or any other information relevant to authenticating the right or forecasting use and supplies in the current drought year.

(3) Any party receiving an order under this subdivision shall provide the requested information within thirty (30) days. The Deputy Director may grant additional time for submission of information supporting the claim of right upon substantial compliance with the 30-day deadline and a showing of good cause.

(4) The failure to provide the information requested within 30 days or any additional time extension granted 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.

(5) Orders issued under previous versions of this subdivision shall remain in effect and shall be enforceable as if adopted under this version. The provisions of Article 12 of this Chapter (commencing with section 768) shall govern petitions for reconsideration of orders issued under this subdivision.

(6) The Deputy Director may delegate the authorities under this subdivision to an Assistant Deputy Director for the Division of Water Rights.

Authority: Sections 1058 and 1058.5, Water Code.
Reference: Sections 100, 183, 186, 187, 275, 348, 1050, 1051, 1058.5 and 1846 Water Code.

D R A F T

FINDING OF EMERGENCY

The State Water Resources Control Board (State Water Board or Board) finds that an emergency exists due to severe drought conditions and that adoption of the proposed emergency regulation is necessary to address the emergency. Specifically, immediate action is needed to effectively and efficiently administer and enforce the state's water rights system in light of significant reductions in water availability due to the current drought.

On January 17, 2014, Governor Brown declared a drought state of emergency. On March 1, 2014, Governor Brown signed a drought relief package, Senate Bill 104 (Statutes 2014; Chapter 3; Committee on Budget and Fiscal Review), to, among other things: provide funding to improve conservation and emergency supplies; reduce fire risk and increase fire-fighting capabilities; and expand the State Water Resources Control Board's (State Water Board or Board) authority under Water Code section 1058.5 and increase penalties for unauthorized diversion of water. In addition, the drought declaration suspended California Environmental Quality Act (CEQA) review for many of the state's responses to the drought. On April 25, 2014, the Governor issued a Proclamation of a Continued State of Emergency to strengthen the state's ability to manage water and habitat effectively in drought conditions. The April 2014 Proclamation ordered that the provisions of the January 2014 Proclamation remain in full force and also added several new provisions. On December 22, 2014, in light of the continued lack of rain, Governor Brown issued Executive Order B-28-14, which extended the CEQA suspension for drought emergency regulations through May 31, 2016.

On April 1, 2015, the Governor issued Executive Order B-29-15 (Executive Order) to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water. The Executive Order finds that the on-going severe drought conditions present urgent challenges across the state including water shortages for municipal use and for agricultural production, increased wildfire activity, degraded habitat for fish and wildlife, threat of saltwater contamination, and additional water scarcity if drought conditions persist. The Executive Order confirms that the orders and Proclamations, April 25, 2014 Proclamation, and Executive Orders B-26-14 and B-28-14, remain in full force and effect.

On November 13, 2015, the Governor issued Executive Order B-36-15 which continues the orders and provisions contained in the January 17, 2014 and April 25, 2014 Proclamations and Executive Orders B-26-14, B-28-14, and B-29-15, with amendments.

On January 23, 2015, the State Water Board issued a Notice of Surface Water Shortage and Potential for Curtailment of Water Right Diversions. The notice advised that if dry weather conditions persist, the State Water Board will notify water right holders in critically dry watersheds of the requirement to limit or stop diversions of water under their water right, based on their relative water right seniority.

In 2014 and 2015, the State Water Board determined that water demands exceeded available water supply in specific critically dry watersheds. Water right holders, diverters and users were advised to stop diversion pursuant to certain priorities of right because information available to

the State Water Board indicated that there was insufficient natural flow to support diversions under those priorities of right. Diversion pursuant to a claim of right when there is no available water under the priority of the right is an unauthorized diversion and use and is subject to enforcement by the State Water Board.

As of November, 2015, the State Water Board mailed Notices of Surface Water Shortage and Potential for Curtailment of Water Right Diversions to over 9,000 water right holders, diverters or users. The notifications informed diverters that due to dry hydrologic conditions there was insufficient surface flow to divert under their priority of right. Continued diversions pursuant to rights covered by the notices under such conditions would be unauthorized.

Emergency Regulation Adoption

Water Code section 1058.5 grants the State Water Board the authority to adopt emergency regulations in certain drought years in order to: ”prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation, to require curtailment of diversions when water is not available under the diverter’s priority of right, or in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports.”

Emergency regulations adopted under Water Code section 1058.5 remain in effect for up to 270 days. The finding of emergency is not subject to review by the Office of Administrative Law.

In this document, the State Water Board is providing the necessary specific facts demonstrating compliance with Government Code section 11346.1, subdivision (b)(2) and Water Code section 1058.5, subdivision (a).

Government Code section 11346.1, subdivision (a)(2) requires that, at least five working days prior to submission of the proposed emergency action to the Office of Administrative Law, the adopting agency 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 submission of the proposed emergency to the Office of Administrative Law, the Office of Administrative Law shall allow interested persons five calendar days to submit comments on the proposed emergency regulations as set forth in Government Code Section 11349.6.

The information contained within this finding of emergency provides the information necessary to support the State Water Board’s emergency rulemaking under Water Code section 1058.5 and also meets the emergency regulation criteria of Government Code section 11346.1 and the applicable requirements of section 11346.5.

Evidence of Emergency

The U.S. Drought Monitor has classified almost the entire state of California as experiencing severe to exceptional drought conditions. In most years, California receives about half of its precipitation in the months of December, January and February, with much of that precipitation

falling as snow in the Sierra. Only a handful of large winter storms can make the difference between a wet year and a dry one. In normal years, the snowpack stores water during the winter months and releases it through melting in the spring and summer to replenish rivers and reservoirs. However, warm and relatively dry weather conditions this year have reduced the amount of snowpack in California's mountains. As of May 1, 2015, Sacramento Region cumulative precipitation was 56 percent of average for that date (8-Station Index). However, most of that precipitation fell as rain, and Northern Sierra snow water content remained extremely low, at 3 percent of average for that date. Similarly, Central and Southern Sierra snowpack is at 2 and 0 percent of average, respectively. The Sierra snow water content is the lowest in recorded history. Water levels in almost all of the state's key water supply reservoirs were significantly below average, and groundwater levels have fallen considerably in many basins throughout the state. Due to the dry conditions at the start of 2015, on January 23, 2015, the State Water Board issued a Notice of Surface Water Shortage and Potential for Curtailment of Water Right Diversions.

As of July, 2015, the State Water Board sent Notices of Surface Water Shortage and Potential for Curtailment of Water Right Diversions to over 9,000 water right holders, diverters or users in the Sacramento-San Joaquin Rivers watershed and Delta, and in the Scott River watershed in Siskiyou County. Some of the water rights affected by these notices included senior water rights. In 2015, the State Water Board conducted roughly 1,200 field inspections to determine compliance with the State's water rights system during this severe drought emergency. A similar program was conducted in 2014.

California is currently in the fourth year of drought. Water year 2012 was categorized as below normal, calendar year 2013 was the driest year in recorded history for many parts of California, water year 2014 was the third driest in the 119 years of record, and water year 2015 had the lowest snowpack on record. In May 2013, Governor Edmund G. Brown, Jr. issued Executive Order B-21-13, which directed the State Water Board and the Department of Water Resources (DWR), among other things, to take immediate action to address dry conditions and water delivery limitations. In December 2013, the Governor also formed a Drought Task Force to review expected water allocations and the state's preparedness for a drought.

Governor Brown's January 17, 2014 Drought Emergency Proclamation, among other things, recognized that changes to water supplies and diversions might be necessary to protect salmon and steelhead, to maintain water supplies, and protect water quality. The Proclamation ordered the State Water Board to "put water right holders throughout the state on notice that they may be directed to cease or reduce water diversions based on water shortages," which the State Water Board did on January 17, 2014. The notice encourages advanced conservation planning and suggests that water right holders look into the use of alternative water supplies, such as groundwater wells, purchased water under contractual arrangements and recycled wastewater. On February 18, 19 and 26, 2014, the State Water Board held public workshops to discuss the drought and responses to it. The workshops included staff presentations on potential curtailments to protect senior water right holders.

On March 1, 2014, Governor Brown signed legislation to assist drought-affected communities and provide funding to better manage local water supplies. The drought relief package, among

other things, provided funding to improve water conservation, emergency supplies, reduce fire risk, and increase fire-fighting capabilities. The drought relief package also expanded the State Water Board's existing emergency regulation authority under Water Code section 1058.5 and made statutory changes to ensure existing water rights laws are followed, including streamlining authority to enforce water rights laws and increasing penalties for illegally diverting water during drought conditions. (SB 104) On April 25, 2014, Governor Brown issued a Proclamation of a Continued State of Emergency related to the drought. The Proclamation finds that California's water supplies continue to be severely depleted and, among other things, suspends environmental review under the California Environmental Quality Act (CEQA) for certain activities, including adoption of emergency regulations by the Board pursuant to Water Code section 1058.5.

On December 22, 2014, Governor Brown issued Executive Order B-28-14 based on the continued severe drought conditions, which extended the suspension of CEQA through May 31, 2016.

On April 1, 2015, the Governor issued Executive Order B-29-15 (Executive Order) to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water. The Executive Order finds that the on-going severe drought conditions present urgent challenges across the state including water shortages for municipal use and for agricultural production, increased wildfire activity, degraded habitat for fish and wildlife, threat of saltwater contamination, and additional water scarcity if drought conditions persist. The Executive Order confirms that the orders and Proclamations, April 25, 2014 Proclamation, and Executive Orders B-26-14 and B-28-14, remain in full force and effect.

In April 2014, the State Water Board began posting information regarding lack of water availability and anticipated supply shortfalls for watercourses in several watersheds. Analyses for the Sacramento-San Joaquin River watershed, the Tulare Lake Basin, the Russian River watershed and the Eel River watershed were made available in 2014. The analyses for the Sacramento-San Joaquin Rivers and Scott River watersheds continued to be updated through 2015. The State Water Board also met with stakeholder groups from the various watersheds to share data. These meetings assisted the State Water Board in quality control of its demand data and assisted in a more real-time temporary lifting of curtailments to allow diversions during storm event in November of 2014 and November of 2015.

As recognized in Water Code section 106.3, access to water for human consumption, cooking and sanitation is a basic human right. Cities, counties and water districts across the state have enacted drought emergency measures to conserve supplies. Fire risk is also greatly increased throughout the state due to the drought. Preliminary data from CAL FIRE show 6,227 fires burned 307,592 acres in California between January 1, 2015 and November 28, 2015. The five-year average for the same interval of time is 4,439 fires and 109,587 acres burned.

Need for the Regulation

Immediate action is needed to prevent the waste and unreasonable use of water and effectively and efficiently administer and enforce the State's water rights system in light of limited water availability during the ongoing drought. The State Water Board will likely need to curtail some junior water diversions in 2016 when natural flows decrease, making water only available for: (1) senior water right users; (2) minimum flows for migration of state and federally listed fish in priority water bodies; and (3) minimum health and safety needs.

In addition, the State Water Board needs an enforceable mechanism to investigate drought-related water right matters, including (1) complaints of interference with water rights by other water right holders, diverters or users; (2) claims of previously unasserted riparian or pre-1914 right in response to curtailment notices or investigations; (3) claims of a right to divert under a contract or water transfer not previously approved by or filed with the Board; (4) lack of response to a curtailment notice or information request and (5) receipt of information that indicates actual or threatened waste, unreasonable use, unreasonable method of diversion, or unlawful diversions.

In order to best accomplish these activities, the State Water Board needs access to better and more current information regarding water rights, water use and water needs in a process that allows the Board to use the information during the drought.

On March 17, 2015, the State Water Board amended and re-adopted emergency regulations regarding Informational Order authority during drought (regulation amending section 879, subdivision (c)). The regulation was reviewed by OAL and went into effect on March 27, 2015. The regulation establishes requirements for water right holders to provide information in specific circumstances. The 270-day period for the emergency regulations ends on December 23, 2015.

The State Water Board issued over 1,000 informational orders in 2015. The State Water Board was able to use the 2015 monthly diversion data available from these orders to refine its diversion demand which enabled an earlier release of curtailments notices, allowing diversions to begin in November 2015. The informational orders also resulted in enforcement actions initiated to prevent further unauthorized diversions.

Water Rights Framework

In order to best understand the need for the regulation and how it will be applied, a very generalized overview of water rights will be helpful.

Two main types of water rights constitute the vast majority of diversions in California: riparian rights and appropriative rights. A riparian water right generally provides a right to use the natural flow of a water body to which the land is riparian. Broadly speaking, riparian land is land that touches a lake, river, stream, or creek. Water can only be diverted under a riparian right

when that water is used on the riparian parcel on land that drains back to the lake, river, stream, or creek from which the water was taken. Riparian rights remain with the property when it changes hands, although parcels severed from the adjacent water source generally lose their right to the water, absent indicia of intent to the contrary at the time of severance. Only the natural flow of water can be diverted under a riparian right. Water that is imported into a watershed from another river, stream, or creek cannot be used under a riparian right. Water cannot be stored during a wet time for use during a drier time under a riparian right. Neither can water released from an upstream storage reservoir be used by a downstream user under a riparian right. Riparian rights generally have a senior (higher relative priority) right to natural flows as against appropriative rights, and water must be available to fulfill the needs of all riparians before an appropriator may divert. This is not always the case, however. An appropriative right predating the patent date of riparian lands has seniority relative to the riparian right. The priorities of riparian right holders are correlative vis-à-vis each other; during a drought all share the shortage among themselves. Because a riparian right only allows the use of natural flow, it is possible to have water available under a riparian right during wetter years or months and not during drier years or months when natural flows are no longer available, including cases where stream flow is being supported by releases of previously stored water. This is particularly the case in dry years such as the current drought.

On the other hand, an appropriative water right is generally needed for water that is diverted for use on non-riparian land or to store water for use when it would not be available under natural conditions. An appropriative right holder can use natural flow, and non-natural flows like imported water from other watersheds, or irrigation return flows. Prior to 1914, appropriative water rights were acquired by putting water to beneficial use. The exact priority date of a pre-1914 appropriation can vary depending on the circumstances, but depends on either posting notice under the then applicable procedures of the Civil Code or otherwise clearly initiating the means necessary to divert or actually diverting. An appropriative water right that was acquired before 1914 is called a pre-1914 appropriative water right and is not subject to the permitting authority of the State Water Board. Appropriative water rights obtained after 1914 require a water right permit and subsequently a license issued by the State Water Board or its predecessors. Similar to pre- 1914 water rights, the seniority of post-1914 water rights is based on a first-in-time concept with the date of seniority typically established by the date of the application for the permit. A water right permit confers the State Water Board's (or its predecessor's) authorization to develop a water diversion and use project. The right to use water is obtained through actual beneficial use of water within the limits described in the permit. A water right license is issued once full beneficial use of water has been made and other conditions of a water right permit are met and constitutes the confirmation by the State Water Board (or its predecessor) of the water right. As between appropriators, junior water right holders may only divert where there is sufficient water to completely fulfill the needs of more senior appropriators.

When the amount of water available in a water source is not sufficient to support the needs of existing water right holders, junior appropriators must cease diversion in favor of more senior rights. However, it is not always clear to a junior diverter whether there is sufficient flow in the system to support their diversion and senior water uses downstream. It can also be difficult to

determine whether releases of stored water are abandoned flows that may be diverted or whether those flows are not available for diversion because they are being released for downstream purposes. Similarly, it can be difficult for a riparian to know if water is natural flow or stored or imported water and whether, when and to what extent correlative reductions in water use are needed due to the need to share limited supplies amongst riparians. As part of administrating water rights, the State Water Board may curtail water diversions based on California's water rights priority system. The State Water Board has continuing authority under Water Code sections 100 and 275 to enforce the requirements of the California Constitution, Article X, § 2, which directs that the water resources of the state be put to beneficial use to the fullest extent, and that water not be wasted or unreasonably used. It further provides that rights to the use of water are limited to such water as is reasonably required for the beneficial use served, and does not extend to the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of the water. The reasonable use doctrine applies to the diversion and use of both surface water and groundwater, and it applies irrespective of the type of water right held by the diverter or user. (*Peabody v. Vallejo* (1935) 2 Cal.2d 351, 366-367.) What constitutes an unreasonable use, method of use, or method of diversion depends on the facts and circumstances of each case. (*People ex rel. State Water Resources Control Board v. Forni* (1976) 54 Cal.App.3d 743, 750.) Under the reasonable use doctrine, water right holders may be required to endure some inconvenience or to incur reasonable expenses. (*Id*. at pp. 751-752.)

In order to implement the water rights priority system, the State Water Board may (a) investigate all streams, stream systems, portions of stream systems, lakes, or other bodies of water; (b) take testimony in regard to the rights to water or the use of water thereon or therein; and (c) ascertain whether or not water heretofore filed upon or attempted to be appropriated is appropriated under the laws of the State. (Water Code § 1051.) This investigative authority extends to diversions under claim of pre-1914 or riparian right, for purposes of determining whether or not such diversions are authorized. (See, e.g., *Young v. SWRCB* (2013) 219 Cal.App.4th 397.)

Diverting water when it is unavailable under your priority of right constitutes an unauthorized diversion and a trespass against the state. Violations could be subject to an Administrative Civil Liability (ACL) under the Water Code, or referred to the Attorney General. Administrative cease and desist orders and court injunctions may also be issued to require that diversions stop. An ACL for an unauthorized diversion may impose liability up to $1,000 a day plus $2,500 per acre foot of water that is illegally diverted for violations during the current drought. The State Water Board may also issue administrative cease and desist orders and request court injunctions to require that diversions stop.

Need for an Information Order Regulation During the Drought Emergency

Enforceable Information Gathering

Emergency regulations are needed to protect authorized water uses from unauthorized diversions and to increase the usability and accuracy of the information the Board relies upon in

determining and communicating whether water is available to certain diverters during the drought.

Due to the severity of the drought, the State Water Board in 2015 issued water shortage notices (also called curtailment notices) to the holders of more than 9,000 water rights due to lack of supply. Appendix 1 lists, and has links to, the water shortage notices issued by the Board through November, 2015, including:

- **Sacramento River and Delta – Water Shortage Notice Sent to 5,992 rights**
  - May 1, 2015: All Post-1914 rights (concurrent with term 91 curtailment of 88 rights).
  - June 12, 2015: All appropriative claims of right with a priority date between 1903 and 1914.
  - September 18, 2015: 238 claims of right with a priority date between 1903 and 1914 in the Sacramento and Feather River watersheds and the Delta received a notice that there was currently water available to meet their reported demand. Water shortage notifications stayed in effect for the remainder of the 1903-1914 claims in the Yuba, American, and San Joaquin watersheds.
  - October 27, 2015: Parties claiming a right with a priority date between 1903 and 1914 in the American River and Yuba River watersheds received a notice that there was currently water available to meet their reported demand, to remain in effect until further notice.
  - November 2, 2015: Pre-1927 appropriative water right holders were notified that water is available to meet their reported demand, to remain in effect until further notice.
  - November 2, 2015: A temporary opportunity to divert was issued to all Post-1914 water rights. This notice remains in effect until further notice.

- **San Joaquin River – Water Shortage Notice Sent to 3,026 rights**
  - April 23, 2015: All Post-1914 appropriative rights.
  - June 12, 2015: All appropriative claims of right with a priority date between 1903 and 1914.
  - Additional sub-watershed water shortage notices sent to:
    - June 26, 2015: Appropriative claims of right in the Upper San Joaquin watershed[1] with a priority date senior to 1903.
    - June 26, 2015: Appropriative claims of right in the Merced watershed with a priority date between 1858 and 1902.
    - June 26, 2015: Four appropriative claims of right in the Tuolumne River watershed.
  - October 27, 2015: Pre-1914 claim of right holders who received water shortage notices in June 2015 were notified that there was water available to meet their reported demand, and wil remain in effect until further notice.

[1] The Upper San Joaquin watershed includes the area upstream of Friant Dam down to the confluence with the Merced River.

- November 2, 2015: A temporary opportunity to divert was issued to all Post-1914 water rights.

  This notice remains in effect until further notice.

- **Scott River – Water Shortage Notice Sent to 204 rights**
  - April 23, 2015: All Decreed Surplus Class Rights, Post-1914 rights, and Priority class 2 water rights in Schedule D4.

Many diverters simply ignored the 2014 curtailment notices, and did not return Curtailment Certification Forms.[2] As of January 8, 2015, out of the 9,463 curtailment notices issued in 2014, the State Water Board received 3,588 Curtailment Certification Forms. This is a response rate of 38 percent, although the responses represent approximately 84 percent of the face value of the curtailed rights. However, of those Curtailment Certification Forms returned, the supplies curtailed only totaled approximately 8.3 percent of the face value of the curtailed rights. In most cases, the diverter continued diversions, claiming underlying senior pre-1914 or riparian rights. Division of Water Rights staff conducted approximately 950 curtailment inspections from June 6, 2014, to November 11, 2014. A substantial number of these inspections revealed continued diversions under claim of senior rights. In many cases, the diverters claiming senior rights had not filed a Statement of Diversion and Use. A permit or license holder is not obligated to file a statement of water diversion and use when all of their diversions can be reported under the permit or license, but lacking this prior right claim information affects the State Water Board's analysis of availability of water. For 2015, the response rate to the compliance certification form was also 38%, and the number of inspections and findings of prior right claims were nearly the same as 2014.

As the drought emergency continues, supplies in 2016 could be just as limited as 2014 and 2015. It is reasonable to project that, if curtailment notices are issued, a substantial number of diverters will again fail to respond to the curtailment notices, and, of those that do respond, a substantial number will again claim underlying senior rights.

Although the Board may investigate and inspect such diverters and claimed senior diversions under Water Code section 1051, Water Code section 1058.5 recognizes the need for a streamlined, enforceable order process to quickly receive information during drought emergencies. Accordingly, the Board first adopted section 879, subdivision (c), in 2014, and then re-adopted and amended it to extend to more circumstances in March of 2015. In 2015, the Board issued informational orders under existing section 879, subdivision (c) to diverters in

[2] Appendix 2 is the Curtailment Certification Form that recipients of these notices were required to submit within seven days. The Board's July 15, 2015 Partial Rescission of April, May and June 2015 Curtailment Notices and Clarification of State Water Board Position RE: Notices of Unavailability of Water for Those Diverting Water in the Sacramento River Watershed, San Joaquin River Watershed and Delta, and Scott River (Clarification Notice) clarified that diverters receiving the notices were not required to submit the Curtailment Certification Form and that any failure to do so would "not constitute a basis for the State Water Board's initiation of any enforcement action."

multiple watersheds, including the China Creek watershed, the Sacramento River and San Joaquin River watersheds and the Delta. The Board also issued informational orders to individual diverters.[3] The response rate to Orders WR 2014-0030-DWR and WR 2015-0002-DWR were significantly higher than the response rates to the 2014 and 2015 curtailment notices likely due to the potential for immediate enforcement. Order WR 2014-0030-DWR was issued to 23 diverters along a limited stretch of the San Joaquin River, of whom approximately 67% complied with the order at least in part. Notices of Cease and Desist Orders and Administrative Civil Liability Complaints have and will be issued for violations. Order WR 2015-0002-DWR was issued to 1,064 statement holders claiming pre-1914 or riparian rights in the Sacramento, San Joaquin and Delta watersheds. As of March 9, 2015, approximately 93% submitted information in response.

In January 2015, the Division of Water Rights prepared the State Water Resources Control Board Dry Year Program Report, which specifically identified the lack of compliance with information requests as a fundamental impediment to an effective curtailment and inspection process.[4] The emergency regulation addresses this issue in the current drought emergency, and remains vital for continued administration of water rights.

The State Water Board this year proposes to implement the water shortage notices and notice and inspection process generally used in 2014 and 2015, bolstered by informational order authority under the proposed section 879, subdivision (c). Specifically, the proposed section 879, subdivision (c) will provide the Board with enforceable tools to investigate:

1. Complaints alleging interference with a water right by a water right holder, diverter or user (not just pre-1914 or riparian claimants);
2. Parties claiming previously unasserted senior rights in response to an investigation, curtailment order or curtailment notice;
3. Parties claiming unverified and previously unnoticed water transfers or contract purchases; or
4. Threats of waste, unreasonable use, unreasonable method of diversion, unlawful diversion of water by any water right holder, diverter or user; or
5. Parties failing to respond to a request for information.

In any of these circumstances, the Board may issue an informational order requiring the water right holder, diverter or user to provide additional information related to a diversion or use, including:

1. The claim of right;

[3] The Board held a public workshop on September 24, 2014, to receive comments and discuss the process the Board should use under existing section 879, subdivision (c) to address allegations of interference with water rights and claims of unauthorized diversion of stored water within the central and southern Delta. Order WR-2015-0002-DWR addresses these complaints and allegations, although the geographic scope of the Order goes well beyond the central and southern Delta in part due to issues discussed at the public workshop.

[4] The Dry Year Program Report is available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/dryyear_report/docs/2015dypr.pdf

2. Property patent date;
3. Date of initial appropriation;
4. Diversions made or anticipated during the current drought year;
5. Compliance with transfer law if the transfer diversion was not subject to approval of the Board or the Department of Water Resources; or
6. Any other information relevant to authenticating the right or forecasting use and supplies in the current drought year.

The proposed emergency regulation solves the reporting compliance issues identified above by providing the Board greater assurance that it will have access to better information to, among other things, investigate complaints or other information suggesting a lack of compliance with water law, and to issue and refine water shortage notifications.

Curtailment Analysis Methodology

Because the Board proposes to continue using the curtailment notice process applied in 2014 and 2015, this section describes the methodology underlying that process. The general analysis for determining the necessity for curtailment of water rights in any watershed compares the current and projected available water supply with the total water right diversion demand. Each of these is described further below.

Projected Supply

When available, the Board relies on the technical expertise and data produced by DWR in calculating projected supplies. DWR forecasts unimpaired runoff, or full natural flows, for certain watersheds in its Bulletin 120 (DWR, 2014) via monthly updates from February through May of every year. The full natural flow, as defined by DWR, is the natural water production of the river basin, unaltered by upstream diversions, storage, or export or import of water to or from other watersheds. This forecasted runoff data is uncertain. To address the uncertainty, DWR provides the forecasted supply data in the form of “levels of exceedance” or simply “exceedance” to show the statistical probability that the forecasted supply will actually occur. The exceedance is simply the percent of the time that the actual flow is expected to exceed the projected flow. The 90 percent exceedance hydrology assumes inflows from rainfall and snowmelt at levels that are likely to be met or exceeded by actual flows with a 90 percent probability, or in other words, there is a ten percent or less chance of actual conditions turning out to be this dry or drier. The 50 percent exceedance is the 50/50 forecast-- it is equally likely to be drier or wetter than projected.

For 2015, State Water Board staff refined the supply in the Sacramento, San Joaquin and Delta by incorporating additional sources. In the Sacramento River watershed, additional unimpaired flows from the smaller tributaries were added using DWR’s 2007 Unimpaired Flow Data prepared by the Bay Delta Office. A similar addition, using the same DWR publication, was made to the San Joaquin River watershed along with a monthly return flow allowance based on the return flow percentages outlined in the 1977 Drought Year Report. Lastly, after consulting with stakeholders representing Delta interests, a 40% adjustment to supply was added to the

Delta diverters to account for Delta hydrology where water is pumped from the islands resulting in an estimated net 60% consumption.

The State Water Board also uses flow forecasts by the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service using information available on the California Nevada River Forecast Center webpage (http://www.cnrfc.noaa.gov/; NOAA, 2015). If forecast data from these entities are unavailable for a particular watershed or river, the Board may look to other sources of data, such as available stream gage data. The Board may also look at these other data sources as a quality control-check against projected supply. Unlike full natural flow data, stream gage data shows the flow in rivers and streams after the effects of diversions, and includes the effects of both diversions to and releases from storage.

There are five on-line data sources available that can be used to analyze stream and reservoir conditions, including the California Data Exchange Center (CDEC); the United States Geological Survey (USGS) National Water Information System (NWIS) Surface Water Data for California; the USGS California Water Science Center; Reclamation's Mid Pacific Region Central Valley Operations Office; and the US Army Corps of Engineers Water Control Data System. Appendix 3 describes each of these data sources in more detail and provided links to the respective databases. Appendix 4 shows a list of stations for which full natural flow data is reported in CDEC and Appendix 5 has an expanded discussion of CDEC full natural flow data and illustrative data for 2014-2015. Appendix 6 has a list stations (and links to data) for which of real-time flow data is available in the following watersheds. The number in parentheses below is the number of known gages in each watershed:

• Sacramento River (175)

• Mokelumne River/Eastside Streams (23)

• San Joaquin River (84)

• Tulare Basin (32)

• Klamath River (33)

• Eel River (9)

• Napa River (2)

• Russian River (12)

• Salinas River (10)11

Gages, high in a watershed in particular, can be used to calculate the water available for diversion downstream. These gages, combined with reservoir operation data, can also be used to identify streams with flows augmented by releases of stored water from reservoirs.

Estimated Diverter Demand

Appropriative post-1914 water rights typically include a "face value" with an authorized rate of diversion, an amount authorized to be collected to storage in any one year, if applicable, and a total amount authorized to be diverted in any one year. These amounts are further constrained by an authorized season of diversion, point of diversion, purpose of use and place of use. All water rights are limited to the amount that can be put to beneficial use in accordance with the terms of the right. These amounts are all maximum allowable diversion amounts[5] that can be diverted only when supplies are available under the specific priority of each water right. On average, water users generally use much less water than the maximum amount included in their water rights because they don't have a consistent need for the water, because they have multiple rights for the same diversion[6], and other reasons. Because of these factors the State Water Board does not usually use these maximum amounts to estimate demand for water. Instead, the Board has historically used estimated amounts, and now uses monthly reported water diversion and use data provided by water right holders that is corrected for known errors. This data is reported to the State Water Board under penalty of perjury by each water user, and should represent the actual amounts of water diverted under each water right. The data is reported in monthly volumes and can be directly compared with the monthly supply projections. Although the data is reported for previous years' diversions, these amounts have reasonable seasonal distribution and provide a better estimate of maximum likely diverter demand under the water right than the face value of a water right.

Legislation was passed in 2009 strengthening the requirement that almost[7] all diverters claiming a riparian or pre-1914 water right file a Statement of Diversion and Use (Statement) with the State Water Board and report the amount of water they divert. (Wat. Code, § 5100 et seq.) Water Right Permit and License holders were already required to report their diversion amounts to the State Water Board. Changes to the California Code of Regulations require diversion data by all diverters to be reported to the State Water Board using the Board's online reporting system. (Cal. Code Regs., tit. 23, § 910 et seq.) These changes also modified the reporting cycle for Licensees from every three years to annually. However, those reporting diversions on Statements were still only required to report every three years. The year 2010 is the first year diversion data was reported to the Division in the online system. Due to the tri-annual reporting cycle of Statement holders, reporting of 2010 water use was only completed in the 2013 reporting year. This means that the Board does not necessarily have the most up-to-date diversion information in any year.

Because the water use information reported to the Board is self-reported, staff reviews the data for obvious errors before using the information in any curtailment analysis. Adjustments to the

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[5] Many permitted and licensed irrigation and municipal uses express a maximum rate of diversion as a 30-day average. Often, the equivalent 30-day amount can be taken at a higher rate in a shorter time period, provided there is no injury.

[6] Some diversions require more than one water right: for example, a mixed use reservoir diversion will require separate rights for non-consumptive hydropower use and consumptive irrigation or municipal use.(See Cal. Code Regs. tit. 23, sec. 686,) Other times, a diverter claiming a riparian or pre-1914 water right may file an application with the State Water Board out of uncertainty whether the right has been maintained or confusion over the extent to which the right applies,

[7] The requirements include minor exceptions for certain small diversions, and for waters otherwise being reported. (Wat. Code § 5101.)

reported use data are made where necessary, and as staffing permits, to develop the best available estimation of demand in the watershed. Adjustments include: 1) removal of water use reported under water rights authorizing direct diversion for power, when that water is returned to the stream in full; 2) incorrect units reported which often result in reporting diversion amounts far in excess of right; and 3) correcting obvious reporting errors such as reporting the same quantity of water as having been diverted under multiple rights. Demand data can then be organized into watersheds, geographic location and priority and compared to available estimated supplies. The Board generally uses its electronic water rights information management system (EWRIMS) database of water rights to determine water right priority dates (EWRIMS, 2014), but may also use other information as appropriate. This information is used to identify and prioritize demand estimates to determine which water users require curtailment given existing supplies.

In 2015, State Water Board staff improved the demand numbers used in the supply and demand analysis by either using an average reported demand or actual 2014 demand data provided in advance of the July 1 reporting deadline through an informational order. Select riparian and pre-1914 claims of right who represent the top 90% of demand in the Sacramento and San Joaquin watersheds were required, through Order WR 2015-0002-DWR, to provide their 2014 and projected 2015 demand by early March 2015 and provide monthly updates during 2015. With the actual 2014 and projected 2015 demand data provided as the result of the informational order, staff was able to compare the forecasted supply with the demand data for the top 90% of diverters to better gage when water shortage notices should be issued. In addition, with the monthly reported use updates provided in response to WR 2015-0002-DWR, staff was able to forecast future demand reductions based on past month's use trends which resulted in earlier release dates for diverters than 2014.

Other Information

The Board can also rely upon other sources of information to refine a curtailment, but for the reasons explained below in the curtailment projection analysis section, much of this information may be of limited value without first curtailing diversions. Some other types of information the Board may rely upon include:

• Releases of stored water - any water released from storage for downstream beneficial uses, including meeting water quality or flow requirements, is not available for diversion by other water right holders, regardless of priority, unless the diverter has a contract for that water, or the released water has been abandoned, and the diversion is appropriative.

• Water supply contracts - terms of water supply contracts define the amounts of water that can be diverted.

• Wastewater discharges are not available for diversion by other water right holders, regardless of priority, unless the diverter has a contract for the discharges, or the discharges have been abandoned and the diversion is appropriative.

• Return flows – unless the return flows are from natural flow, which, as described below, is less likely in drought years, such flows are unavailable for riparian right holders.

• Projected 2015 use estimates by water right holders for field fallowing or conservation.

• Observations of Board staff in conducting inspections of water rights that have been curtailed. Inspections provide important information on tributary stream flow conditions, especially on ungaged streams that may lose continuity to lower, gaged, water bodies.

• Historic water use reports, for water right holders that failed to report diversions in recent years.

• Water transfers and Section 1707 petitions for instream beneficial uses.

• Permit terms and conditions that provide storage releases for instream beneficial uses.

• Adjudications and State Water Board Decisions and Orders that may provide information regarding some riparian and pre-1914 right holders.

The Delta watershed has more unimpaired flow and real time stream and reservoir gage information than much of the rest of the State, and it provides a good illustration of how such information can be used to assess water supply in large and complicated watersheds. Schematics of some of the data that can be used to determine water supply in the Sacramento and San Joaquin River watershed are shown in appendices 7 and 8, respectively. This information can be used to determine streamflows along specific river reaches in a larger watershed, and thereby allow the Board to adjust the timing of initial curtailment notices. The detailed real-time information, based on flow changes that result from reduced diversions in response to curtailments, can also be used to either increase or decrease the extent of curtailment limits. Other, generally less complex, watersheds throughout the state have less detailed information, but many have similar interrelationships between reservoirs, storage releases from reservoirs, and instream flow measurements. All of this information could, of course, be improved.

Curtailment Projections Analysis

Supply and demand data may be compared to determine when, and to what priority level, curtailments should occur. Demand data is first sorted by priority date to create a running list of demand data that starts with the most senior water right holders. Demand groupings for riparian, pre-1914, and post-1914 water rights are tallied to create different levels of demand to compare against projected, or observed, available supply. The groupings are developed based on the available supply and the need to refine what priorities of water rights require curtailment. These demand levels include the quantity of water needed to satisfy the demand under each priority level for each month. These demand levels may then be plotted against the monthly quantities of forecasted supply to create a graphical representation of supply and demand. The point at which the supply curve and demand curves intersect indicates the initial determination of what water right priority levels need to be curtailed at that time. Appendix 9 is an example of a supply and demand curve for the Sacramento River watershed. Other supply/demand curves are located on the Division of Water Rights webpage at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/analysis/

This initial determination may be refined to take into account return flows of water diverted from the watercourse. This additional quantity of water could change the priority level at which curtailments should occur. Specifically, the addition of return flows could mean that the priority under which a water right holder may divert may be lower (more junior) than the initial estimate and fewer water right holders may need to be curtailed than under the initial estimate. Other potential modifications to the initial curtailment numbers could show that the initial curtailment does not curtail enough water rights. In many parts of the state, groundwater elevations have been sufficiently lowered so that rivers and streams receive little or no groundwater accretions. In fact, instead of being a gaining stream with groundwater accretions, streams flowing over areas with lowered groundwater tables can lose surface water to groundwater. Rather than rely upon imperfect estimates of water supply, water demand, return flows from diverted water, and other system complexities, curtailments will be adjusted based on real time monitoring of hydrologic conditions as described in the next section.

In no case, however, is a riparian water right holder entitled to divert water other than natural flow. Unlike appropriators, riparian water right holders are not entitled to abandoned flow unless the source of the return flow itself was from natural flow. In many stream systems under the current severe drought conditions it is unlikely that there will be natural return flows as there already is no natural flow in the stream. Similarly, flow releases may be required at certain locations as a condition of a water right permit or license or a water quality certification for a hydroelectric project, or as an agreement to satisfy senior water rights. This water too, may be available to appropriative water right holders downstream of this flow but not available to riparian right holders.

In a watershed that has not undergone any type of hydro-modification, such as: 1) installation of dams; 2) diversions from surface water; or 3) groundwater pumping in adjacent aquifers, any water that remains in rivers and streams after the end of the rainfall season comes from either melting snow or groundwater accretions. However, most watersheds in California have undergone at least some type of hydro-modification. Given increased losses to groundwater in an extended period of dry years such as this one there remains little or no natural flow in surface water shortly after rains have stopped and snow has melted. This means that when supply information shows that there is no longer any natural flow in the stream, there is no water available for riparian use. This also means that riparian water rights can and should be fully curtailed in tributaries and watersheds when there is no longer any natural flow in the system. The need for curtailment, however, may not be apparent to many riparian water rights holders in many streams because water is still being released from storage, and there are return flows from water released from storage.

In consideration of the above, regular enforceable access to more up-to-date and reliable information is needed so that the Board can most promptly and finely make appropriate adjustments to curtailments, if needed. Timely responses by water right holders and timely adjustment to Board curtailments ensure that no water right holder is prematurely curtailed, and that no senior water right holder is injured due to lack of available water because of diversions by a more junior water right.

The goal of curtailments is principally to ensure that water to which senior water right holders are entitled is actually available to them. To ensure that this occurs generally requires that some water remain in most streams to satisfy senior demands at the furthest downstream point of diversion of these senior water rights. This in turn means there must also be some additional water, on top of the senior water right holder demand, to get that quantity of water to the senior water rights holder. This additional quantity of water, or "carriage" water, is defined here as the variable quantity of water needed to make up for losses to evaporation and groundwater, maintain water levels needed to facilitate pumping from a stream, and any other reasonable losses or factors that should be considered to ensure that a certain quantity of water to which a senior water right holder is entitled reaches that water right holder. Maintenance of this carriage water has the ancillary benefit of preventing normally wetted stream channels from running completely dry and may provide some additional benefit to fish and wildlife and to the riparian corridor.

Adjustment of Curtailments

At present, refinements can be made to curtailment analyses based on: 1) real-time information regarding water availability; and 2) information obtained from reports submitted to the Board in response to curtailment notices or in response to an order under the existing or proposed emergency regulation section 879, subdivision (c).

Real-time information regarding water availability includes gage data and field measurements and observations by field staff of stream flows, return flows, and any other such information in the curtailed watersheds, as described in more detail above.

This information will be used to issue, lift or refine curtailments. Refinement could result either in: 1) releasing some water right holders from curtailment because the additional information demonstrates that there is sufficient water in the system to support the demand of additional water right holders; or 2) adding additional water right holders to the curtailment because the initial curtailment does not result in protection of senior water rights. Although adjustments could also be made to curtailments issued under the Board's current authorities, any such adjustment, absent the proposed regulation, will be less accurate and take longer to implement because stale or inaccurate information on current diversions means that curtailments may not be promptly fine-tuned to provide diverters with the best information regarding whether water is available for diversion under their priority of right at any given time. Therefore, in the absence of the proposed regulation, senior water right holders are likely to be injured.

Summary

The proposed informational order regulation is necessary in this extended drought period to provide the State Water Board with enforceable authority to rapidly investigate water right complaints and claims of senior rights or transfers, and threatened or actual waste, unreasonable use, unreasonable method of diversion, or unlawful diversions by any water right holder or diverter. The State Water Board uses this information to investigate complaints and to issue, lift and refine curtailments, bring non-reporting entities into compliance, and to undertake other activities related to the effective administration of the water rights system and to

implement the requirements in Article X, section 2 of the California Constitution that the waters of the state be put to the greatest use possible, and that such use be reasonable.

Informative Digest

Summary of Existing Laws and Regulations

A general description of existing law governing water rights, the water right priority system, the State Water Board's information-gathering authorities, and the constitutional prohibition against the waste, unreasonable diversion, unreasonable method or diversion, or unreasonable use of water is set forth above.

Mandate on Local Agencies or School Districts

The State Water Board has determined that amendment and re-adoption of section 879 does not impose a new mandate on local agencies or school districts. The regulation is generally applicable law.

Cost Estimate

This cost estimate considers the fiscal effect of the proposed regulation, as defined in Government Code section 11346.5, subdivision (a)(6), which requires analysis of a proposed regulation's anticipated costs and savings to state agencies, local governments and agencies, school districts, including the effect of costs of savings of federal funding to the State.

Fiscal Effect of Section 879, Subdivision (c)

Using the definitions in Government Code section 11346.5, subdivision (a)(6), the only fiscal effect of the proposed regulation is the cost that would be incurred by state and local government agencies to complete and submit the information requested in any Informational Order issued under section 879, subdivision (c).

Based on information prepared by economists at the University of California, Davis, and using assumptions that show a higher projection of the potential range of costs, the State Water Board estimates that the cost to state and local agencies and governments to complete and submit the online Informational Order form and provide the supporting documentation will be approximately $504,530. The proposed regulation is not anticipated to have a fiscal impact on school districts or to result in costs or savings in federal funding to the State.

Appendix 10 provides more background information on the proposed estimate.

Consistency Determination

As the State Water Board is the agency charged with implementing the water right system, it is the only agency that can implement this emergency regulation. As required by Government Code Section 11346.5, subdivision (a)(3)(D), the State Water Board has conducted an

evaluation of this regulation and has determined that it is not inconsistent or incompatible with existing state regulations. State Water Board authority includes broad investigatory authority, and Water Code Section 1058.5 explicitly recognizes the need for regulations to provide the Board with increased information to appropriately implement the water rights system during the drought emergency.

Authority and Reference Citations

Authority: Sections 1058 and 1058.5, Water Code.
Reference: Sections 100, 183, 186, 187, 275, 348, 1050, 1051 and 1058.5, Water Code.

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