

LATE COMMENT

October 15, 2014



Via Email to commentletters@waterboards.ca.gov

Clerk to the Board
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: **Dry Year Report Comments**

To the Clerk of the Board:

Wagner & Bonsignore Consulting Civil Engineers and Ellison, Schneider & Harris, LLP offer brief comments on the Notice of Solicitation Regarding Improvements to the Implementation and Enforcement of Water Rights During Drought Conditions with regard to curtailments in the Russian River watershed. We commented on the May 27, 2014 notice of water right curtailment for the Russian River watershed (June 19, 2014 comments attached as Exhibit 1) and on the proposed emergency regulations adopted July 2, 2014 (June 30, 2014 comments attached as Exhibit 2). At the July 1, 2014 Board meeting, the Board directed staff to meet with us to discuss our comments. No meeting was scheduled. Instead, staff sent a letter dated September 9, 2014 (Exhibit 3) whereby they expressed their belief “that determination of water availability for the May 27 Notice was supported by the best available data at the time.” The staff letter—a justification of staff’s use of poor data to support their water availability determination—is unproductive and misses the point. We critiqued the notice of curtailment in the hope the Board will work with us to refine the determination of water availability moving forward. The Board can do a better job when considering future curtailments and we had hoped to be part of the discussion.

- 1) What actions, if any, should the State Water Board take to improve the Board’s information and analyses to support determinations on water availability relative to water right priority, including, but not limited to, improvements to supply, demand and watershed specific information and water right priority information?***

The Board’s 2014 water availability determination for the Russian River upstream of its confluence with Dry Creek was hampered by lack of information on tributary streamflows, hydraulic continuity between tributaries and the mainstem Russian River at low flows and hydraulic continuity between the alluvial groundwater basins and the mainstem Russian River, and by ambiguous water right permit and license terms. These

are systemic problems inherent with current water management practices and the water right administration system, and the fix will take many years and many dollars. That does not mean that the current poor understanding is good enough to support future curtailment decisions. The Board should work with stakeholders to accomplish the following:

- Develop a work plan and identify funding opportunities to install additional stream gages, precipitation gages and other watershed climate monitoring tools.
- Continue development of analytic tools for quantifying rainfall, runoff and water use from various watersheds.
 - The quantification should include the source and timing of water available for diversion at key points of interests within the watershed. The analyses should identify the quantity of water available for recharge as groundwater, and the potential for developing groundwater resources within various watersheds and the relationship between riparian rights, groundwater rights and surface water appropriations. The analyses should also include sources and responsibilities for in stream flow maintenance and water right priorities relative to in stream flow requirements. Actual water demands, rather than face value of water rights should be the basis of comparing water availability to estimated water supply. Source of water and its origins should be determined on a watershed specific basis for each diverter.
- Analyze and publish the list of permits and licenses receiving water under the “reservations” within the permits issued to Sonoma County Water Agency.
- It is not possible to effectively define the relative water right priorities in the mainstem Russian River until the Board addresses the pending long-term petition for change of Sonoma County Water Agency’s minimum streamflow requirements and the protests thereon. The Board should urge Sonoma County Water Agency to complete the CEQA analysis for its long-term petition as soon as possible.
- Treating the Russian River as a single watershed for purposes of determining water availability is overly simplistic and harms water rights relying on water sources that lack hydrologic continuity to the mainstem Russian River. The Board should separately analyze water availability for the Russian River’s tributaries, stream reaches, and groundwaters.

2) *What actions should the Board take to better communicate information about limited water availability relative to water right priorities, including the need and basis for curtailments of water diversions?*

The posting of water supply and demand projections on the Board's website this year was a positive improvement. Additional information relied upon by Board staff, including the raw data input into the water supply and demand tables, should also be posted.

3) *What, if any, changes should be made to enhance the effectiveness of the State Water Board's curtailment process, including measures to protect the public interest, health and safety and public trust resources?*

Please see the recommendations for question 1 and the information provided in Exhibits 1 and 2.

4) *What, if any changes should be made to enhance the effectiveness of the State Water Board's complaint process?*

We do not recommend any changes to the Board's complaint process as this time, and note that we are not aware of any senior water right complaints having been filed in the Russian River watershed in 2013 and 2014.

5) *Should the State Water Board pursue any additional authorities or policies to more effectively implement and enforce the water rights priority system?*

We do not believe the Board needs additional authorities. The Board needs to dedicate more of its staff resources (and hire new staff) and acquire better hydrologic information to better understand and enforce the water right priority system.

6) *How can the Board better assist water users in planning for upcoming dry periods?*

The Board can better assist water users in planning for upcoming dry periods by expeditiously approving applications and petitions for change, by expanding the eligibility criteria for small irrigation registrations, and other administrative actions that help water users to take advantage of winter water storage opportunities.

7) *What additional actions, if any, should the Board take to prepare for the next dry year or series of dry years?*

Please see the recommendations for question 1 and the information provided in Exhibits 1 and 2.

Sincerely,

ELLISON, SCHNEIDER
& HARRIS, LLP



Peter J. Kiel

WAGNER & BONSIGNORE,
CONSULTING CIVIL ENGINEERS



Robert C. Wagner, P.E.

Enclosures

Exhibit 1

2014 JUN 19 PM 1:51

DIV OF WATER RIGHTS
SACRAMENTO

June 19, 2014

Via Personal Delivery and Email

Thomas Howard
Executive Director
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: Russian River Water Right Curtailments

Mr. Howard:

Wagner & Bonsignore, Consulting Civil Engineers and Ellison, Schneider & Harris, LLP are writing on behalf of various clients that hold post-1914 and pre-1914 appropriative rights and riparian rights in the Russian River watershed. We have concerns with the technical approach employed by your staff to issue the May 27, 2014 notice of water right curtailment to permittees and licensees with a priority date after February 19, 1954. We have reviewed the information relied upon by your staff—a spreadsheet of Russian River demand and unimpaired flow data provided to us by Ms. Laura Lavalley on May 28, 2014—and believe that the Board does not have sufficient information to issue further curtailments.

The ostensible purpose of the State Board's notice of curtailment is to protect senior water rights. The Board can fulfill this purpose only if it undertakes more careful examination of the water supply in the system, including accounting for the extensive supply of groundwater stored within the water bearing sediments of the Redwood Valley, Ukiah Valley, Alexander Valley and Russian River Valley and the other alluvial valleys within the watershed. Accounting must also be made for water reserved under Sonoma County Water Agency water rights for downstream users, and to better assess water demand, such as by excluding the demand for diversions with water sources that lack hydrologic continuity to the Russian River. The Water Board's curtailment does not include an analysis of the sources of water available to the various diverters and right holders. Further curtailments without better information would be arbitrary and would deprive curtailed water users of due process of law and infringe on their property rights. By ignoring all of the various sources of water in the watershed, the Board may fail to protect senior right holders against junior appropriators.

The following are general comments and observations.

The Board's estimate of Russian River water supply fails to consider all sources of water that are available for appropriation.

Our understanding is that your staff estimated Russian River water supply using a few stream gages in the Russian River system and estimates of historic "unimpaired" surface flow in the Russian River at Healdsburg provided by the California Department of Water Resources (DWR). Using DWR's unimpaired flow estimates and limited stream gages as the basis for determining water available for appropriation is flawed for at least four reasons. First, unimpaired flow is not the correct metric for determining what water is available for appropriation. A water right holder is entitled to divert the "natural flow" of the Russian River and its tributaries. Natural flow "means such flow as will occur at the point in a stream from the runoff of the watershed which it drains, from springs and seepage which naturally contribute to the stream and from waste and return flow from dams, conduits, and irrigated land. Natural flow is distinguished from water released directly from storage for rediversion and use, or water imported from another watershed which is released directly to the natural channel for conveyance to the place of beneficial use." (SWRCB Order No. 90-6, p. 20.)

Second, the few stream gages in the watershed used for the supply estimate are not reasonably representative of all streamflow in the Russian River system. There are only three active USGS gages that measure unimpaired flow, and two of these are upstream of Lake Sonoma and Lake Mendocino. There are no gages on tributaries used in the supply estimate. The lack of tributary gaging creates two problems. The water made available from tributaries that are currently flowing into the Russian River may not be accounted for in the supply estimate. Similarly, the spring-fed headwaters of many tributaries are currently flowing, but the lower reaches of those streams are not flowing and do not have hydrologic continuity to the Russian River mainstem.

Third, the estimate does not account for subsurface water available in the extensive alluvial deposits along the middle reaches of the Russian River mainstem within Sonoma County. The subsurface water, a source the Board has defined as "Russian River underflow" in many water right permits and licenses, is not subject to direct measurement and is not accounted for in the Board's water supply estimate. Subsurface flow and groundwater have been available in the Redwood Valley, Ukiah Valley, Alexander Valley and Russian River Valley for diversion and use at all times, including times when there is no surface flow in the Russian River as occurred every summer and fall prior to the construction of Lake Mendocino and Lake Sonoma. For example, the USGS estimated that there were 75,000 to 100,000 acre feet of storage in the Ukiah Valley Groundwater Basin in 1965 (Cardwell, USGS Water Supply Paper 1548) and that there was 90,000 acre feet of storage in 1986 (Farrar, USGS Water-Resources Investigations Report 85-4258). In the Alexander Valley-Healdsburg area, DWR estimated that 992,000 acre feet of groundwater were in storage in 1980 (Bulletin 118-4, 1983. Our review of historical groundwater level data from DWR's Water Data Library indicate that groundwater levels have declined temporarily during past droughts, but recovered rapidly during more normal rainfall years. As there is no evidence of long term decline in aquifer storage and hence no overdraft, the

water stored in the alluvial sediments is available to be pumped by pre-1914 diverters, riparians, overlying groundwater users or appropriators of groundwater.

Sources of water to recharge the Ukiah Valley include the West Fork Russian River, East Fork Russian River, infiltration along the alluvial basin contact with the continental deposits and surrounding upland areas, and most importantly, direct recharge of precipitation. These sources all provide many times the available recharge to the groundwater system (aquifer) than the demand. The groundwater resources are sufficiently recharged without project water and should not be subject to curtailment. This example could be applied to every other alluvial filled valley of the Russian River system.

Fourth, Permit 12947B (A.012919A) of the Sonoma County Water Agency authorizing storage in Lake Mendocino reserves 8,000 acre-feet for use in Mendocino County and 10,000 acre-feet for use in Russian River Valley within Sonoma County. (Decision 1030; *see also* SWRCB Standard Terms 81 and 82.) It is unclear whether the Board has assessed which post-1949 water right permits and licenses are entitled to divert water under this reservation.

The Board has overestimated water demand.

The Board staff have estimated water demand by averaging the last three years of water diversions reported in reports of permittees, licensees and statements of water diversion and use. The assumption that average direct diversions over the last three years would recur in this extreme drought year overestimates water demand. Much of the summer and fall water diversion demand on the tributaries is unlikely to be met due to lack of streamflows. Demand from reaches of tributaries that now have no surface and subsurface flow should be excluded from the demand estimate. Sonoma County Water Agency will not directly divert from its mainstem Russian River points of diversion this summer and fall due to low storage in Lake Mendocino, and will instead divert stored water from Lake Sonoma on Dry Creek. Accordingly, the large Sonoma County Water Agency direct diversion demand should also be excluded from the demand estimate.

The Board should not curtail diversions from sources that lack hydrologic continuity to the Russian River.

The Board's treatment of the entire Russian River watershed (above the Dry Creek confluence) as a single source of water unfairly curtails water users relying on water sources that lack hydrologic continuity to the Russian River mainstem or its tributaries. The Board has previously recognized that water sources that lack hydrologic continuity to downstream stream segments, such as headwaters of streams, are exempt from curtailment. For example, in Standard Term 90A, the Board reserves jurisdiction to curtail the season of diversion for diversions "when hydraulic continuity with the Russian River exists, or is likely to exist, during the requested diversion season." (*See also* Standard Terms 80, 91, 93.) There are numerous headwaters of tributary streams that flow perennially, but the flow is not of sufficient quantity to maintain surface flow in downstream reaches. Flow in lower reaches may cease due to reduced

Mr. Thomas Howard
June 19, 2014
Page 4

groundwater accretion and the effects of geologic controls such as alluvial fans or fractured bedrock. Curtailing an upstream diverter with access to perennial flow lacking hydrologic continuity to downstream reaches unreasonably limits that user's water rights while providing no protection to downstream water users.

The Board must also recognize that there is ample subsurface water available to users in the alluvial reaches of the Russian River valleys, and much of this water lacks hydrologic continuity to the Russian River due to lowered groundwater tables. Also, pumping of subsurface water that is in hydrologic continuity with the surface flow of the River will not affect surface flow as would a pump in the stream channel, and depending upon various factors may have no discernable effect on the surface flow. There are hundreds of water right permits and licenses and hundreds more riparian and pre-1914 claimants that divert "Russian River Underflow." A review of the eWRIMS web mapping program reveals that some of these diverters have wells 3000-4000 feet from the Russian River channel. Assuming that the only water available to Russian River underflow diverters is surface flow released from upstream reservoirs is patently incorrect.

Conclusion.

We are available to discuss our findings with your staff. If the Board does not account for these matters in further curtailments for the Russian River, our clients will be forced to take action to defend their water rights.

Sincerely,

ELLISON, SCHNEIDER
& HARRIS, LLP



Peter J. Kiel

WAGNER & BONSIGNORE,
CONSULTING CIVIL ENGINEERS



Robert C. Wagner, P.E.

cc: Ms. Felicia Marcus, Chair of the Board
Ms. Barbara Evoy, Deputy Director for Water Rights
Mr. John O'Hagan, Chief of Enforcement Section

Exhibit 2

June 30, 2014

Via Email to commentletters@waterboards.ca.gov

Clerk to the Board
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: 7/1-2/14 BOARD MEETING (Item 5: Consideration of a proposed Resolution regarding drought related emergency regulations for curtailment of diversions to protect senior water rights)

To the Clerk of the Board:

Wagner & Bonsignore Consulting Civil Engineers and Ellison, Schneider & Harris, LLP submit the following comments on the Proposed Emergency Regulations for Statewide Drought Related Curtailment of Water Diversions to Protect Senior Water Rights (“Emergency Regulation”). These comments are submitted on behalf of the Alexander Valley Group, a coalition of vineyard owners that pump from wells in the Alexander Valley region of the Russian River watershed: Amanos LLC (Vino Ranch #4); Constellation Wines; Crimson Wine Group; Ferrari-Carano Vineyards & Winery; Gallo Family Vineyards; Hoot Owl Creek Vineyards; Klein Foods (Rodney Strong); Lytton Rancheria; Marietta Cellars; Reuser Incorporated; Seghesio Family Vineyards; Silverado Sonoma; and ViMark (Trione Vineyards & Winery). The stated purpose of the Emergency regulation is to “improve[] the State Water Board’s abilities to quickly and effectively implement and enforce those curtailments during the current drought to ensure that the State’s water right priority system is effectively implemented during the drought emergency.” The Alexander Valley Group opposes the Emergency Regulation as drafted because it will not protect their senior water rights.¹ Fundamental improvements to Board staff’s process of determining available supply and water right priorities for issuing water right curtailments are needed before the Board can adopt the Emergency Regulation. If the curtailment process is not fixed, the Emergency Regulation would only rubber stamp arbitrary curtailment orders that impair their senior water rights.

¹ We concur with other comments that proposed regulation’s elimination of individualized investigation and hearing on unauthorized water diversion and use—fundamental due process steps afforded by the Water Code—for sake of staff workload and expediency does not constitute an emergency. We focus instead on the factual circumstances demonstrating where the current and proposed curtailments themselves do not protect senior rights, and as such the removal of important due process protections renders the proposed regulation arbitrary and capricious and contrary to law.

Alexander Valley Group's Water Rights

The Alexander Valley Group entities own the majority of the vineyard acreage on the valley floor of the Alexander Valley American Viticultural Region, which encompasses lands within Sonoma County along the Russian River from Healdsburg north to Geyserville, Cloverdale and the Mendocino County border. An extensive groundwater basin underlies this region. (Department of Water Resources Bulletin 118-4, 1983.) The Alexander Valley groundwater basin is estimated to have nearly 1 million acre feet of groundwater in storage.² The legal characterization of the Alexander Valley Group's water rights are uncertain. Each entity has at least one each permit or license with a water source characterized by the State Water Board as "Russian River Underflow," and pumps this water from a well that is located some distance from the channel of the Russian River. Each entity with a permit or license with a Russian River Underflow source also claims a riparian or groundwater right for the same diversion on the basis that its properties overlies the subsurface water supply and is not dependent on the surface flow of the Russian River.

Critique of the Curtailments Currently In Effect and Proposed for the Russian River Watershed

Board staff issued a May 27, 2014 notice of water right curtailment to permittees and licensees with a priority date after February 19, 1954 in the Russian River watershed above the confluence with Dry Creek. On June 19, 2014 we provided Executive Director Tom Howard comments expressing our concern with the technical approach employed to issue these curtailments and discussing why the Board does not have sufficient information to issue further curtailments. (Exhibit 1.) The Board estimated water supply of the entire watershed upstream of its confluence with Dry Creek using only inflow from Russian River tributaries and historic estimates of unimpaired surface flow on the mainstem Russian River at Healdsburg. The supply estimate did not include estimates or measurements of streamflow in the numerous tributary streams that lack USGS stream gages (some of which have flow in upper reaches but not lower reaches) and without accounting for the subsurface water available in the extensive alluvial deposits along the middle reaches of the Russian River mainstem within Sonoma County. We also noted that the water demand projection overestimated demand during this drought, and that the Board should not have combined the demand of sources that are not hydrologically connected.

² Bulletin 118-4 (1980) estimates that 990,000 acre feet were in storage in 1980.

Using the groundwater gradients and cross sections developed by the U.S. Geological Survey (Metzger, et al., 2006), permeability values (hydraulic conductivities) based on the USGS descriptions of the geologic formations (including lithology, specific yield, and average well yields), the groundwater flux through the lower end of the Alexander Valley (roughly Lytton to Jimtown) is estimated at 133 cfs. This value was based on the USGS's Autumn 2002 groundwater elevation map (from the end of a two-year drought period), when groundwater discharge was assumed to be at a lower-end value. Late-season depth to water data were also verified using the DWR's online *Water Data Library*.

Implications of Flawed Curtailment Methodology for Water Rights in the Russian River

Water underground is presumed to be percolating groundwater, which is defined as those waters that “do not form part of the body or flow, surface or subterranean, of any stream.” (*City of Los Angeles v. Pomeroy* (1899) 124 Cal. 597, at 633-634.) The State Water Board’s water right permitting jurisdiction extends only to surface water flowing in a natural channel and to groundwater in a subterranean stream flowing through known and definite channels. (Water Code § 1200; *Pomeroy*, 124 Cal. at 633-634; *see also* Water Code § 1205, subd. (a) (“‘stream system’ includes stream, lake, or other body of water, and tributaries and contributory sources, *but does not include an underground water supply other than a subterranean stream following through known and definite channels.*”(emphasis added).) In the Russian River watershed, the Water Board has characterized the source of some diversions from wells as “underflow” of the Russian River without specifying whether or not the water is confined to a subterranean stream as defined in courts and prior Water Board Orders. The Water Board’s water right database for Sonoma County lists 1,277 surface water right holders and claims of right with Russian River Underflow as the source of water. These right holders pump water beneath the ground from wells, and do not divert surface water directly from a stream.

If the “underflow” is confined to a known and definable subterranean stream groundwater extractions from the source for use on overlying (riparian) lands would enjoy a riparian right to the subsurface flow within the subterranean stream. In such a case, the groundwater storage and the groundwater flux is the source of water for riparian diversions, and not the surface flow of the Russian River or releases from storage in upstream reservoirs. If the “underflow” is not confined, the groundwater is beyond the Water Board’s permitting authority, notwithstanding the Board’s issuance of a permit to appropriate the water, and the groundwater extractions are available to overlying land owners and exporters of groundwater (appropriators) to non-overlying land to the extent there is no shortage (overdraft) within the groundwater basin. Pre-1914 diversions from the underflow of a subterranean stream would similarly have access to water in the absence of surface flow.

Pre-1914 diversions and riparian diversions, and overlying landowners have a priority over others in the watershed, depending on source. In the alluvial valleys of the Russian River watershed, groundwater extractions (whether or not the extractions are determined to be from a subterranean stream subject to the permitting authority of the Water Board) are senior to diverters of surface water released from storage. In order for the Emergency Regulation to protect senior water right holders the Water Board must evaluate the available groundwater resources of the alluvial valleys to determine whether or not these are properly characterized as groundwater basins or subterranean streams. Alexander Valley and Ukiah Valley, for example, are described by the Department of Water Resources as groundwater basins in Bulletin 118.

Within the Russian River watershed the Emergency Regulation and any curtailments issued under its authority should acknowledge the physical reality that groundwater resources are plentiful and that any curtailments issued would not apply to riparian diversions of groundwater (if the groundwater is confined to a subterranean stream) or to overlying landowners who extract groundwater, or to exporters of groundwater from a non-overdrafted groundwater basins. The Regulation should also acknowledge that permittees and licensees extracting Russian River “underflow” have available source in excess of the presumed unimpaired surface flow.

Evidence that Russian River Underflow is not Surface Water of the Russian River

Along the Russian River, losses to surface flow released from storage occur for many reasons. In various reaches of the river accretions offset losses. The losses are the result of uptake by riparian plants and surface evaporation. The accretions are the result of groundwater discharge (from various sources) to the river system and tributary inflow.

The Water Board acknowledges that the potential for groundwater diversions to impact the Russian River is limited. The Supplement to Appendix D of the Substitute Environmental Document, April 2013 for the State Water Resources Control Board’s North Coast Instream Flow Policy (Supplement 2013) states:

As indicated in the 2008 SED, a switch from surface water diversions to groundwater pumping also could result in reduced surface flows. The 2008 SED did not explain, however, that the potential reduction in surface flows is unlikely. In fact, a switch to groundwater pumping is likely to result in less depletion of surface water flows because groundwater pumping will not ordinarily deplete hydraulically connected surface water flows on a one-to-one basis, and in some cases the groundwater and surface water may lack hydraulic connection entirely, or the hydraulic connection may be indiscernible. A switch to groundwater pumping could cause a delay in surface flow depletion, which could in turn cause a significant adverse environmental impact, particularly if the delayed reduction in flows occurs during the summer months, but this potential impact is speculative and unlikely to occur in the Policy area. This conclusion is further explained through the following discussion of basic principles of well hydraulics and groundwater hydrology, and an examination of geologic and hydrologic conditions in the Policy area.

The Supplement further explains that groundwater diversions are less likely to deplete streamflow than surface diversions. The Supplement also sets forth factors that should be evaluated before determining that a groundwater well would have an affect on the streamflow.

In the Alexander Valley and Ukiah Valley, water levels in wells are stable other than normal seasonal variations. Many of the wells are distant from the river, and likely cause little if any stream depletion. Further, the recharge to the groundwater basins from sources other than releases from upstream reservoirs greatly exceeds the demands in

those groundwater basins. The USGS report “Geohydrology and Water Chemistry of the Alexander Valley, Sonoma County, California”, SRI 2006-5115, (Metzger, et al.) demonstrates in general the accretions to the Russian River system in Alexander Valley and the relative lack of influence due to pumping as indicated by the Water Board’s Supplement to Appendix D as indicated above.

Water year 2000 represents a near normal year in terms of precipitation; with 41.57 in. measured at Healdsburg compared with an average precipitation of 41.87 in. for 1932–2004. Discharge at the Healdsburg gage was greater than that at the Cloverdale gage between February and June 17, 2000, (except for 1 day) primarily because of inflow from tributaries downstream of the Cloverdale gage. After June 17, discharge decreased between Cloverdale and Healdsburg on most days; this pattern persisted until October 25, when discharge began to increase consistently between the two gages. The decrease in discharge is a measure of evapotranspiration along the riparian corridor, direct diversions from the river, indirect diversions from ground-water pumping near the river, and seepage from the river into the alluvial aquifer. The total difference in discharge between the two gages from June 17 to October 25, 2000 was about 2,776 acre-ft. This represents the minimum amount of water consumed between the two gages; additional water may have entered the river from tributaries or from irrigation return. However, these quantities were not gaged.

As reported by Metzger, there was a difference in gaged flow between Cloverdale and Healdsburg (roughly the area of the Alexander Valley) totaling 2,776 acre feet for 130 days, amounting to about 10.76 cfs (approximately 21.34 acre feet per day). This means that the total decrease in surface flow within the Alexander Valley was 10.7 cfs and includes, surface evaporation and evapotranspiration of riparian plants, as well as pumping by agriculture and uptake by native vegetation within Alexander Valley. We assume that the evapotranspiration potential is roughly equal to surface evaporation (0.3 inches per day for Lake Mendocino; or 0.025 feet per day, CDEC). Metzger et al., estimates there is about 59,000 acres of native vegetation. Assuming that evaporation and evapotranspiration of riparian plants and native vegetation occur at roughly the same rate, the total soil moisture, surface evaporation and riparian uptake of 59,000 acres is about 1,475 acre feet per day.

Given these assumptions, the reported streamflow losses can be entirely accounted for by evaporation and riparian plant uptake. That means the pumping within the Alexander Valley and the needs of native vegetation (some 59,000 acres) must be supplied by groundwater accretions. In any event, the accretions are not part of the river flow released from storage by upstream reservoirs. Similarly, if the same analysis is applied to the flow today the same conclusion is reached.

Recommendations

We urge the Board to reject the Emergency Regulation because it will remove due process protections for water right holders and will not accomplish its stated purpose of protecting senior water rights. If the Board adopts the regulation, the following changes must be incorporated:

1. Amend Section 875(b) of the Emergency Regulation to clarify that it does not apply to diversions of groundwater unless there has been a prior finding that the diversion is from a subterranean stream.
 - (b) After the effective date of this regulation, when flows are sufficient to support some but not all diversions, the Deputy Director for the Division of Water Rights, or her designee, may issue curtailment orders to water right holders in order of water right priority, requiring the curtailment of water diversion and use except as provided in sections 878 and 878.3. **This section shall not apply to an underground water supply other than a subterranean stream flowing through known and definite channels.**
2. In order to provide right holders with meaningful due process, the Board must adopt findings supporting any curtailment order and provide the opportunity for a hearing before a water right is curtailed. The following changes to Section 875(c) and (f) would provide appropriate due process protections to right holders adversely affected by an erroneous curtailment order:
 - (c) In determining whether water is available under a diverter's priority of right and to issue curtailment orders, the Deputy Director for the Division of Water Rights, or her designee, ~~may rely upon~~ **shall adopt and post findings for the following criteria for each proposed curtailment order:**
...
(5) The findings required by this section and all relevant information supporting the findings shall be posted for public inspection no less than seven (7) days prior to issuance of a curtailment order.
 - (f) **Any person subject to a curtailment order shall be afforded a hearing prior to the effective date of the curtailment. All curtailment orders issued under this article 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.**

3. Revise the description of “[w]ater right demand projections” in Section 875(c)(2) to exclude demand that is not likely to occur in this extreme drought year demand from water sources that lack hydrologic continuity to downstream reaches.
 - (2) Water right demand projections based on: recent reports of water use for permits and licenses, 2010, or later, statements of water diversion and use, or reports submitted by watermasters, **and excluding demand that is unlikely or impossible to be met due to lack of streamflows or minimum bypass flow requirements and demand from sources that lack hydrologic continuity to downstream rights.**

4. Expand the description of the bases for “[w]ater availability projections” in section 875(c)(3) to account for subsurface water supplies.
 - (3) Water availability projections based on:
 - i. Projected full natural flow data supplied by the Department of Water Resources, where available;
 - ii. Projections from the National Weather Service’s River Forecasts website, where available;
 - iii. Stream gage data, where available; ~~or~~
 - iv. **Estimates of groundwater supply within a subterranean stream supplied from the Department of Water Resources Bulletin 118, the United States Geological Survey, and other sources, where available; and**
 - v. Other data that the Deputy Director for the Division of Water Rights determines is appropriate, given data availability and reliability and staff resources.

5. Curtailment of junior rights must be enforced to prevent premature curtailment of senior water rights.

The Emergency Regulation Digest, page 14, states that there is a risk of premature curtailment of senior rights if the Board does not first ensure compliance by curtailed junior rights and adjust curtailment projections accordingly:

Without first curtailing at least some junior water rights it is difficult to determine with precision exactly what rights must be curtailed. . . . Timely compliance by curtailed water right holders is needed so that the Board can promptly 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.

(Emergency Regulation Digest, page 14.) Accordingly, the Board should make enforcement of junior right curtailments an express condition of curtailments of senior rights, including pre-1914 and riparian rights, by Board staff.

6. The Emergency Regulation and curtailment orders should be designated as non-precedential in accordance with Government Code section 11425.60.

Conclusion

The curtailment currently in effect in the Russian River Watershed and additional curtailments proposed by Water Board staff are not supported by data and analysis. The Water Board has not identified the senior right holders, the relative priorities of water rights among competing users, and the sources available to those users. Appropriate water rights may be junior in time in some cases but have access to different sources of water than the apparent senior rights. While the Emergency Regulation package states that additional enforcement powers are needed to protect senior water rights, the emergency regulation would have the opposite effect. Senior water rights are threatened by arbitrary curtailments, and adding the power to increase penalties for noncompliance with an arbitrary curtailment process will further harm water rights and deny senior rights holders of due process. The Board must first fix the process for curtailing water rights before it empowers Board staff to enforce arbitrary curtailment orders.

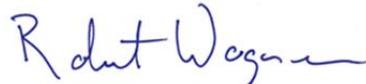
Sincerely,

ELLISON, SCHNEIDER
& HARRIS, LLP



Peter J. Kiel

WAGNER & BONSIGNORE,
CONSULTING CIVIL ENGINEERS



Robert C. Wagner, P.E.

Enclosure

Exhibit 3



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

SEP 09 2014

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Dear Mr. Kiel and Mr. Wagner:

RESPONSE TO COMMENTS SUBMITTED JUNE 19, 2014 AND JUNE 30, 2014 REGARDING EXISTING AND POTENTIAL CURTAILMENTS IN THE RUSSIAN RIVER WATERSHED AND CONSIDERATION OF ADOPTION OF A DROUGHT RELATED EMERGENCY REGULATION

By letter dated May 27, 2014, the State Water Resource Control Board (State Water Board) Division of Water Rights (Division) notified diverters that the State Water Board had determined the existing water supply in the Russian River watershed was insufficient to meet the needs of all water rights holders, and of the need for holders of post-1914 appropriative water rights within the Russian River watershed upstream of the confluence of Dry Creek (Upper Russian River) with a priority date of February 19, 1954 or later to immediately stop diverting under their junior post-1914 water rights, with some exceptions (May 27 Notice).

On July 2, 2014, the State Water Board adopted an emergency regulation for statewide drought-related curtailment of water diversions to protect senior water rights (emergency regulation). The emergency regulation authorizes the Deputy Director of the Division to issue curtailment orders to post-1914 appropriative water right holders. Among other things, any curtailment order issued pursuant to the emergency regulation must be accompanied by the Deputy Director's determination of the (i) quantity of water supply available by priority or type of right; (ii) total water right demand, including the known quantity and basis of right; and (iii) the State Water Board's assumptions pertaining to the diverters' right. The Division is currently examining the possibility of issuing curtailment orders for the Russian River under the emergency regulation.

The Division received your June 19, 2014 comment letter to the Executive Director of the State Water Board regarding the Russian River May 27 Notice (June 19 Letter), and your June 30, 2014, comment letter to the Clerk of the Board regarding the State Water Board's consideration of the then-proposed emergency regulation (June 30 Letter). In the June 19 Letter, you commented on Division staff's methodology and analysis of the availability of water for the May 27 Notice and outlined concerns with:

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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1. Estimation of Russian River water supply and consideration of all sources of water that are available for appropriation;
2. Potential overestimation of water demand; and
3. Curtailment of diversions from sources that lack hydrologic continuity to the Russian River.

You reiterated and expanded these comments in the June 30 Letter, and during the July 1, 2014 Board Meeting on the emergency regulation, and outlined concerns with:

4. Implications of curtailment methodology;
5. Evidence that Russian River underflow is not surface water; and
6. Language of the emergency regulation.

The Division addresses your comments below.

Response to comments in the June 19 Letter:

1. Estimation of Russian River water supply and consideration of all sources of water that are available for appropriation:

You claim that the State Water Board's estimate of Russian River water supply fails to consider all sources of water that are available for appropriation, and that using unimpaired flow estimated by the Department of Water Resources (DWR) and limited stream gauges as the basis for determining water available for appropriation is flawed, and make the following comments:

Comment 1:

"Unimpaired flow is not the correct metric for determining what water is available for appropriation. A water right holder is entitled to divert the "natural flow" of the Russian River and its tributaries."

Staff Response:

Historical unimpaired flow estimations represent the estimation of natural surface flow; that is what the flow would have been in the absence of imported flows, releases from upstream reservoirs, and diversion of stream flow in the watershed upstream of the gauge location.

Diversions under a riparian basis of right are limited to the natural flow of the waterway. Diversions under an appropriative basis of right are limited to water available for appropriation, which includes that portion of the natural flow in excess of riparian demand, and any other water which has not been appropriated by a senior appropriator.

Comment 2:

"The few stream gauges in the watershed used for the supply estimate are not reasonably representative of all stream flow in the Russian River system...there are no gauges on tributaries used in the supply estimate."

Staff Response:

Division staff concludes that the calculation of unimpaired natural flow is inclusive of the flows from all upstream tributaries so it is not necessary to measure flow in every tributary. Additionally, Water Right Permit 12947A requires a minimum stream flow between Coyote Valley Dam and the confluence of the Russian River and Dry Creek. When the Russian River is a losing stream, there is less water entering the stream from these tributaries than is diverted or naturally lost, and water must be released at Coyote Valley Dam to offset these losses and maintain the minimum stream flows required by Permit 12947A. When the losses are a result of diversions made under a junior appropriative right, these diversions are interfering with a senior water right.

Comment 3:

"Spring-fed headwaters of many tributaries are currently flowing, but the lower reaches of those streams are not flowing and do not have hydrologic continuity to the Russian River main stem."

Staff Response:

The State Water Board has no specific evidence to find that flows from tributaries, in the absence of diversions by post-1914 water rights, would not maintain continuity with downstream sources that contribute to satisfying downstream senior rights. Additionally, a break in surface continuity of a tributary does not necessarily mean there is a lack of subsurface flow continuity.

Comment 4:

"The estimate does not account for subsurface water available in the extensive alluvial deposits along the middle reaches of the Russian River main stem within Sonoma County."

Staff Response:

To determine the availability of water for appropriation for the May 27 Notice, Division staff assumed that any permit or license to divert sub-surface flow in the Upper Russian River watershed is a right to divert water from a source that has hydrologic continuity with the Russian River, and the exercise of such right diminishes the surface flow of water in the Russian River watershed to some extent.

Comment 5:

"USGS estimated that there were 75,000 to 100,000 acre feet of storage in the Ukiah Valley Groundwater Basin in 1965 (Cardwell, USGS Water Supply Paper 1548) and that there was 90,000 acre feet of storage in 1986 (Farrar, USGS Water-Resources Investigations Report 85-4258). In the Alexander Valley-Healdsburg area, DWR estimated that 992,000 acre feet of groundwater were in storage in 1980 (Bulletin 118-4, 1983)."

Staff Response:

All three estimates you cited included water stored in groundwater aquifers, as well as sub-surface flow of the Russian River. The 1965 and 1986 USGS estimates also went on to say that this water is hydraulically continuous with the surface flow, and that large scale pumping from the groundwater storage will affect surface flows.

Regardless of the classification of the groundwater in those three estimates, the State Water Board's authority to issue permits and licenses extends to diversions from surface water and subterranean streams flowing through known and definite channels (jurisdictional water), and all permits, licenses, registrations, and certificates issued by the State Water Board are considered using jurisdictional water and subject to water right priority. Additionally, the Water Code does not require diverters to file Statements of Diversion and Use for diversions of non-jurisdictional groundwater.

The May 27 Notice and any curtailment order issued to holders of appropriative water rights by the State Water Board under the emergency regulation may only prohibit diversion and use of jurisdictional water under an appropriative basis of right. Any diverters who wish to claim their diversions are not using jurisdictional water can request cancelation or revocation of their appropriative right, or inactivation of their statement.

Comment 6:

"Our review of historical groundwater level data from DWR's Water Data Library indicate that groundwater levels have declined temporarily during past droughts, but recovered rapidly during more normal rainfall years."

Staff Response:

The potential for future rainfall to replenish groundwater is not relevant to the analysis for the May 27 Notice or any curtailment order issued under the emergency regulation.

Comment 7:

"Permit 12947A (A012919) of the Sonoma County Water Agency authorizing storage in Lake Mendocino reserves 8,000 acre feet for use in Mendocino County and 10,000 acre feet for use in Russian River Valley within Sonoma County. It is unclear whether the State Water Board has assessed which post-1949 water right permits and licenses are entitled to divert water under this reservation."

Staff Response:

Permittees and licensees who are entitled to divert under the reservation, may do so to the extent that project water is available in accordance with Permit 12947A. When the May 27 Notice was issued, Sonoma County Water Agency was not releasing water from storage, and no project water was available for any diverter to take under the reservation. Since curtailment notices were mailed, Division staff is not aware that any permit or license holders have claimed use of Sonoma County reservation rights as an alternative supply.

2. Potential overestimation of water demand:

You claim that the State Water Board has overestimated demand, and make the following comments:

Comment 8:

"State Water Board Staff have estimated water demand by averaging the last three years of water diversions reported in reports of permittees, licensees, and statements of water diversion and use. The assumption that average direct diversions over the last three years would recur in this extreme drought year overestimates water demand."

Staff Response:

When the supply of water is sufficient to meet some but not all demand of post-1914 appropriative water rights, the allocation of the supply is based on satisfaction of the demand of the most senior rights. The demand of senior rights is not dependent on the amount of water available to junior rights, and a deficiency in supply of water for junior rights does not require a senior appropriative right to reduce their diversions by any amount.

Division staff considered alternative methods of projecting demand, including using face value for permits and licenses or maximum reported diversions from the past several years. Division staff found that the projected demand found using these methods would likely overestimate demand in 2014. By using actual reported use, averaged where possible, the Division was able to make the most reasonably accurate estimate of 2014 demand possible given the available data.

When Statements were submitted with incomplete reporting data or obvious errors, Division staff estimated diversion amount based on the purpose and place of use.

Comment 9:

"Demand from reaches of tributaries that now have no surface and subsurface flow should be excluded from the demand estimate."

Staff Response:

The State Water Board has no specific evidence of tributaries lacking both surface and subsurface flow. Therefore, Division staff included all tributary demands to ensure protection of prior rights.

Comment 10:

"Sonoma County Water Agency will not directly divert from its main stem Russian River points of diversion this summer and fall due to low storage in Lake Mendocino, and will instead divert stored water from Lake Sonoma on Dry Creek. Accordingly, the large Sonoma County Water Agency direct diversion demand should also be excluded from the demand estimate."

Staff Response:

SCWA's ability to directly divert water during the summer and fall is limited by the availability of stream flow and the authorized diversion rate of Permit 12947A, not the level of storage in Lake Mendocino. Division staff projected that any stream flow available to SCWA in excess of the minimum stream flow requirements of its permit would be available for SCWA's appropriation.

Consequently, any diversions by junior appropriators that cause reductions of the stream flow will interfere with SCWA's senior right. Additionally, SCWA has not waived its priority of right.

3. Curtailment of diversions from sources that lack hydrologic continuity to the Russian River:

You claimed that the State Water Board should not curtail diversions from sources that lack hydrologic continuity to the Russian River, and made the following comments:

Comment 11:

"The State Water Board has previously recognized that water sources that lack hydrologic continuity to downstream segments, such as headwaters of streams, are exempt from curtailment. For example, in Standard Term 90A, the Board reserves jurisdiction to curtail the season of diversion for diversions "when hydraulic continuity with the Russian River exists, or is likely to exist, during the requested diversion season." (See also Standard Terms 80, 91, 93)"

Staff Response:

Standard Term 90A concerns reduction or elimination of the season of diversion for permits to divert water from the Russian River Watershed when hydraulic continuity with the Russian River exists, or is likely to exist, during the requested diversion season. It does not exempt any permit from curtailment under the May 27 Notice or the emergency regulation. Standard Term 80 reserves jurisdiction to change the season of diversion to conform to later findings concerning availability of water, and like Standard Term 90A, does not exempt any permit from curtailment. Standard Terms 91 and 93 do not relate to permits in the Russian River watershed.

Comment 12:

"Assuming that the only water available to Russian River underflow diverters is surface flow released from upstream reservoirs is patently incorrect."

Staff Response:

Division staff did not make that assumption for the analysis of water availability for the May 27 Notice.

Response to comments in the June 30 Letter:**4. Implications of curtailment methodology:**

Your June 30 Letter reiterated many of the previously addressed comments in the June 19 Letter, and made the following additional comments:

Comment 13:

"Within the Russian River watershed the Emergency Regulation and any curtailments issued under its authority should acknowledge the physical reality that groundwater resources are plentiful and that any curtailments issued would not apply to riparian diversions of groundwater (if the groundwater is confined to a subterranean stream) or to overlying landowners who extract groundwater, or to exporters of groundwater from a non-overdrafted groundwater basins."

Staff Response:

The emergency regulation specifically authorizes the Deputy Director of the Division to issue curtailment orders to post-1914 appropriative water right holders in order of water right priority, requiring the curtailment of water diversion and use. The Deputy Director may issue an order under the emergency regulation requiring a riparian or pre-1914 appropriative water right holder to provide additional information regarding their water rights upon receipt of a complaint alleging interference with a water right or information that indicates unlawful diversions of water.

5. Evidence that Russian River underflow is not surface water:

You referenced an excerpt from the Supplement to Appendix D of the Substitute Environmental Document, April 2013 (Supplement) for the State Water Resources Control Board's North Coast Instream Flow Policy, and make the following comments:

Comment 14:

"The Water Board acknowledges that the potential for groundwater diversions to impact the Russian River is limited...The Supplement further explains that groundwater diversions are less likely to deplete stream flow than surface diversions."

Staff Response:

The Supplement addresses the potential for surface water diverters to switch to groundwater pumping. Groundwater pumping, as discussed in the Supplement, is specifically extraction of groundwater, which is not within the permitting authority of the State Water Board, and was analyzed as a potential alternative for people who do not wish to divert surface water under an appropriative or riparian basis of right. The Supplement does not acknowledge that diversions from the underflow of the Russian River are unlikely to cause a reduction in surface flows, but acknowledges the lesser impact to stream flow from groundwater diversion than from surface diversions.

You referenced an excerpt from USGS report Geohydrology and Water Chemistry of the Alexander Valley, Sonoma County, California, 2006 (USGS Report) and used data from the USGS report, along with some assumptions, to calculate surface flow depletions between Cloverdale and Healdsburg, which could attributed to evaporation and evapotranspiration:

Comment 15:

"Given these assumptions, the reported streamflow losses can be entirely accounted for by evaporation and riparian plant uptake. That means the pumping within the Alexander Valley and the needs of native vegetation (some 59,000 acres) must be supplied by

groundwater accretions. In any event, the accretions are not part of the river flow released from storage by upstream reservoirs. Similarly, if the same analysis is applied to the flow today the same conclusion is reached."

Staff Response:

Division staff is receptive to consideration of natural losses in the analysis of the water availability for a potential curtailment order issued pursuant to the emergency regulation, if such information is made available and acceptable to stakeholders of the Russian River.

6. Language of the emergency regulation:

You made recommendations and proposed specific language for the emergency regulations in the June 30 Letter, and during the July 1, 2014 Board Meeting.

Staff Response:

The State Water Board considered your written and oral comments regarding the adoption of the emergency regulation prior to adopting the emergency regulation.

Conclusion:

Division staff still believes that determination of water availability for the May 27 Notice was supported by the best available data at the time. In the event enforcement action is taken on water right holders who were notified in the May 27 notice that they should immediately stop diverting under their junior post-1914 water rights, they have a right to present information supporting their position at that time.

If any curtailment order is issued, it will be in accordance with the requirements of the emergency regulation, and would 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.

The Division appreciates your concern with the curtailment process implemented during the severe drought conditions this year, and invites you to engage with Division staff over the next months to refine data and gather input on how to most effectively implement and enforce the water rights priority system in future dry years. The State Water Board seeks to improve the water users' confidence in the technical tools and analysis that will be used for making determinations on water availability relative to water rights priority, and appreciates your input and capabilities to assist in improving these tools.

Sincerely,



John O'Hagan, Assistant Deputy Director
Division of Water Rights

cc: Andrew Tauriainen, Office of Enforcement