CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MEETING OF SEPTEMBER 16-17, 2015
BARSTOW

ITEM: **9**

SUBJECT: **EXECUTIVE OFFICER'S REPORT**

DISCUSSION: The Executive Officer's report includes the following:

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ENCLOSURE 1

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Lahontan Regional Water Quality Control Board

EXECUTIVE OFFICER'S REPORT

September 2015

STATE AND REGIONAL

1. **The Perennial Streams Assessment: Biological Condition using the new California Stream Condition Index (CSCI)** *– Carly Nilson*

The State and Regional Water Boards Surface Water Ambient Monitoring Program (SWAMP) published its Perennial Streams Assessment (PSA) in June 2015. This Report has been included at the back of the EO Report. The PSA has been California's primary means of monitoring the health of its wadeable streams since 2010. The PSA program has used the CSCI tool to evaluate over 1,300 perennial stream sites throughout the state. Each sampled site represents a portion of a total wadeable stream length in California. The PSA program collects biological data (invertebrates, algae) and associated chemical and habitat data to determine the biological condition, stream condition, relative condition draining various land uses, and stressors associated with biological condition.

The PSA uses a probability survey design which allows extrapolation of results from relatively few sampled sites to all wadeable streams in the state. The PSA sampling design is cost efficient and provides an objective means of assessing the health of the entire stream population. The PSA program was organized around answering four questions that were used to frame management objectives for the State Water Board's Non-Point Source Program and has made these four conclusions about the health of California's streams:

a. The majority of stream length in the Sierra Nevada and North Coast is in good biological condition, while the majority of stream length in the South Coast, Chaparral and Central Valley is in poor or very poor condition.
b. Stream condition fluctuated somewhat during the first 13 years of PSA, but no directional trend was observed. Note: Most current drought data has not be evaluated.
c. Watersheds dominated by agricultural and urban land use practices are in poor or very poor condition. Most of the stream length draining forested watersheds is in good condition.
d. Phosphorus is the most prevalent chemical stressor in urban settings and agricultural settings. Other prevalent stressors included total suspended solids and turbidity.

The data from the PSA is valuable for determining reference sites and tracking long term trends. Currently, training is occurring on how to use the CSCI scoring tool (good, fair, poor, very poor condition) and discussions of how to incorporate this into other programs including evaluation as part of the Integrated Report and permitting. In the Lahontan region, we can use this information to determine if the water quality

of water bodies supports beneficial uses and evaluate the effects of climate change over time. For SWAMP to use the PSA successfully, annual monitoring is needed to track long term trends of the stream health conditions.

2. **FY15/16 Budget Highlights–** *Sue Genera*

On June 24, 2015, the Governor signed into law the $115 billion FY15/16 Budget Act (AB 93, Weber), which is an increase of $7 billion over last year. The Budget provides $2.5 billion to the State and Regional Boards with 184 new personnel years (PYs), bringing the total number of staff to 2,046. Approximately 59% of the FY 2015-16 Budget Act finances State Board positions and 41% of the funding goes to the Regional Boards. A breakdown of these positions can be seen on the table below:

Regions	PYs
R1	77.8
R2	97.8
R3	65.2
R4	141.0
R5	243.7
R6	56.9
R7	32.0
R8	62.8
R9	62.0
Total	839.2

State Board	PYs
Exec	21.0
OCC	55.1
OLPA	18.0
ORPP	25.0
DWQ	136.1
OE	39.7
OIMA	24.5
DIT	93.5
DWR	166.5
DDW	54.0
DDW-FO	169.0
DFA	264.9
DAS	139.6
Total	1,206.9

Total Water Board PYs FY 15/16: 2,046.1

Region 6 received funding for one staff person to implement the AB 1492 Timber Regulation Law. On August 17, 2015 Brian Judge was hired in the non-point source program to work on timber harvest, vegetation management, Forest Service, and stream restoration projects.

The Underground Storage Tank Cleanup Fund (SB 445) received $187 million with an increase of 21 PYs statewide. Stormwater Resource Planning was given $381,000 from the Waste Discharge Permit Fund and three, two-year, limited term positions. The legislation amended the Budget Act of 2014 and accelerated approved FY15/16 funds to FY14/15 for a limited term increase of $22.6 million to support drought-related activities and a $4 million limited term increase to provide interim drinking water to Disadvantaged Communities with contaminated drinking water supplies. These positions are all at the State Board. A complete summary has been provided at the back of the EO Report and a complete FY15/16 Budget may be found on the Governor's website.

NORTH

3. **2015 Lake Tahoe State of the Lake Report**– *Daniel Sussman*

Water Board staff attended the public release event for the Lake Tahoe State of the Lake Report (Report). The event was well attended by nearly 100 interested members of the public and agency staff. The Report, produced by the UC Davis Tahoe Environmental Research Center, presents annual monitoring and research findings for the Lake Tahoe Basin. UC Davis has conducted continuous monitoring of Lake Tahoe since 1968, and the Report includes long term status and trend details coupled with new and innovative research work. Below are some of the key conclusions.

The Report documents climate change And drought impacts on the Lake. The winter of 2013-14 had the lowest number of freezing days (29) recorded in more than 100 years, and precipitation was only 61 percent of the long term average. Consequently, Lake Tahoe waters are getting warmer, and the 2014 annual average surface temperature was an all-time high (53° F). The warm water is less dense than cold water, essentially floating on top of the cold water and creating a boundary between warm and cold known as a thermocline. Increased water temperature above the thermocline makes it more difficult to achieve deep lake mixing. This past year the lake mixed to 440 feet in depth, far short of its maximum depth of 1,645 feet. Without deep lake mixing the nutrient load being introduced from cold, deep waters is greatly reduced, effectively limiting algae production in shallow waters. The lack of storms this past year limited the amount of stormwater and associated pollutants entering the lake.

As a result, the annual average transparency was 77.8 feet – the best in more than a decade.

In 2014, Lake Tahoe's water level dropped roughly one half foot below the lake's natural rim. The lowest level in the past 100 years was measured in November 1992 when the lake was 2.75 feet below the rim. As lake level declines the shoreline moves further from land, complicating marina operations and leaving many piers and boat launches high and dry.

The Report also provides information on nearshore conditions. Periphyton (attached algae) measurements continue to show variability from site to site. The variability is a product of the drought and the monitoring method. UC Davis monitors periphyton in 0.5 meters of water. As the lake level dropped, the monitoring locations shifted. The periphyton observed in low-water conditions are different species with different growth patterns. While the biomass measured is less than in the past, it is not necessarily a marker of nearshore water quality improvement.

A UC Davis postdoctoral researcher, Shohei Watanabe, developed a *blueness* index to apply to Lake Tahoe. His investigation showed that blueness and clarity do not correspond. Blueness is more associated with low levels of phytoplankton and nutrient inputs, whereas clarity is more associated with low levels of fine sediment particles. The Lake Tahoe TMDL addresses the clarity standard and primarily focuses on reduction of fine sediment particles entering the lake. However, the TMDL also requires the reduction of nutrient inputs to the Lake.

4. **Lassen County Fair Kiddie Korner–** *Carly Nilson and Cindy Wise*

Water Board staff participated in the Lassen County Fair's children's corner. Sponsored in part by the Lassen County Farm Bureau, the children's corner showed youth how farmers and ranchers can provide reliable food sources through responsible stewardship of land and water.

Some of the educational stations included learning about farming and the how things grow. No event would be complete without learning about the water cycle and the importance to agriculture. Children pretended they were a water droplet and rolled dice to see how they move through the water cycle. At each new location, they collected a bead to make a bracelet. The bracelet was to remind them of all the places a water droplet can go. Their water droplet moved many places including clouds, glaciers, ocean, rivers, lakes, animals, plants, soil, and the groundwater. Children and parents alike enjoyed the activity as children learned about the different processes including evaporation, transpiration, and precipitation.

5. ***Leviathan Mine, Alpine County*** – *Hannah Schembri and Doug Carey*

The Water Board's contractor completed seasonal treatment of acid mine drainage (AD) stored in onsite evaporation ponds. This year's treatment effort neutralized and removed metals from approximately 2.5 million gallons of AD. Other routine site maintenance activities included removing sediment from onsite concrete surface water drainage ditches and installing temporary best management practices to reduce the transport of sediment to the site drainage system. Water Board staff continues collaboration with El Dorado Department of Agriculture (EDDA) for ongoing invasive weed abatement activities. The EDDA visited the site for purposes of evaluating current conditions regarding invasive weeds, and applied herbicide to tall whitetop and dyers woad.

Under contract with the Water Board, the United States Geological Survey (USGS) monitored surface water and AD source flows at 15 locations on, and in the vicinity of Leviathan Mine every six weeks. USGS and Water Board staff collected real-time provisional flow and stage recordings for six stations: Adit, Pit Underdrain (PUD), Station 1, Station 15, Station 25, and Pond 1. Detailed information may be found on the USGS website.

Water Board staff reviewed and commented on the following documents prepared by Atlantic Richfield (AR):

- Preliminary Design Drawings for proposed infrastructure to allow the transfer of AD from the upper most evaporation ponds to AR's High Density Sludge (HDS) treatment system, also referred to as the Upper Pond Water Conveyance System
- *Revised Draft Interim Combined Treatability Investigation Report* which summarizes AR's various efforts to assess the feasibility of using their HDS treatment system to provide seasonal treatment of four primary sources of AD (Adit, PUD, Channel Underdrain, and Delta Seep). The Report included the results of bench-, pilot-, and field-scale testing of the HDS process.
- *Evaluation of Historical and Remedial Investigation Feasibility Study Surface Water Data* which evaluates surface water conditions based on data collected by the Water Board from 1994 through 2010 and data collected by AR during 2012 and 2013. Water Board staff provided comments to USEPA.
- *Ground Water Evaluation Summary, Technical which* presents AR's current understanding of groundwater conditions at the site.

The information contained in the Summary, along with associated interpretations is expected to be updated as groundwater investigations are ongoing.

6. **100 Percent Compliance with the Timber Waiver Monitoring Report Requirements** *– Jim Carolan*

The Timber Waiver requires enrollees of projects with the highest potential impacts to water quality to conduct visual monitoring on effectiveness, winter implementation, and forensics, or to submit a report of non-operation. The monitoring results are due to the Water Board by July the following season. Of the 53 current reports received, 53 were submitted on time, 36 were reports of non-operation, and no water quality violations were noted.

Effectiveness monitoring is an evaluation of management measures and infrastructure within the activity area following the winter period, typically between March and June, to determine the effectiveness in preventing sediment discharge to surface water and protecting water quality. Winter implementation monitoring is required if work was conducted during the winter period. Forensic monitoring must be completed soon after significant rain and consists of monitoring roads, surface waters, watercourse crossings, skid trails, waterbody buffer zones, landings, burned areas, and unstable areas. A statement of non-operation is required if a project has not been operated on during the prior year.

Based on Water Board staff discussions with project implementers, the high number of projects not in operation is largely due to the harvesting and processing of salvage logs from burn areas in California which has become a top priority. Salvage logs from burn areas must be harvested within the first two years of the fire or the logs will lose value because of significant deterioration.

Although Water Board staff continues to process new Timber Waiver applications for fuel reduction and forest restoration in unburned areas, the number of applications is fewer than previous years. With fewer applications to review and process, Water Board staff increased field visits to ensure water quality is being protected.

7. Lake Tahoe Beach Sand Aluminum Sampling Project – *William Chen*

Water Board staff completed a sampling project to compare aluminum concentrations in Lake Tahoe beach sands to recent aluminum concentrations found in dredged material from the Tahoe Keys Property Owners Association's (TKPOA) dredging/beach replenishment project. Samples of beach sand or dredge material were sent to commercial laboratories where they took sand mixed with deionized water, and then analyzed the liquid portion for total dissolved aluminum. Sand samples were also analysed for total aluminum. The aluminum concentrations exceeded U.S. EPA aquatic toxicity levels (chronic aquatic toxicity level - 87 micrograms per liter (µg/L); acute aquatic toxicity level - 750 µg/L) established for surface waters.

Water Board staff collected beach sand samples at Kings Beach, Tahoe City Beach, Sugar Pine Point Beach, Meeks Bay Beach, Baldwin Beach, El Dorado Beach, Ski Run Beach, and Lakeside Beach. The results provide a snapshot of aluminum concentrations present in beach sands on Lake Tahoe's north, west, and south shores. The results also provide information about aluminum that could potentially be released from the sands into Lake Tahoe.

Total aluminum concentrations from the beach sand samples ranged from 390 mg/kg to 9,200 mg/kg. These concentrations are well below the Human Health Screening Level of 77,000 mg/kg; aluminum level concentrations above

77,000 mg/kg can have a negative effect on children. The total dissolved aluminum concentrations in lab-created samples ranged from 99 µg/L to 3,300 µg/L with two of the samples, one from Tahoe City Beach (1,100 µg/L), and one from El Dorado Beach (3,300 µg/L), producing aluminum concentrations exceeding U.S. EPA's acute aquatic toxicity level of 750 µg/L.

For comparison, three samples of the TKPOA dredging material had total aluminum concentrations ranging from 3,200 mg/kg to 5,500 mg/kg, also well below the Human Health Screening Level of 77,000 mg/kg, and within the range of Water Board staff sampling results. The three corresponding lab-created samples produced total dissolved aluminum concentrations ranging from 1,200 µg/L to 3,200 µg/L, exceeding U.S. EPA's acute aquatic toxicity level of 750 µg/L.

Geology can play a significant role in the varying aluminum concentrations found in Lake Tahoe beach sands. Aluminum is a typical part of many mineral grains found in sands, since it is the third most abundant element in the earth's crust behind oxygen and silicon. However, the presence of aluminum typically diminishes as the sand weathers over time. Additionally, other factors can affect aluminum concentrations in beach sands, such as sand importation and roadway stormwater runoff that carries a variety of pollutants onto the beach.

Of the eight different beaches sampled, the highest aluminum concentrations were found at three beaches (Tahoe City, Sugar Pine Point, and El Dorado). Additionally, Tahoe City Beach has had sand imported from sources outside the Tahoe Basin on at least two occasions, and the El Dorado Beach sample was intentionally taken in an area affected by roadway stormwater runoff, which would contain some traction sand and eroded soils. All of these conditions likely contribute to the higher aluminum concentrations.

Water Board staff has amended the Clean Water Act Section 401 Water Quality Certification (401 Certification) issued for TKPOA's dredging/beach replenishment project in response to TKPOA's request to extend its beach replenishment area and the above-referenced sampling results. The amendment allows TKPOA to increase the length of its beach replenishment activities from approximately 720 feet of beach to approximately 2,000 feet of beach. The amendment also requires TKPOA to remove a limited amount of dredged material with the highest total aluminum concentrations (5,500 mg/kg), and to spread the remaining dredged material on the upper portions of its beach area moving eastward. Water Board staff believes that this combination of measures strikes a fair balance between the uncertainty regarding the potential for the aluminum in TKPOA's beach replenishment materials to adversely affect Lake Tahoe's water quality and beneficial uses, and the need to protect Lake Tahoe's water quality and beneficial uses. The amended 401 Certification also requires monitoring of lake waters adjacent to the beach replenishment areas to evaluate if these additional measures do effectively protect aquatic life (meet or are below the U.S. EPA criteria). However, the Water Board retains all of its regulatory and enforcement options should the monitoring results prove otherwise.

8. **Sierra Water Work Group Workshop presents "Legal and Legislative Strategies to Protect our Headwaters"** - *Rich Booth*

The Sierra Water Work Group (SWWG) presented a one-day workshop on August 10 at the Kings Beach Events Center. Liz Mansfield with Sierra Water Work Group and Peter Pumphrey with State Bar of California, Environmental Law Section, hosted the event. Mr. Pumphrey challenged participants to generate good ideas and to suggest ways to be heard.

Twelve Integrated Regional Water Management (IRWM) Groups comprise the SWWG. Eight of the 12 gave status updates on the projects in their watershed. Common themes included the benefits of collaboration between IRWM Groups for managing shared projects and funding opportunities, primarily though the Proposition 1 Water Bond.

A SWWG Americorps member and a consultant gave a demonstration of an interactive map-based data management tool. The GIS-based tool can be used to display data for IRWM projects by clicking on the project's location on the topographic base map that clearly outlines the watershed.

Guest Speaker Debbie Davis-Franco, Community and Rural Affairs Advisor and Local Drought Liaison in the Governor's Office of Planning and Research, spoke of the governor's drought efforts. She also presented a challenge unique to the rural mountain terrain of the Sierras – many of the aquifers that supply our water are in fractured volcanic rock as opposed to the alluvial aquifers of the valleys. Storage capacity in fractured rock aquifers are more difficult to predict. This presents groundwater management challenges to the rural communities that rely on the groundwater.

Expert Panel discussions included topics such as the recent groundwater legislation for sustainability, legal tools for protecting in-stream flows, upper watershed resources, and help for disadvantaged communities. The experts emphasized certain tools available, including the use of reasonable and beneficial use to protect water quality and quantity in the Sierras from downstream interests that could degrade the Sierra's human and ecological water uses.

The following are select highlights of the "Issue Area" afternoon breakout session discussions:

- Issue Area #1 – Groundwater. Identify and protect groundwater recharge areas for good quality water and effective percolation for recharge. Identify the highest beneficial uses to afford this protection (e.g., domestic use is higher priority than irrigation use).
- Issue Area #2 – Surface Water. Provide venues for California legislators to have better connection to the area by inviting them to visit and tour the region. Forest health, its importance and methods to enhance, was another topic of discussion.
- Issue Area #3 – Disadvantaged Communities (DACs). A major topic of this issue was how DACs should be defined. Use of tools such as EnviroScreen was causing some DACs in our region to be cut out of opportunities for "cap and trade" dollars and some Prop 1 money – including air quality, traffic congestion, and unemployment criteria. Many of the areas of the Sierra don't have this data and/or more appropriate indicators should be used in these rural areas.

After the breakout sessions, all the attendees convened together, in a final group session to assess what we learned and where we are headed. In addition to the ideas presented in the breakout sessions, other "good ideas" included enhancing private funding sources, get the most out of the Proposition 1 funding, get the federal land management agencies more involved with the IRWM Groups, and evaluate other areas with fractured rock aquifer problems similar to the Sierra Nevada region.

The participants all agree that outreach is important, but the best idea on "how to be heard" was the suggestion to help form a "Sierra Headwaters" Caucus in the California legislature, particularly as an engagement tool to improve legislators' awareness of the interconnectivity of both surface and groundwater. The speakers from Sacramento, having experience with the legislature, endorsed the caucus idea as a viable and effective way to accomplish the goals of the SWWG.

The Lahontan Water Board and staff perform various water quality outreach and education activities. We present good ideas and expect to be heard. Conversely, Water Board and staff should continue be receptive to beneficial ideas of others and be prepared to act according to our mission to protect, restore, and enhance water quality in our region.

9. **Tahoe Keys Property Owners Association Integrated Weed Management Plan Status** - *Bruce Warden*

The Tahoe Keys Property Owners Association (TKPOA) 2014 Waste Discharge permit requires submittal of an Integrated Weed Management Plan (IWMP) by January 31, 2016. TKPOA has been very active in a multi-faceted IWMP development process, which includes an IWMP development workgroup, environmental review workgroup, and solicitation of comments on the IWMP from a panel of experts. Members of the expert panel are from UC Davis, UN Reno, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the California Department of Food and Agriculture. TKPOA held a public meeting of the expert review panel's findings on August 11, 2015 in South Lake Tahoe.

The draft IWMP proposes several means of aquatic weed control such as bottom barriers, diver-assisted suction removal, mechanical harvesting, and use of aquatic herbicides over a five-year period. The current permit does not authorize the use of aquatic herbicides—the Water Board would have to grant an exemption to the Basin Plan prohibition of pesticide use, which following US EPA approval of the pesticide exemption criteria, an acceptable CEQA document, and a new NPDES permit. The expert panel expressed unanimous acceptance of the draft IWMP plan. The public expressed the following concerns about the IWMP:

- Potential for herbicide migration to nearby Tahoe Keys drinking water wells
- The plan addressed the symptoms of the problem and not the cause
- Will herbicide retreatment be needed in the future?
- The plan does not address loading of nutrients
- What are the roles and participation of other land owners in the Tahoe Keys Marina?
- What is the fate of weeds after killing?

The public expressed some ideas for alternatives to aquatic herbicides, including dewatering the Tahoe Keys lagoons to facilitate weed removal, and using high intensity light at depth to kill the light-sensitive invasive aquatic weeds. These alternatives would have to go through the environmental review process to evaluate the potential impacts.

Concurrent with the public meeting, the draft plan was made available to the public for review and comment. Water Board staff will submit comments.

The final IWMP will be submitted in early 2016 for Executive Officer acceptance under the terms of the permit.

SOUTH

10. **Palmdale Regional Aquifer Storage and Recovery Project** – *Cephas Hurr*

Staff met with Palmdale Water District and Los Angeles County Sanitation Districts No. 20 (Palmdale) in July to discuss the Palmdale Regional Aquifer Storage and Recovery project. The project will blend recycled water from District 20 with State Water Project water that will be percolated into the underground aquifer at a 160 acre recharge basin site. There will be 16 recovery wells in a square formation at some distance from the percolation ponds. The water will then be pumped back to the Palmdale Water Districts distribution system from a 2-acre distribution site complete with disinfection

Three needs were identified:

a. Install monitoring wells before the construction of the recharge project to establish background water quality before percolation begins;
b. Prepare an anti-degradation analysis to comply with State Board resolution 68-16 that would primarily evaluate the amount of salt added to the aquifer; and
c. Include measures to prevent the formation of tri-halomethanes in groundwater that would be formed by using recycled water disinfected with chlorine.

Palmdale Water District completed a Feasibility Study and a Notice of Preparation and is currently preparing an Environmental Impact Report, Preliminary Design (30%) and Title 22 Engineering Report. The environmental documents are expected in the first quarter 2016.

11. **Caltrans Joint Port of Entry, Interstate 15 near the CA/NV Border, Stormwater Inspection –** *Tom Browne*

Staff made a pre-termination stormwater permit inspection with Caltrans staff of the new Joint Port of Entry facility on Interstate-15, seven miles south of the California-Nevada Border. The facility will include an agricultural inspection station, truck weighing scales, California Highway Patrol and Caltrans vehicle maintenance and storage, and even a jail. Only half of the structures have been funded so far for construction, but Caltrans has completed the permanent post-construction stormwater best management practices installation, and they have requested termination of statewide stormwater construction permits. This facility has a high degree of public prominence as it will be seen by all travelers on Interstate 15.

The Ivanpah Dry Lake is downstream of the facility and is routinely subjected to heavy thundershowers in summer and early fall. Flash-flood type flow regularly inundates the Ivanpah Dry Lake. A tortoise preserve, managed by BLM, is located between the engineered drainage channel shown on the photo below and the south eastern fence of Brite Source Solar project. BLM required Caltrans to install a tortoise fence along the entire length of the main engineered drainage channel. During the inspection, we found that this fence has collapsed from the force of a recent storm flow caused by a mild summer storm and caused the erosion shown. Unless corrected, this situation will worsen.

Satellite photos show many braided ephemeral drainages flowing northeast toward the I-15, heading for the Ivanpah Dry Lake. Caltrans designed for sheet flow across the desert, ignoring the importance of flow along the larger ephemeral channels. Caltrans did not design for any

channels to feed into their main channel, and as a result, these flows along these existing drainages concentrated along a dirt road running parallel to their property fence, then flow breached violently at the location shown, digging a pit four feet deep on the upstream side of the fence. As evidenced by this erosion from a mild summer storm, the design failed dramatically. We told Caltrans that the project was not ready for stormwater permit termination and requested them to address the erosion and install adequate post-construction Best Management Practices before submitting a termination request.

The project is also regulated under a Notice of Applicability issued under the dredge and fill waste discharge requirements. Caltrans provided staff with preliminary plans to install rock rip-rap and check dams in the engineered channel. We advised Caltrans that the proposed work was acceptable. In addition, we requested Caltrans install adequate Best Management Practices to address: (1) the large erosional features that are forming and (2) proper allowance for stormwater sheet flow to cross through the tortoise fence.

Jay Cass at left, with Ron Lamaster, inspecting erosion in main drainage channel; view west toward Brite Source solar farm

12. **City of Barstow Wastewater Treatment Plant Compliance with Enforcement Orders** – *Ghasem Pour-ghasemi*

The City of Barstow (City) completed upgrades to its wastewater treatment plant and disposal percolation ponds in July 2015. The Phase I improvement was approved by the City at a cost of 8.1 million dollars, of which 2.8 million dollars was from federal grants. The Phase I money was used to:

a. Rebuild and upgrade two aeration basins to improve wall structural stability between the oxidation and anoxic basins and to improve nitrogen removal.
b. Rebuild four secondary clarifiers for improved solids removal.
c. Rebuild four effluent disposal ponds to improve percolation and install slope protection.
d. Replace effluent pipelines and valves to all ponds.
e. Install new sludge dewatering equipment and a screw press.
f. Install a new Supervisory Control and Data Acquisition system to allow real time viewing of operational processes.
g. Increase staffing levels for wastewater operations from 5 to 10 persons.
h. Rebuild and upgrade the sludge gravity thickener and other operational improvements to the treatment system.

Phase II is not yet scheduled but will address additional improvements to wastewater treatment. Currently, one aeration basin, one primary clarifier and two secondary clarifiers are in use. The remainder of the plant is idle due to lack of sufficient wastewater inflow.

Nitrogen Removal

The effluent average total nitrogen over the last year has been 7.31 mg/L as nitrogen. This demonstrates the improvements have been effective in reducing total effluent levels. In 2004, the effluent total nitrogen concentration was 34 mg/L as nitrogen. The Cease and Desist Order (CDO) required effluent not to exceed a total nitrogen concentration of 26 mg/L as nitrogen (30-day average). This was achieved by the efficient plant operations overseen by City staff. Thus, the City has fully complied with CDO. However, we do not recommend rescinding this enforcement action until revised waste discharge requirements are issued to establish an enforceable total nitrogen effluent limitation of 10 mg/L as nitrogen. Staff intends to prepare revised requirements. The revised requirements would also consolidate groundwater monitoring required under the waste discharge requirements and the groundwater cleanup order.

Nitrate Pollution Groundwater Cleanup

The Cleanup and Abatement Order (CAO) required the City to design and construct a system to capture and treat nitrate-polluted groundwater downgradient of the northern irrigation field in the Soapmine Road neighborhood. Amended CAO issued on July 10, 2013, extended the required deadline to begin groundwater extraction by an additional 40 days to November 10, 2014. However, quarterly groundwater monitoring data indicated the presence of perchlorate in some of the monitoring wells along the Soapmine Road neighborhood. The perchlorate is migrating from a contaminated site about three miles up-gradient of the City's nitrate source area (formerly used Northern Irrigation Field). The City is not responsible for the perchlorate pollution, but the two plumes of perchlorate and nitrate are now co-mingled.

Water Board and City staff agreed that the perchlorate and nitrate groundwater pollution should be addressed concurrently. To accomplish this, the City had to modify and enlarge the size of its proposed extracted groundwater treatment system design. The City presented the new treatment plan design in early September

2014. Water Board staff asked the City to apply for all available cleanup funds, grant money, and report to the Water Board by early February 2015. Due to the co-mingled plume, I issued an amendment in December 2014, allowing an extension to start the cleanup system by November 10, 2015.

In January 2015, the Water Board met with the City and asked for scaled down and more reasonable design than the original plan to adequately address removal of perchlorate and nitrate from the groundwater. In May 2015, the City requested additional time in order to address the perchlorate treatment portion of the project. In July 2015, I issued a CAO amendment granting an additional two-year extension to November 2017. In the meantime, I instructed the City and Water Board staff to meet regularly to establish reasonable actions the City and the Water Board will take to address nitrate and perchlorate plumes.

Residential Well Sampling and Replenishment Water in the Soapmine Road Area

The City continues to conduct residential well sampling of drinking water wells in the Soapmine Road area, as required by the CAO. In the second quarter of 2015, the City sampled 33 residential wells. Only one residential well exceeded the drinking water maximum contaminant level for nitrate as nitrogen of 10 mg/L. A total of eight private wells showed nitrate as nitrogen concentrations exceeding 5 mg/L. The nitrate concentrations are going down. However, when the groundwater elevation increases then Water Board staff expects the nitrate concentrations will increase as nitrate is flushed from the source area. Currently, the City is supplying 33 residences with uninterrupted replacement water service (bottled water) where nitrate has been detected at concentrations at or exceeding 5 mg/L nitrate-as N at any time in the past. One action we want the City to explore is providing residents with uninterrupted whole-house replacement water. The City has also requested to reduce the number of residential wells sampled. Water Board staff intends to recommend allowing reduced sampling with triggers to resume sampling if groundwater elevations increase.

13. Molycorp Minerals, LLC, Filed for Chapter 11 Bankruptcy, June 2015 - *Christy Hunter*

In July Water Board staff received notice from the U.S. Bankruptcy Court for the District of Delaware of the commencement of a Chapter 11 bankruptcy case for Molycorp Minerals, LLC, (Molycorp).

Since this notification was received, discussions ensued between Water Board and Molycorp staff, who have indicated that Molycorp's planned restructuring will include a limited shutdown of some of the mine facilities. However, Molycorp will continue to perform all required monitoring, reporting, and maintenance of the closed and active waste management units on the Mountain Pass Mine site, as specified by the various Water Board Orders. The ongoing interim groundwater remediation and associated groundwater monitoring and reporting program will also continue without interruption, as required by the existing Cleanup and Abatement Order to address the groundwater contamination.

On July 22, 2015, Molycorp received the Bankruptcy Court's approval for an improved debtor-in-possession financing package, which allows for a net financing of $130 million. In accordance with the court-appointed financing package, Molycorp must come to an agreement with their creditors on the limited operations plan for the Mountain Pass mine site by August 20, 2015, and to complete implementation of that plan no later than October 20, 2015. Currently, Molycorp is developing a plan for their reorganization and is forecast to exit

Chapter 11 bankruptcy protection in January 2016.

14. **New Staff in the Victorville Office** – *Patrice Copeland and Cindi Mitton*

A new Engineering Geologist in our Victorville office, Jeffrey Fitzsimmons comes to the State from private consulting with over 27 years of experience in engineering geology and geotechnical engineering. Jeff graduated with a Bachelor of Science degree in geology from California State University, San Bernardino; and he is a licensed Professional Geologist. He started work August 17 and will be working in the Land Disposal Program unit, which includes work on landfills, mines, surface impoundments, site cleanups, and industrial storm water. In addition, Jeff voluntarily serves the greater geological community of southern California and the Inland Empire as the Vice President of the Inland Geological Society as well as the Vice Chair of the Association of Environmental and Engineering Geologists, Inland Empire Chapter. The position Jeff fills was vacated by a transfer of Tom Browne to our South Lahontan Regulatory Unit.

Two new permanent positions have also been added to the Department of Defense and Cleanup Sites unit. These replace two limited term positions created in 2013 to accommodate increased work in the Department of Defense program, primarily at Air Force sites. I am pleased to announce that Todd Battey, who has been working in the unit in a temporary position since 2014, will be filling one of the positions. The other position will be filled by Alonzo Poach who joined our office August 24. Alonzo brings his experience from private consulting where he has worked for approximately 6 years dealing with investigations and cleanups at private and military sites. Alonzo also worked as a Student Assistant in our office, while he earned his B.S. Degree in Geology from California State University, San Bernardino. Work in the Department of Defense and Sites Cleanup unit includes oversight of activities at Military sites including compliance and cleanup sites.

15. **Hinkley Area Residential Well Study Completed** - *Ghasem Pour-ghasemi*

In December 2013, Water Board staff identified two separate areas in Hinkley where nitrate as nitrogen concentrations in groundwater exceeded the 10 mg/L maximum contaminant level to levels as high as 156 mg/L. Also, in early 2014, staff became aware that the State Board's Division of Drinking Water would promulgate a primary drinking water standard for chromium VI of 10 ug/L. That meant that Pacific Gas and Electric Company would no longer be required to provide replacement water where chromium VI was less than 10 ug/L. It was believed that some residential wells exhibiting chromium VI were also polluted by legacy dairy operations. I directed staff to conduct a survey of willing residential well owners in the Hinkley area to establish whether those wells exceeded drinking water standards for any other constituents, including nitrate.

In June 2014, staff targeted three areas (southeast, northwest, and northeast Hinkley) that were most likely affected by confined animal operations and/or agricultural activities. Within those areas, staff canvassed residents and obtained the property owner's permission to sample wells. A total of 41 residential wells were sampled and analyzed for general minerals, metals and nitrate. After obtaining laboratory results, a copy of the results were mailed to residents along with a letter explaining the results and identifying any constituents that exceeded primary or secondary drinking water standards. All data were also uploaded to the State Board's GAMA database for future assessment.

Overall, 19 of the 41 sampled wells did not meet primary drinking water standards for one or more elements. Of the 19 residential wells exceeding primary standards, 10 exceeded the standard for nitrate. Cleanup and Abatement Orders issued to four dairies require these dairies to provide bottled water to eight of the 10 residences whose wells did not meet drinking water standards for nitrate. However, two of these 10 residences are not receiving replacement water either because the dairy is not active or there is no clear source of nitrate pollution.

There are nine residential wells exceeding the primary drinking water standards for constituents not related to nitrate. Eight of these residential wells exceed the standard for arsenic and one exceeded the mercury standard. It is unclear, but likely, the elevated arsenic and mercury in these areas is naturally occurring.

In summary, 11 residences exceed the primary drinking water standards for nitrate, mercury, and arsenic that are not receiving bottled water. Those owners and/or residents were informed in writing that their wells do not meet primary drinking water standards. No further staff action is planned to address these residential wells.

16. **Dairy Status Report** – *Ghasem Pourghasemi*

I have instructed staff to draft a General Order that would be issued to all confined animal facilities after it is approved by the Board. The General Order will address: 1) unlined washwater disposal ponds, 2) over application of manure and wash water to land, 3) storm water runoff from the corrals and dairy site, and 4) prevent further groundwater pollution caused by the operation. Developing the Order will take several months and involve several meetings with stakeholders: dairymen, Natural Resources Conservation Service (NRCS) staff, and Resource Conservation District (RCD) members. Early stakeholder input will allow staff to prepare an effective order. The NRCS and RCD have been actively involved in the recent past board actions involving dairies. The NRCS also has technical personnel and access to federal matching funds assisting these facilities with order compliance. Staff intends to host an October meeting with stakeholders followed by other meetings as the Order is being developed.

We are currently aware of seven dairies and three heifer ranches in operation. Of the ten, only three are regulated by the Water Board under waste discharge requirements. Other facilities have some enforcement orders issued against them. Three dairies closed operations in the last two years, of which two were under waste discharge requirements. The waste discharge requirements for N & M dairy will not be rescinded until site cleanup is completed (anticipated by 2016).

Approximately 35 residents are receiving replacement drinking water from four dairies that have polluted down gradient residential supply wells. These dairies were issued Cleanup and Abatement Orders (CAO) requiring them to sample residential wells around the dairies once every nine months and analyze for nitrate and total dissolved solids. Further, replacement bottled water must be provided for any residents with nitrate and total dissolved solids concentrations close to or over the primary and secondary drinking water standards. The table below summarizes the current status of all existing and closed dairies as well as heifer ranches:

Summary of Region 6 Confined Animal Facilities

Facility	WDRs	CAO to Provide Water?	Groundwater Pollution?	Status
Active Dairy				
Harmsen Dairy	No	Yes	Yes	A CAO will not be issued. Rather, the facility will be covered under the General Order.
A & H Dairy	Yes	No	Yes	The Dairy stopped flood irrigation of pure wash water and now mixes wash water with fresh water that is applied to crops at an agronomical rate.
Dutch Dairy	Yes	No	Yes	The Dairy over applies washwater to irrigate a small pasture area. The Dairy is pursuing additional land acquisition to achieve application of washwater. The facility will be covered under the General Order.
B & E Dairy	Yes	No	Yes	A CAO was drafted and released to the public for comment. The CAO would require the Dairy to provide replacement water. The Advisory team has requested additional information. Issuance is pending.
John Van Leeuwen Dairy	No	No	Unknown	The Dairy has unlined washwater disposal ponds. Staff intends to sample nearby residential wells in 2015.
Hinkley Dairy	No	Yes	Yes	Operating
High Desert Dairy	No	No	No	Operating
Active Heifers				
Desert View Dairy	No	Yes	Yes	Dairy closed and groundwater pollution from past dairy operations. Heifer ranch has moved in.
Green Valley Farms	No	No	No	Operating
Alamo Mocho Ranch	No	No	No	Operating
Closed				
N & M Dairy	Yes	Yes	Yes	Dairy ceased operation as of July 2013. Cleanup in progress.
Meadow Brook Dairy	Yes	No	No	Dairy closed and permit **rescinded** in June 2013.
DVD Heifer Ranch	No	Yes	Yes	Moved to DVD location. Corrals and structures removed.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

September 2015 STANDING ITEMS

The Water Board has requested that it be kept informed of the status of a number of issues. The following table lists the items, the reporting frequency and the dates the items are due.

ENTIRE BASIN		
ISSUE	**FREQUENCY**	**DUE DATE**
Lake Tahoe Nearshore	Semi-Annual	January 2016 July 2017
Status of Basin Plan Amendments	Semi-Annual	January 2016 July 2016
Status of Grants	Annually	March 2016
Caltrans Statewide General Permit/Tahoe Basin	Annually	July 2016
Tahoe Municipal Permit	Annually	July 2016
County Sanitation Districts of Los Angeles - District No. 14	Annually	January 2016
County Sanitation Districts of Los Angeles - District No. 20	Annually	January 2016
Status of Dairies	Semi-Annual	~~August~~ September 2015 (EO Report Item 16) ~~January~~ February 2016
City of Barstow	Annually	September 2015 (EO Report Item 12)
Pacific Gas & Electric Company	Each Southern Board Meeting	September 2015 (Agenda Item 2)
Leviathan Mine	Semi-Annual	January 2016 July 2016
Salt & Nutrient Management Plans	Semi-Annual	November 2015 May 2016
Onsite Septic Tanks	Annually	June 2016
Bridgeport Grazing Waiver	Annually	June 2016
Bacteria Water Quality Objectives Project	Semi-Annual	November 2015 May 2016

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EO's Monthly Report
July 16, 2015 to August 15, 2015
Unauthorized Waste Discharges*

COUNTY: LASSEN

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
USDA Forest Service Lassen National Forest Susanville/Eagle Lake Rec Area CS	Near Merrill Campground, Eagle Lake Recreation Area	North	Yes	7/30/2015	500 Gallons	Pump station mechanical failure resulted in 500-gallons raw sewage discharge to unpaved surface.	Level switch failure in pump station created discharge from force main. No surface waters affected.	Level switch replaced, 100 gallons recovered, and affected area disinfected.

COUNTY: PLACER

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Tahoe City PUD/Tahoe City Public Utility Dist CS	357 Sunnyview Drive, Tahoma	North	Yes	7/29/2015	100 Gallons	Sewer main blockage resulted in 100-gallon raw to unpaved surface.	Root Intrusion created blockage, causing discharge from lateral cleanout. No surface waters affected.	Blockage cleared and lateral repaired, 40 gallons recovered, and affected area disinfected.

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Hesperia City/City of Hesperia CS	Main Street between Pyrite and Aqueduct, Hesperia	South	Yes	7/20/2015	6,900 gallons	Storm water inflow resulted in 6,900-gallon raw sewage discharge to ephemeral wash.	After heavy thunderstorms, two cleanouts were found uncapped allowing mud and water to flow into the City main. City main capacity was exceeded causing discharge from manhole. Surface waters affected.	Cleanouts capped, and affected area cleaned up.

*All discharges to surface waters are included in the report.
Discharges to land of less than 100 gallons are not included in the report.

EO's Monthly Report
July 16, 2015 to August 15, 2015
Unauthorized Waste Discharges*

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Chevron Mining Inc R6(+)/Onsite Evaporation Ponds	P-16 tailings seepage collection system	South	Yes	7/21/2015	2,500 gallons	Unauthorized discharge of 2,500 gallons of leachate seepage to soil.	Discharger reported rainfall entering P-16 tailings seepage collection system during intense rainfall events and exceeded system capacity. No surface waters affected.	Spill was cleaned up, affected soil removed and to be disposed in the lined tailings pond.
Molycorp Minerals LLC/Mountain Pass Mine & Mill Ops	Paste Plant	South	Yes	7/27/2015	1,200 gallons	Unauthorized discharge of 1,200 gallons of reclaimed wastewater, paste mix slurry, to ground.	Discharger reported leaking concrete secondary containment caused discharge. No surface waters affected.	Spill was cleaned up, affected soil removed and to be disposed in the lined tailings pond.
Barstow City/Barstow CS	Sixth Street and Buena Vista, Barstow	South	Yes	8/11/2015	900 Gallons	Sewer main blockage resulted in 900-gallon raw sewage discharge to paved surface.	Construction debris created blockage causing discharge from a manhole during a paving project. No surface waters affected.	Blockage cleared, and affected area disinfected.

*All discharges to surface waters are included in the report.
Discharges to land of less than 100 gallons are not included in the report.

ENCLOSURE 4

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Summary of
No Further Action Required Letters Issued
July 16 - August 15, 2015
September 2015 EO Report

State of California
Lahontan Regional Water Quality Control Board

The Executive Officer finds the release of petroleum products at the following sites poses a low threat to human health, safety, and the environment. Therefore, these petroleum cases were closed in accordance with the Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closure (Resolution 2012-016). The Policy recognizes contaminant mass often remains after the investment of reasonable remedial effort and this mass may be difficult to remove regardless of the level of additional effort and resources invested. The establishment of the Policy is an effort to maximize the benefits to the people of the State of California through the judicious application of available resources.

Date Closure Issued	Site Name	Site Address	Case Number	Additional Information
July 17, 2015	Hank's Service Station, Inc.	38519 6th Street East Palmdale, Los Angeles County	6B1920025T	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006775
July 27, 2015	Former ARCO #0064	500 Main Street East Barstow, San Bernardino County	6B3600192T	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100711
August 13, 2015	Cal Nev Terminal George AFB Jet Fuel Spill	13334 Air Expressway Blvd., Victorville, San Bernardino County	SLT6V008	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT6V0083835
August 14, 2015	Goodspeed Auto Fuel	11210 I Avenue, Hesperia, San Bernardino County	6B3620003T	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000002345#
August 14, 2015	OWS 789-S1 AGE Wash Rack	Building 789, Phantom Road Former George Air Force Base, San Bernardino County	T10000001733	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000001733

Additional links:

General Policy information: http://www.swrcb.ca.gov/ust/lt_cls_plcy.shtml#policy081712

Copy of Policy: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

Implementation Plan http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/110612_6_final_ltcp%20imp%20plan.pdf

ENCLOSURE 5

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M E M O R A N D U M

TO: LAHONTAN WATER BOARD MEMBERS

FROM: LAURI KEMPER
ASSISTANT EXECUTIVE OFFICER
LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

DATE: August 28, 2015

SUBJECT: QUARTERLY VIOLATIONS REPORT, 2nd QUARTER 2015

Attached is the Quarterly Violations Report for April 1, 2015 – June 30, 2015 (2nd Quarter 2015). I have included in this memo with the Quarterly Violations Report (1) a Synopsis of 2nd Quarter Violations; and (2) a Table of Pending Formal Enforcement Cases.

Synopsis of 2nd Quarter 2015 Violations

There were 86 violations entered into the CIWQS and SMARTS databases for the 2nd Quarter 2015, compared to the 76 violations entered for the previous quarter. Approximately 18 percent of the violations were associated with NPDES storm water construction and industrial inspections, with another approximately 26 percent of the violations associated with three facilities [Oak Tree Inn (10 violations), Tahoe Keys Property Owners Association (7 violations) and Heavenly Ski Area (6 violations)]. The remaining violations were widely distributed across multiple facilities.

There were two (2) Priority 1 violations associated with the Barstow Wastewater Treatment Facility. These are violations associated with groundwater contamination (nitrates) due to historical discharge practices and are being addressed through two cleanup and abatement orders. One of the cleanup and abatement orders requires the City of Barstow to provide replacement water to a number of residents whose private wells have been adversely affected by the historical discharge practices, and the other cleanup order is addressing groundwater cleanup.

There were sixty-five (73) Priority 2 violations, a number of which were a result of Water Board staff inspecting NPDES storm water construction and industrial project/facilities. Additionally, violations related to Oak Tree Inn, Tahoe Keys Property Owners

Association Dredge and Beach Replenishment Project, Heavenly Valley Resort, and Victor Valley Wastewater Treatment Authority require some additional discussion. The higher number of NDPES storm water related violations are largely due to Lahontan's traditional inspection season getting underway. Water Board staff inspected multiple projects/facilities and largely observed minor deficiencies with best management practices. Water Board staff provided direction to correct the deficiencies, and Dischargers quickly responded.

The Oak Tree Inn Wastewater Treatment Facility flow violations are because the Discharger installed a package treatment plant with greater capacity than indicated in the 2001 report of waste discharge. Since then, the Facility has had numerous flow violations because the Discharger operated within the plant capacity but violated flow limits established in the permit based on the report of waste discharger. Subsequently, the Discharger requested a permit amendment to allow a flow increase from 5,100 gallons per day to 7,000 gallons per day. Water Board staff will be requesting additional information from the Discharger to ensure the proposed flow increase would maintain receiving water quality objectives. One option staff is considering is regulating the Facility under the statewide general order for small domestic systems and require effluent monitoring to evaluate plant operations.

The Tahoe Keys Property Owners Association Dredge and Beach Replenishment Project violations were due to water quality exceedances of chronic and acute aquatic toxicity criteria established in the 401 Water Quality Certification for soluble aluminum. The results both during and after the dredging work, exceeded both the chronic and acute aquatic toxicity standards. Water Board staff undertook a Tahoe beach sand sampling project to provide some background aluminum data with which to compare the Tahoe Keys Property Owners Association aluminum results. Staff is planning to use the information gathered from the Discharger and staff monitoring to inform future dredging projects and permit conditions.

Heavenly Valley Ski Resort's violations are associated with parking lot storm water discharges, which are addressed in the recently updated waste discharge requirements adopted in May. The updated waste discharge requirements require Heavenly Valley to develop a Feasibility Report by November 1, 2015, addressing traction sand quality/use, brine application, and an engineering evaluation of its StormFilter™ storm water treatment system. Water Board staff anticipate report recommendations and the results of the engineering evaluation will result in significant progress towards addressing the cause of these violations.

Victor Valley Water Reclamation Authority (VVWRA) had two effluent violations (total cyanide and bis(2-ethylhexyl) phthalate) that currently appear to be subject to mandatory minimum penalties. Water Board staff is currently investigating these and other effluent limitation violations that may be subject to mandatory minimum penalties, and anticipates addressing such violations with an Expedited Payment Letter. The Water Board will have an opportunity to review any settlement proposal that comes out of this process, and/or to request a full evidentiary hearing.

There were twelve (12) Priority 3 violations, half of which were associated with late self-monitoring reports and the other half associated with first-time minor deficiencies with best management practices.

Table of Pending Formal Enforcement Cases

Facility	Alleged Violations Summary	Schedule Action (Quarter/Year)
Susanville CSD WWTP – Susanville, Lassen Co.	Exceeding effluent limitations; subject to MMPs	3rd Quarter, 2015
Dutch Dairy – Helendale, San Bernardino Co.	Nitrate pollution in groundwater	3rd Quarter, 2015
B & E Dairy – Barstow, San Bernardino Co.	Elevated nitrates in groundwater	3rd Quarter, 2015
California Dept. of Fish and Wildlife – Hot Creek Hatchery	Exceeding effluent limitations subject to MMPs	3rd Quarter, 2015
California Dept. of Fish and Wildlife – Fish Springs Hatchery	Exceeding effluent limitations subject to MMPs	3rd Quarter, 2015
Pacific Gas and Electric – Hinkley Compressor Station, San Bernardino Co.	Ongoing chromium groundwater contamination	4th Quarter, 2015
Spalding Tract Resident – Sheila Miner	Failure to connect or remove onsite wastewater disposal system as required by Cease and Desist Order	1st Quarter, 2016

Attachment: 2nd Quarter 2015 Quarterly Violations Report

Quarterly Violations Report
April 1, 2015 - June 30, 2015

Priority	Agency	Facility	Violation ID	Violation Type	Violation Program	Date Occurred	Violation Description	Comments	Corrective Action	Enforcement Action	County
1	Barstow City	Barstow WTF Mojave River Bed	994416	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	4/30/2015	Exceeded MCLs for Nitrate as N (10 mg/L) and TDS (1,000 mg/L) in multiple wells during April of 2015. Violates Board Order No. R6V-94-0026 I.B.5	Nitrate as N: MW 3-4 (11.0 mg/L), and MW 6 (12.0 mg/L). TDS: MW 2-1 (2200 mg/L), MW 3-2 (1700), MW 3-3 (1300 mg/L), MW 3-4 (2200 mg/L).	The City has issued a RFP for the design and construction of a groundwater remediation treatment. Since then the City has found perchlorate in the nitrate plume preventing further actions.	null	San Bernardino
1	Barstow City	Barstow WTF Mojave River Bed	994417	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	5/13/2015	Exceeded MCLs for Nitrate as N (10 mg/L) in two wells during May of 2015. Violates Board Order No. R6V-94-0026 I.B.5	Nitrate as N: MW3-4 (11 mg/L) and MW6 (12 mg/L).	The City has issued a RFP for the design and construction of a groundwater remediation treatment. Since then the City has found perchlorate in the nitrate plume preventing further actions.	null	San Bernardino
2	Adelanto Public Utility Authority	Adelanto WWTP	993569	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	4/16/2015	Exceeded MCLs for Nitrate as N (10 mg/L) in one well during the April of 2015. Violates Board Order No. R6V-2013-0058, WDR III.A.	Nitrate as N: MW-8 (24 mg/L)	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	Bishop City	Bishop Sewage Treatment Plant	993276	Water Quality -> Effluent -> CAT1	WDRMUNILRG	4/30/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) 30-Day Average limit is 50 mg/L and reported value was 61 mg/L.	Violated Board Order No. R6V-94-0025 Section I.A.3.	Exceeded limit due to algae blooms. Filtered samples were well below limit (24 mg/L).	null	Inyo
2	Bishop City	Bishop Sewage Treatment Plant	993277	Water Quality -> Effluent -> CAT1	WDRMUNILRG	6/30/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) 30-Day Average limit is 50 mg/L and reported value was 78 mg/L.	Violated Board Order No. R6V-94-0025 Section I.A.3.	Exceeded limit due to algae blooms. Filtered samples were well below limit (24 mg/L).	null	Inyo
2	Ca Dept. of Fish & Game Independence	Mojave River Fish Hatchery NPDES	993605	Water Quality -> Effluent -> CAT1	NPDNONMUNIPRCS	6/17/2015	Total Suspended Solids (TSS) Monthly Average limit is 6 mg/L and reported value was 9 mg/L at M-001.	Violates Board Order 2011-0081 IV.A.1	Hatchery staff will conduct water samples earlier in the month in order to allow for a re-test should a sample show over the monthly average.	null	San Bernardino
2	Cal Neva	Cal Neva Casino, 2 Stateline Rd, Kings Beach	S857374	SW - Deficient BMP Implementation	CONSTW	6/11/2015	Several BMP deficiencies were noted in violation of section VIII. of B.O. No. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
2	California City	California City WTF	992057	Other Codes	WDRMUNILRG	4/1/2015	In violation of not having the current CPO in the proper grade.	null	null	Oral Communication	Kern
2	California City	California City WTF	992289	Reporting -> Deficient Reporting	WDRMUNILRG	4/30/2015	No Coliform data from weekends and holidays. Violates Board Order No. R6V-00-094 MRP I.B.2. No sludge data. Violates Board Order No. R6V-00-094 MRP I.D.	null	Discharger did not propose or identify any corrective actions taken.	null	Kern
2	California City	California City WTF	993337	Reporting -> Deficient Reporting	WDRMUNILRG	5/31/2015	No Coliform data from weekends and holidays. Violated Board Order No. R6V-00-094 MRP I.B.2.	null	Discharger did not propose or identify any corrective actions taken.	null	Kern
2	California City	California City WTF	993338	Reporting -> Deficient Reporting	WDRMUNILRG	6/30/2015	No Coliform data from weekends. Violates Board Order No. R6V-00-094 MRP I.B.2.	null	Discharger did not propose or identify any corrective actions taken.	null	Kern
2	Caltrans District 3	Highway 89 between Emerald Bay to Mee	S857308	SW - Deficient BMP Implementation	CONSTW	5/19/2015	A few minor BMP deficiencies were identified in violation of section VIII. of BO No. R6T-2001-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	El Dorado
2	Caltrans District 3	Highway 89 between Tahoma and Tahoe	S857309	SW - Deficient BMP Implementation	CONSTW	5/20/2015	A few deficient BMPs were noted in violation of section VIII. of B.O. No. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
2	Caltrans District 3	Highway 89 between the Y and Cascade	S857317	SW - Deficient BMP Implementation	CONSTW	5/26/2015	Minor BMP deficiencies in violation of section VIII of B.O. No. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	El Dorado
2	Caltrans District 3	HWY 89 Tahoma	S857341	SW - Deficient BMP Implementation	CONSTW	6/3/2015	A few sediment control BMPs were deficient, including lack of needed sweeping in violation of section VIII. of B.O. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	El Dorado

Quarterly Violations Report
April 1, 2015 - June 30, 2015

Priority	Agency	Facility	Violation ID	Violation Type	Violation Program	Date Occurred	Violation Description	Comments	Corrective Action	Enforcement Action	County
2	CH2M Hill(+)	Fort Irwin WTF	994139	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	4/13/2015	Groundwater exceeded the MCL (1000 mg/L) and the SMCL (500 mg/L) for TDS and the MCL (10 mg/L) for Nitrate as N in multiple wells: and MCL for chloride (2 mg/L) in one well and fluoride SMCL (4 mg/L). Violates Board Order 6-04-05, WDR section I.B.2.	STP-1: 1300 mg/L, STP-3R: 1200 mg/L, STP 4: 1100 mg/L, STP-6: 1100 mg/L, STP-7: 960 mg/L, STP-8: 1400 mg/L, STP-9: 1200 mg/L, STP-10: 1200 mg/L, STP-11: 1100 mg/L, STP-12: 690 mg/L, STP-13: 1100, STP-14: 1200 mg/L, STP-15: 3700 mg/L. STP-1: 35 mg/L, STP-15: 17 mg/L. Chloride and fluoride STP-1: 2.9 mg/L, STP-3R: 4.4 mg/L, STP-4: 5.9 mg/L, STP-5: 3 mg/L, STP-6: 2.8 mg/L, STP-7: 4.3 mg/L, STP-8: 3.2 mg/L, STP-9: 2.5 mg/L, STP-10: 9.2 mg/L, STP-11: 5.3 mg/L, STP-12: 14 mg/L, STP-13: 3.5 mg/l, STP-14: 2.4 mg/L.	No corrective action was given.	13267 Letter	San Bernardino
2	CPCR	California Correctional Center	S857235	SW - Deficient BMP Implementation	INDSTW	5/11/2015	55 gallon drum of mineral oil stored outside without secondary containment. SWPPP section 4.1.4 states that all material will be stored inside. site Representative stated the drum will be move into a building.	null	null	Verbal Communication	Lassen
2	Edward Donovan, Jr.	RND Enterprises	994277	Reporting -> Deficient Reporting	WDRMUNIENROTH	6/30/2015	Failed to provide results for one parameter related to effluent quality. Violates Board Order No. 97-10-DWQ-08 MRP I.C.	The SMR was missing the effluent DO results for the entire second quarter of 2015.	Discharger did not propose or identify any corrective actions taken.	null	Los Angeles
2	Heavenly Mountain Resort	Heavenly Mountain Resort	994174	Water Quality -> Effluent -> CAT1	WDRNONMUNIPRCS	5/7/2015	Nitrogen, Total (as N) Instantaneous Maximum limit is 0.5 mg/L and reported value was 0.74 mg/L.	Violates Board Order No. R6T-2015-0021, WDR I.A.1.	Discharger to submit feasibility study addressing parking lot runoff by November 1, 2015, as required by WDRs.	null	El Dorado
2	Heavenly Mountain Resort	Heavenly Mountain Resort	994175	Water Quality -> Effluent -> OEV	WDRNONMUNIPRCS	5/14/2015	Turbidity Instantaneous Maximum limit is 20.0 NTU and reported value was 26.0 NTU.	Violates Board Order No. R6T-2015-0021, WDR I.A.1.	Discharger to submit feasibility study addressing parking lot runoff by November 1, 2015, as required by WDRs.	null	El Dorado
2	Heavenly Mountain Resort	Heavenly Mountain Resort	994176	Water Quality -> Effluent -> CAT1	WDRNONMUNIPRCS	5/14/2015	Nitrate, Total (as N) Instantaneous Maximum limit is 0.5 mg/L and reported value was 0.78 mg/L.	Violates Board Order No. R6T-2015-0021, WDR I.A.1.	Discharger to submit feasibility study addressing parking lot runoff by November 1, 2015, as required by WDRs.	null	El Dorado
2	Heavenly Mountain Resort	Heavenly Mountain Resort	994177	Water Quality -> Effluent -> OEV	WDRNONMUNIPRCS	6/29/2015	Turbidity Instantaneous Maximum limit is 20.0 NTU and reported value was 220.0 NTU.	Violates Board Order No. R6T-2015-0021, WDR I.A.1.	Discharger to submit feasibility study addressing parking lot runoff by November 1, 2015, as required by WDRs.	null	El Dorado
2	Heavenly Mountain Resort	Heavenly Mountain Resort	994178	Water Quality -> Effluent -> CAT1	WDRNONMUNIPRCS	6/29/2015	Phosphorus, Total (as P) Instantaneous Maximum limit is 0.10 mg/L and reported value was 0.30 mg/L.	Violates Board Order No. R6T-2015-0021, WDR I.A.1.	Discharger to submit feasibility study addressing parking lot runoff by November 1, 2015, as required by WDRs.	null	El Dorado
2	Heavenly Mountain Resort	Heavenly Mountain Resort	994180	Water Quality -> Effluent -> CAT1	WDRNONMUNIPRCS	6/29/2015	Nitrogen, Total (as N) Instantaneous Maximum limit is 0.50 mg/L and reported value was 4.40 mg/L.	Violates Board Order No. R6T-2015-0021, WDR I.A.1.	Discharger to submit feasibility study addressing parking lot runoff by November 1, 2015, as required by WDRs.	null	El Dorado
2	Helendale CSD	Helendale Silverlakes STP	991478	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	4/16/2015	Exceeded MCLs for TDS (1,000 mg/L) and Chloride (250 mg/L) in multiple wells during the month of April 2015. Violates Board Order No. R6V-2001-0039 WDR I.C.2.	TDS: MW2 (3330 mg/L) and MW4 (1950 mg/L); Chloride: MW2 (1050 mg/L), MW3 (299 mg/L), and MW4 (552 mg/L).	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino

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Priority	Agency	Facility	Violation ID	Violation Type	Violation Program	Date Occurred	Violation Description	Comments	Corrective Action	Enforcement Action	County
2	Inyo Cnty IWM	Lone Pine Class III Landfill	992796	Water Quality -> Receiving Water -> Groundwater	LFOPER	4/14/2015	Exceeded the laboratory detection limit for 1,1-Dichloroethane (0.11 ug/L), Trichlorofluoromethane (0.13 ug/L), Tetrachloroethene (0.13 ug/L), and Trichloroethene (0.085 ug/L) in two wells during the first semi-annual monitoring period. VOCs in groundwater are of a known release. Violates Board Order No. 6-95-70, WDR section II.A.3. and MRP I.A.3.b respectively.	1,1-Dichloroethane: MW-3 (0.88 ug/L). Trichlorofluoromethane: MW-3 (0.5 ug/L), MW-2 (0.92 ug/L). Tetrachloroethene (PCE): MW-2 (0.63 ug/L), MW-3 (0.38 ug/L). Trichloroethene (TCE): MW-3 (0.15 ug/L).	Water Board staff will be working with the Discharger for future corrective action.	null	Inyo
2	Inyokern CSD	Inyokern CSD WTF	991496	Order Conditions	WDRMUNILRG	5/28/2015	The last quarterly SMR submitted was 2014 Q3. No annual SMRs ever submitted. Violates Board Order No. 6-93-077 II.D.1 and MRP II.B.1 and 2.	Staff spoke with Discharger and informed him that SMRs need to be submitted in a timely manner, and one has not been received since 2014 Q3. The next quarterly report 2015 Q2 is due on 7/15/2015.	Discharger did not propose or identify any corrective actions taken.	Oral communication	Kern
2	June Lake PUD	June Lake PUD STP	993278	Water Quality -> Effluent -> CAT1	WDRMUNILRG	5/31/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Daily Maximum limit is 45 mg/L and reported value was 53.8 mg/L.	Violated Board Order No. R6V-93-0019 Section I.A.2.	Maintain current process relative to reduced wasting activities and increased aeration utilizing the East and West brushes 12 hours per day. We have also reached out to a Brewery Business that opened in June 2014, the business is continuing to remove the yeast and residual mash from entering the sewer system once the brewing is complete. The yeast and mash are disposed of offsite from the business.	null	Mono
2	June Lake PUD	June Lake PUD STP	993279	Water Quality -> Effluent -> CAT1	WDRMUNILRG	5/31/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Annual Average (Mean) limit is 30 mg/L and reported value was 53.8 mg/L.	Violated Board Order No. R6V-93-0019 Section I.A.2.	Maintain current process relative to reduced wasting activities and increased aeration utilizing the East and West brushes 12 hours per day. We have also reached out to a Brewery Business that opened in June 2014, the business is continuing to remove the yeast and residual mash from entering the sewer system once the brewing is complete. The yeast and mash are disposed of offsite from the business.	null	Mono
2	Lac Minerals (USA) Inc	Colosseum Gold Mine	992656	Water Quality -> Receiving Water -> Groundwater	LNDISPOTH	5/27/2015	Exceeded concentration limits for Sulfate (135 mg/L) in one well during the second quarter monitoring period. Exceeding concentration limits is due to a known release. Violates Board Order 6-96-11, MRP section 1.b.2.	MW-4 (160 mg/L)	The facility is currently in corrective action and working with Water Board staff to remediate the release.	null	San Bernardino
2	Lake Arrowhead Community Service	Lake Arrowhead CSD WTFS	994288	Water Quality -> Effluent -> CAT1	WDRMUNILRG	4/30/2015	Nitrogen, Total (as N) 30-Day Average limit is 8 mg/L and reported value was 8.23 mg/L.	Violated Board Order No. R6V-2009-0037 I.A.4.	Discharger stated in the SMR that the Total Nitrogen delivered to the District's Hesperia EMS for the quarter averaged 6.73 mg/L.	null	San Bernardino
2	Lake Arrowhead Community Service	Lake Arrowhead CSD WTFS	994289	Water Quality -> Effluent -> CAT1	WDRMUNILRG	6/6/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Daily Maximum limit is 30 mg/L and reported value was 30.2 mg/L.	Violated Board Order No. R6V-2009-0037 I.A.4.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	Mojave PUD	Mojave STP	993340	Water Quality -> Effluent -> CAT1	WDRMUNILRG	5/4/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Daily Maximum limit is 60.0 mg/L and reported value was 61.0 mg/L.	null	null	null	Kern
2	Molycorp Minerals LLC	Mountain Pass Mine & Mill Ops	992490	Order Conditions	LNDISPOTH	6/28/2015	Unauthorized discharge of 700 gallons of reclaimed wastewater + paste tailings mix slurry to ground. Violates Board Order No. R6V-2010-0047, WDR II.A.6 and II.A.7.	Discharger reported mechanical failure of pressure relief valve.	cleanup of waste, stored in bunker cv4 (paste plant) for disposal into paste tailings lined waste unit.	Oral Communication	San Bernardino

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Priority	Agency	Facility	Violation ID	Violation Type	Violation Program	Date Occurred	Violation Description	Comments	Corrective Action	Enforcement Action	County
2	Placer County Department of Public Works	Alpine Meadows Road Bridge Replacement Project	S857227	SW - Deficient BMP Implementation	CONSTW	5/6/2015	BMPs were not installed properly or were missing in violation of Attachment D (Risk Level 2 BMP Requirements) of BO No. 2009-0009-DWQ.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
2	Placer County Department of Public Works	Alpine Meadows Road Bridge Replacement Project	S857342	SW - Deficient BMP Implementation	CONSTW	6/9/2015	Minor BMP deficiencies in violation of Attachment D. section E. of B.O. 2009-0009-DWQ.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
2	Placer County Department of Public Works	Kings Beach CCIP	S857013	SW - Deficient BMP Implementation	CONSTW	4/22/2015	A few BMP items were deficient and needed corrective actions. Violates section VIII. of BO No. R6T-2001-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
2	Placer County Department of Public Works	Kings Beach CCIP	S857384	SW - Deficient BMP Implementation	CONSTW	6/17/2015	A few BMP maintenance deficiencies were noted in violation of section VIII. of B.O. No. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
2	Ridgecrest City	Ridgecrest Reclamation Irrigation Site	993395	Reporting -> Deficient Reporting	REC	5/31/2015	Failed to provide results for parameters related to coliform data. Violated Board Order No. R6V-1993-0086 MRP I.B.	No Total Coliform, or chlorine residual data.	Discharger did not propose or identify any corrective actions taken.	null	Kern
2	Ridgecrest City	Ridgecrest Reclamation Irrigation Site	994275	Reporting -> Deficient Reporting	REC	6/30/2015	No coliform or chlorine residual data. Violated Board Order No. R6V-1993-0086 MRP I.B.	null	Discharger did not propose or identify any corrective actions taken.	null	Kern
2	Ridgecrest City	Ridgecrest WTF	993394	Water Quality -> Effluent -> CAT1	WDRMUNILRG	5/31/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Monthly Average (Mean) limit is 30.0 mg/L and reported value was 32.0 mg/L.	null	Elevated BOD attributed to seasonal weather changes and algal blooms and is monitoring the discharge levels.	null	Kern
2	Ridgecrest City	Ridgecrest WTF	994274	Reporting -> Deficient Reporting	WDRMUNILRG	6/30/2015	No Freeboard data. Violated Board Order No. R6V-2000-0056 MRP I.A.5.	null	Discharger did not propose or identify any corrective actions taken.	null	Kern
2	Squaw Valley PSD	Squaw Valley Public Svc Dist CS	989682	Water Quality -> Sanitary Sewer Overflow/Spill/	SSOMUNISML	4/26/2015	Debris-Rags;flushable wipes caused 19220.0 gallons of sewage to spill from Manhole at 91 Winding Creek to Surface Water;Unpaved surface. Surface water body affected (Sewage flowed at an estimated rate of 30gpm over exposed ground about 100 feet then into Squaw Creek. Squaw Creek is a Tributary of the Truckee River.).	Spoke with the Discharger this line had been cleaned and inspected, via a camera, last October. From the description of the response it appeared to have been appropriate. no follow up action currently proposed.	Cleaned-Up;Restored flow;Returned Portion of Spill to Sanitary Sewer System;Other Enforcement Agency Notified.	null	Placer
2	Tahoe Asphalt Inc	Tahoe Asphalt Inc	S857403	SW - No SWPPP	INDSTW	6/26/2015	No SWPPP on site. Violates Order No. 97-03-DWQ, WDR Section A, No. 10.a.	Directed Discharger to submit a copy of SWPPP by July 1st.	Discharger updated new SWPPP to SMARTs on July 1, 2015.	Staff Enforcement Letter	El Dorado
2	Tahoe Asphalt Inc	Tahoe Asphalt Inc	S857404	SW - Deficient BMP Implementation	INDSTW	6/26/2015	Deficient BMP implementations which include poor housekeeping, inadequate preventative maintenance and spill response procedures.	null	null	null	El Dorado
2	Tahoe Keys Marina & Yacht Club	Tahoe Keys Marina Entrance Channel Maintenance Dredge	991556	Order Conditions	CERDREDGE	5/22/2015	Standard Condition #5 in the CWA section 401 WQC, which states the project must be constructed in accordance with the description in the application, was violated by not placing the material where indicated in the application.	null	null	null	El Dorado
2	Tahoe Keys Marina & Yacht Club	Tahoe Keys Marina Entrance Channel Maintenance Dredge	991558	Unauthorized Discharge	CERDREDGE	5/25/2015	Excavator was reported and verified to be in the water on planks instead of on a barge.	null	Upon inspection, General Manager, Robert Spinnato, was told to remove the excavator from the water, which he did by the end of the day.	null	El Dorado

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2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994962	Water Quality Effluent -> CAT1	CERDREDGE	4/4/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the four day arithmetic average concentration of 0.087 mg/L chronic aquatic toxicity for aluminum.	The average concentration of two samples was 0.35 mg/L during active dredging.	null	null	El Dorado
2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994966	Water Quality Effluent -> CAT1	CERDREDGE	4/11/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the one-hour concentration for acute toxicity of 0.750 mg/L for aluminum.	0.9 mg/L Aluminum near the channel mouth during active dredging.	null	null	El Dorado
2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994967	Water Quality Effluent -> CAT1	CERDREDGE	4/11/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the one-hour concentration for acute toxicity of 0.750 mg/L for aluminum.	1.0 mg/L aluminum in the channel near the curtain during active dredging.	null	null	El Dorado
2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994963	Water Quality Effluent -> CAT1	CERDREDGE	4/11/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the four day arithmetic average concentration of 0.087 mg/L chronic aquatic toxicity for aluminum.	The average concentration of two samples was 0.95 mg/L during active dredging.	null	null	El Dorado
2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994964	Water Quality Effluent -> CAT1	CERDREDGE	5/8/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the four day arithmetic average concentration of 0.087 mg/L chronic aquatic toxicity for aluminum.	0.4 mg/L aluminum during active dredging mid channel	null	null	El Dorado
2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994965	Water Quality Effluent -> CAT1	CERDREDGE	5/13/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the four day arithmetic average concentration of 0.087 mg/L chronic aquatic toxicity for aluminum.	The average concentration of 3 samples was 0.37 mg/L during active dredging.	null	null	El Dorado
2	Tahoe Keys POA	Tahoe Keys Property Owners Association West Channel Dredge and Beach Replenishment Project	994968	Water Quality Effluent -> CAT1	CERDREDGE	5/13/2015	Additional Condition #17 in the CWA section 401 WQC, which states that the Project must not cause soluble aluminum to exceed the one-hour concentration for acute toxicity of 0.750 mg/L for aluminum.	0.8 mg/L aluminum in the channel near the curtain during active dredging.	null	null	El Dorado
2	TR Lodging Enterprises Inc	Oak Tree Inn	993570	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	4/17/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.008 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993581	Water Quality -> Effluent -> CAT1	WDRMUNIOWTS	4/30/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Daily Maximum limit is 45.0 mg/L and reported value was 54.0 mg/L.	Violated Board Order No. R6V-2001-0032 I.A.3.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993582	Water Quality -> Effluent -> CAT1	WDRMUNIOWTS	4/30/2015	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) 30-Day Average limit is 30.0 mg/L and reported value was 54.0 mg/L.	Violated Board Order No. R6V-2001-0032 I.A.3.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993571	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	5/29/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.006 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino

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2	TR Lodging Enterprises Inc	Oak Tree Inn	993573	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	5/31/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.006 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993574	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	6/24/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.007 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993575	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	6/26/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.007 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993577	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	6/28/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.008 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993578	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	6/29/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.008 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	TR Lodging Enterprises Inc	Oak Tree Inn	993580	Water Quality -> Effluent -> OEV	WDRMUNIOWTS	6/30/2015	Flow Daily Maximum limit is 0.0051 MGD and reported value was 0.008 MGD.	Violated Board Order No. R6V-2001-0032 I.A.1.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	US Marine Corps Barstow Logistic Base	Nebo Domestic WTF	994296	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	4/15/2015	Groundwaters exceeded MCL for TDS (1000 mg/L) in multiple wells. and also exceed the MCL (250 mg/L) for Chloride in two wells:Violates Board Order 6-01-20. Section I.B.1.b.	TDS 1010 mg/L, NGW04: 1270 mg/L, NGW06: 1260 mg/L, MW-D: 884 mg/l, and NS2-2: 887 mg/L. Groundwater Chloride in two wells: NGW04: 275 mg/L, and NGW06: 271 mg/L.	No corrective actions was given.	null	San Bernardino
2	US Marine Corps Barstow Logistic Base	Yermo Domestic WTF	994295	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	4/15/2015	Violates Board Order 6-01-42. Section I.B.1.b.	Groundwater exceeds the MCL (500 mg/L) for TDS in multiple wells. YDMW-2: 677 mg/L, YDMW-4: 713 mg/L, YDMW-6 711 mg/L.	No corrective action given for exceeding the TDS MCL.	null	San Bernardino
2	US Marine Corps Barstow Logistic Base	Yermo Domestic WTF	993945	Water Quality -> Receiving Water -> Groundwater	WDRMUNILRG	6/16/2015	Groundwater exceeds the Nitrate as N MCL of 10 mg/LViolates Board Order Number: 6-01-42 for. Section I.B.1.c.	Yermo Domestic Wells 3/4 Nitrate as N in March and June 2014. March = 13.90 mg/L, June = 14.30 mg/L.	Yermo Domestic continues to monitor high Nitrates by hiring outside contractors to investigate the issues.	null	San Bernardino
2	US Tungsten Div of Stratcor	Rovana Housing Package STP	994084	Water Quality -> Effluent -> OEV	WDRMUNIOTH	6/3/2015	Dissolved Oxygen Instantaneous Minimum limit is 1.0 mg/L and reported value was 0.8 mg/L.	Violated Board Order No. R6V-1986-0111 I.A.6.	Discharger did not propose or identify any corrective actions taken.	null	Inyo
2	USDI National Park Service Death Valley	DVNM HDQ Furnace Creek WWTF	990152	Water Quality -> Effluent -> OEV	WDRMUNIOTH	4/15/2015	Flow Daily Maximum limit is 0.008 MGD and reported value was 0.081 MGD.	Violates Board Order No. R6V-1986-0084 I.A.1.	Concentrate from RO plant going into the sewer system now. Causing low DO to ponds and possible odor problems in the near future. Have requested a generator and aerators to resolve DO problem and avoid odor problems.	null	Inyo
2	Victor Valley Wastewater Reclamation Authority	Victor Valley Wastewater Reclamation Authority WTP	993556	Water Quality -> Effluent -> CAT2	NPDMUNILRG	5/31/2015	Bis (2-Ethylhexyl) Phthalate Monthly Average (Mean) limit is 1.8 ug/L and reported value was 3 ug/L at EFF-001.	Violated Board Order No. R6V-2013-0038 Section IV.A.1.a.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	Victor Valley Wastewater Reclamation Authority	Victor Valley Wastewater Reclamation Authority WTP	993561	Water Quality -> Effluent -> CAT2	NPDMUNILRG	5/31/2015	Cyanide, Total (as CN) Monthly Average limit is 3.6 ug/L and reported value was 5 ug/L at EFF-001.	Violated Board Order No. R6V-2013-0038 Section IV.A.1.a.	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	Victor Valley Wastewater Reclamation Authority	Westwinds Golf Course	993543	Reporting -> Deficient Reporting	REC	4/30/2015	No Turbidity data. Violates Board Order No. R6V-2003-0028 MRP I.B.3.a-h.	null	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	Victor Valley Wastewater Reclamation Authority	Westwinds Golf Course	993544	Reporting -> Deficient Reporting	REC	5/31/2015	No Turbidity data. Violates Board Order No. R6V-2003-0028 MRP I.B.3.a-h.	null	Discharger did not propose or identify any corrective actions taken.	null	San Bernardino
2	Victorville City	SCLA Central WWTP-Victorville Water Dist	993565	Water Quality -> Effluent -> CAT1	WDRMUNILRG	5/31/2015	Nitrogen, Total (as N) Monthly Average limit is 6.1 mg/L and reported value was 13.8 mg/L.	Total Nitrogen (13.8 mg/L) exceeded maximum monthly average. Violates Board Order No. R6V-2014-01002 I.B.1.	Process adjustments to aeration blower on/off cycles. Total Nitrogen in effluent is already heading lower.	null	San Bernardino
3	Ca Dept of Forestry Bishop Calfire	Owens Valley Conser Camp WTF	990821	Reporting -> Late Report	WDRMUNIOTH	4/27/2015	Submitted quarterly SMR 12 days late. Violates Board Order No. R6V-96-0053 MRP II.C.	Quarterly SMR was due 04/15/2015and received 04/27/2015.	Discharger did not propose or identify any corrective actions taken.	null	Inyo
3	Caltrans District 3	Highway 89 between Tahoma and Tahoe City	S857248	SW - Deficient BMP Implementation	CONSTW	5/13/2015	Deficient BMP implementation in violation of section VIII. of B.O. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	El Dorado

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3	Caltrans District 3	Highway 89 between the Y and Cascade Road	S857226	SW - Deficient BMP Implementation	CONSTW	4/29/2015	Minor BMP deficiencies were noted in violation of section VIII of B.O. No. R6T-2011-0019.	null	Corrective actions were completed as required.	Staff Enforcement Letter	El Dorado
3	Caltrans District 9	HWY 395 Lee Vining Rockfall	S857330	SW - Deficient BMP Implementation	SWCALTRANS	5/27/2015	Minor oil spill needed clean up and equipment was encroaching on vegetation outside the work area. Violates Attachment D, section B. of B.O. 2009-0009-DWQ.	null	Corrective actions were completed as required.	Verbal Communication	Mono
3	Edward Donovan, Jr.	RND Enterprises	994415	Reporting -> Late Report	WDRMUNIENROTH	6/30/2015	Submitted quarterly SMR 24 days late. Violates Board Order No. 97-10-DWQ-08 MRP II.B.1.	Quarterly SMR was due on 07/15/2015 and received on 08/08/2015.	Discharger did not propose or identify any corrective actions taken.	null	Los Angeles
3	Federal Highway Administration CFLHD	Mooney Road	S857236	SW - Deficient BMP Implementation	CONSTW	5/11/2015	Project is complete and the Temporary BMP have been left in place on side slopes. Straw wattles are not meant to be left in place. Discharger responded June 19, MP should be removed.	null	null	Staff Enforcement Letter	Lassen
3	Fort Irwin National Training Center	Fort Irwin Class III Landfill	994482	Reporting -> Late Report	LFOPER	4/24/2015	Violates Board Order 6-00-18, MRP section IV.5. 2nd Semi-Annual report is due January 15, 2015. Report submitted April 24, 2015. Report is ~99 days late.	null	The discharger did not give corrective action for the late report.	null	San Bernardino
3	Fort Irwin National Training Center	Fort Irwin Class III Landfill	994484	Reporting -> Late Report	LFOPER	4/24/2015	Violates Board Order 6-00-18, MRP section IV.6. Annual report is due April 1, 2015. Report submitted April 24, 2015. Report is ~23 days late.	null	The Discharger did not provide corrective action for the late report.	null	San Bernardino
3	Honey Lake Power Co	Honey Lake Power Plant	991105	Reporting -> Late Report	WDRNONMUNIPRCS	4/15/2015	The SMR was due on April 15 2015 and was not received until April30, 2015. Violates Board Order No. 6-88-136 MRP, section III	Spoke with the Discharger in January 2015, for the previous late report violation. The Discharger requested that the report due date be changed to to the first day of the second month following the end of the quarter or basically 30 days after the end of the quarter. Will propose updating quarterly monitoring requirements and update the monitoring and reporting requirements.	No corrective Action,	Staff Enforcement Letter	Lassen
3	Placer County Department of Public Works	Alpine Meadows Road Bridge Replacement Project	S857014	SW - Deficient BMP Implementation	CONSTW	4/23/2015	Numerous BMP deficiencies were identified. Violates BMP requirements specified in Attachment D (Risk Level 2) of BO No.2009-0009-DWQ.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Placer
3	Placer County Department of Public Works	Lake Forest WQIP Panorama	S857303	SW - Deficient BMP Implementation	CONSTW	5/13/2015	Fiber rolls were not staked anywhere and had gaps underneath them.	null	null	Staff Enforcement Letter	Placer
3	Town of Truckee	SR89 Mouse hole	S857117	SW - Deficient BMP Implementation	CONSTW	4/23/2015	A few minor BMP deficiencies were noted. Violates BMP requirements specified in Attachment D (Risk Level 2) of BO No.2009-0009-DWQ.	null	Corrective actions were completed as required.	Staff Enforcement Letter	Nevada

ENCLOSURE 6

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SWAMP
Surface Water Ambient Monitoring Program

Management Memo	Perennial Streams Assessment 2015

THE PERENNIAL STREAMS ASSESSMENT (PSA):

An Assessment of Biological Condition using the new California Stream Condition Index (CSCI)

OBJECTIVE

The objective of this memo is to describe the biological condition of streams in California based on a next-generation indicator of stream health applied to a robust 13-year data set.

Overview

PSA stream surveys found that the majority of stream length in the Sierra Nevada and North Coast is in good biological condition, while the majority of stream length in the South Coast, Chaparral and Central Valley is in poor or very poor condition. Similarly, most of the stream length draining forested watersheds is in good condition, while most of the stream length draining watersheds dominated by agricultural and urban land use is in poor or very poor condition. On average, stream condition showed no directional change over time, either for better or for worse. Streams where phosphorous concentration or riparian disturbance exceeded thresholds had the greatest relative risk of biological impairment.

Wadeable streams and rivers provide vital resources for all Californians, including fresh drinking water, water for irrigation, healthy places to fish and swim, and critical habitat for freshwater organisms and other wildlife. Land use practices such as urbanization,

California Water Boards
State Water Resources Control Board
Regional Water Quality Control Boards

agriculture, logging and mining can have negative impacts on water and habitat quality and continue to expand in support of California's economy and growing population even as the state faces unprecedented drought. The Perennial Streams Assessment (PSA) has been California's primary means of monitoring the health of its wadeable streams and rivers since 2000. Over 1,300 unique perennial stream sites throughout the state have been sampled by PSA and its partner programs[1] using a statistical survey design where each sampled site represents a portion of the total wadeable stream length in California. Probability survey designs allow extrapolation of results from relatively few sampled sites to all wadeable stream length in the state, providing an objective means of assessing the health of the entire stream population. Benthic macro-invertebrates (BMIs) and algae were collected from each survey site as indicators of biological condition, together with associated data on the chemical and physical environment in each stream. Now in its 15th year, the PSA program provides a long-term, statistically robust data set to answer 4 key questions at the heart of SWAMP's statewide water quality program:

1. ***What is the biological condition of California streams?***
2. ***Is stream condition changing over time?***
3. ***What is the relative condition of streams draining agricultural, urban and forested landscapes?***
4. ***Which chemical and physical stressors have the strongest association with biological condition?***

Because of the rigor and scope of this program, PSA data also have been used as the foundation for a wide range of environmental management and assessment efforts including the State's Healthy Watersheds Partnership, The Nature Conservancy's Atlas of Freshwater Biodiversity and Freshwater Conservation Blueprint, Nutrient Numeric Endpoints, and the US Forest Service's Management Indicator Species program.

The California Stream Condition Index (CSCI): A New Biological Scoring Tool

The California Stream Condition Index (CSCI) is a new statewide biological scoring tool that translates complex data about individual BMIs found living in a stream into an overall measure of stream health (Mazor et al. in review). Finalized in 2013, the CSCI represents the next generation of biological indicator for assessing stream health in California. The CSCI combines two separate types of index that each provides unique information about the biological condition at a stream: a multi-metric index (MMI) that measures ecological structure and function, and an observed-to-expected (O/E) index that measures taxonomic completeness. Unlike previous MMI or O/E indices that were applicable only on a regional basis or poorly represented large portions of the state, the CSCI was built with a statewide dataset of nearly 600 reference sites[2] that represents the broad range of environmental conditions across California (Figure 1). The CSCI provides consistency and accuracy in the interpretation of biological data collected by both statewide and regional monitoring programs and will be the basis of the new statewide Biological Integrity Policy.

[1] Probability surveys began in California in 2000 with the USEPA's Environmental Monitoring and Assessment Program (EMAP) and were continued by PSA. Since 2009, the Southern Monitoring Coalition (SMC) has collected most of the probability data from southern coastal California and the US Forest Service has collected PSA-comparable data from National Forests in the Sierra Nevada.

[2] Reference sites are the core of any bioassessment program and set the benchmark for biological conditions expected when human activity in the landscape is absent or minimal (see Ode et al. (in review) for description of SWAMP's reference program).

CSCI scoring thresholds:

The CSCI was calibrated during its development so that the mean score of reference sites is 1. Scores that approach 0 indicate great departure from reference condition and degradation of biological condition. Scores > 1 can be interpreted to indicate greater taxonomic richness and more complex ecological function than predicted for a site given its natural environmental setting. In practice, CSCI scores observed from nearly 2000 study reaches sampled across California range from about 0.1 to 1.4. For the purposes of making a statewide assessment, three thresholds were established based on the 30th; 10th; and 1st percentiles of CSCI scores at reference sites. These three thresholds divide the CSCI scoring range into 4 categories of biological condition as follows: ≥0.92 = good condition; 0.91 to 0.80 = fair condition; 0.79 to 0.63 = poor condition; ≤0.62 = very poor condition.

This report, the first on statewide stream condition since 2011[3] and the first to use the CSCI in an assessment, summarizes and updates the major survey findings from the first 13 years of PSA (2000-2012) with regard to the 4 questions listed above. Objective answers to these questions provide a comprehensive interpretive context for all water quality programs in the state, and thus serve as a vital foundation for consistent statewide bio-objectives, development of nutrient criteria directly tied to aquatic life uses, support of long-term climate change monitoring, evaluation of the success of stream restorations, and prioritization of the healthiest streams and rivers to protect for future generations, just to name a few applications. The results in this report are based on 1,318 sampling sites (more than three times the number in Ode et al. 2011) that together represent an estimated 38,426 km of perennial, wadeable stream length in California. The results do not apply to an estimated 10,500km of large, non-wadeable rivers, nor do they apply to an estimated 226,668 km of non-perennial streams (nearly 5 times the length of perennial streams and large rivers combined) that were excluded from these surveys.

Figure 1. The California Stream Condition Index (CSCI) was calibrated with nearly 600 reference sites that represent the diversity of stream types throughout the state and is applicable statewide.

[3] The most recent PSA report (Ode et al. 2011) covered the first 8 years of survey data (2000-2007).

Question 1: What is the biological condition of California streams?

Answer: Approximately 44% (± 4%) of the statewide stream length is in good biological condition (Figure 2, see inset). Of the other 56%, approximately 34% is degraded (i.e., either in poor or very poor condition) and 22% is in fair condition. Results vary by PSA region however, with the North Coast and Sierra Nevada having the highest percentage of sites in good condition and the Central Valley having the lowest percentage of sites in good condition (Figure 2).

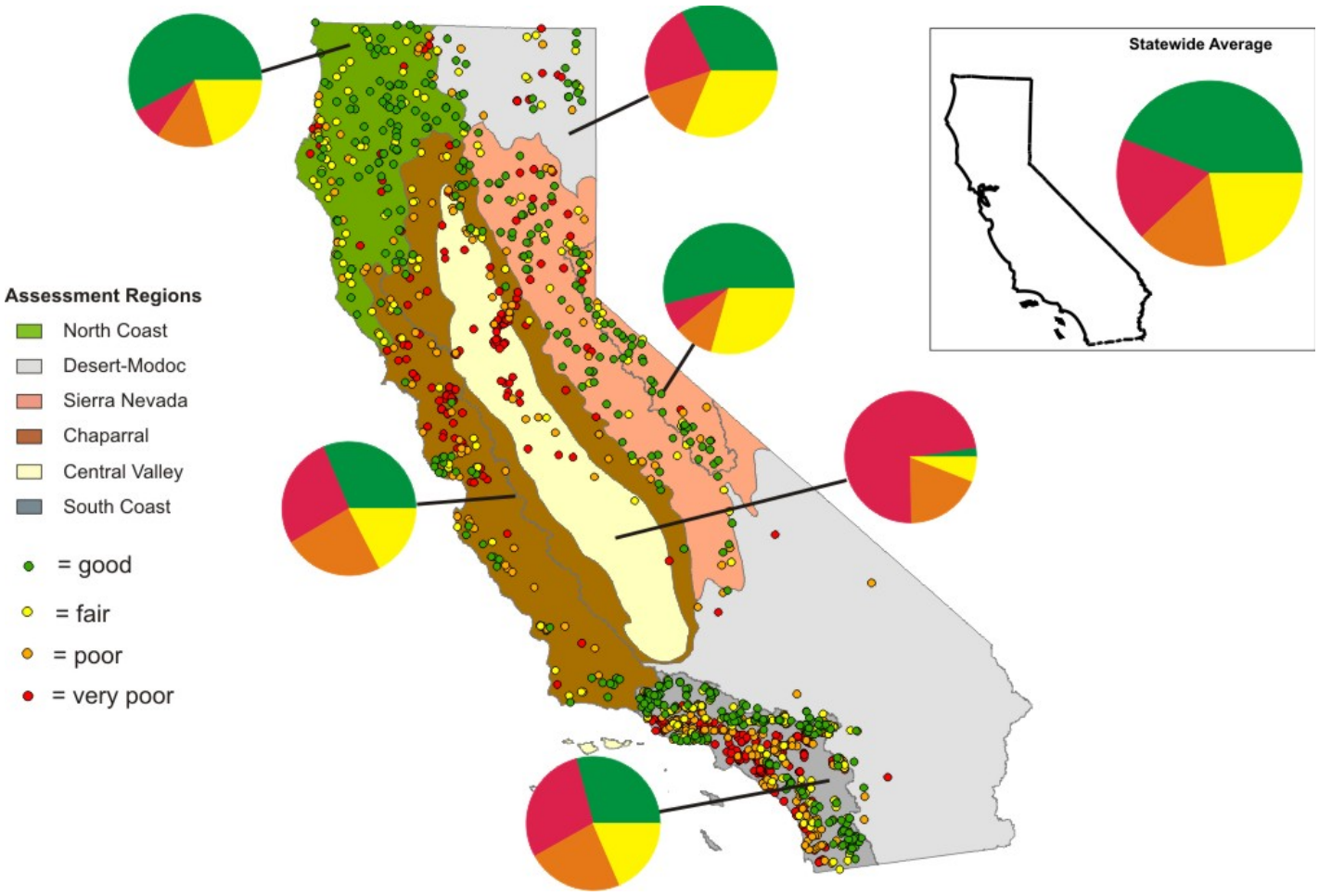


Figure 2. Map of 1,318 probability sites sampled by the PSA program in 2000-2012. Sampling sites are color-coded by biological condition according to CSCI score. Pie charts show percent of stream length in each of 4 condition categories by PSA region.

Question 2: Is stream condition changing over time?

Answer: Stream condition fluctuated somewhat during the first 13 years of PSA, but no trend (i.e., no consistent directional change over time) was observed (Figure 3). A moving average (a series of averages based on different subsets of the full dataset) was used to analyze inter-annual data for trends. Moving averages are often used with time-series data to smooth out short-term fluctuations and highlight longer-term trends or cycles. Annual results from PSA surveys were averaged for 4-year time blocks, with each block "shifting forward" one year by excluding the first year in the series and including the next year in the series (Figure 3). Over 50% of the stream length in California was estimated to be in good condition during the first 4 years of the study (2000- 2003; Figure 3). After that, good condition stream length decreased to approximately 42% of the total for the next 4 time blocks, then increased again starting with the 2005-2008 time block, and equaled or exceeded 50% of the total for the last 4 time blocks. It is important to note that most of the data for this analysis were collected before the current severe drought began in 2012.

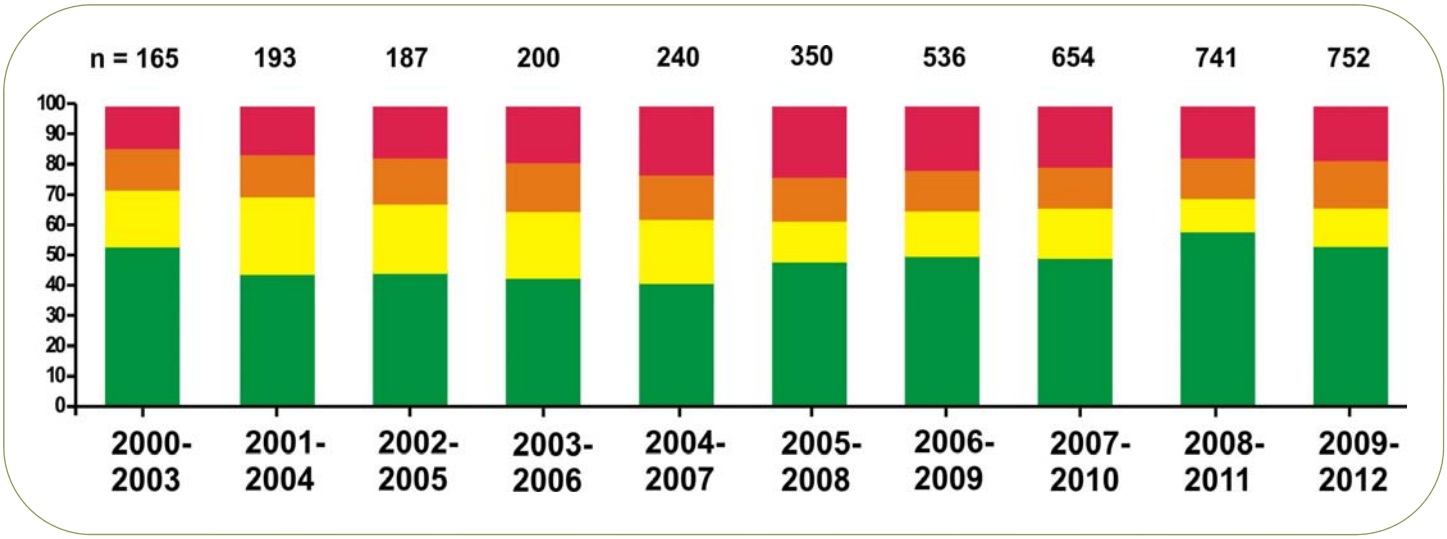


Figure 3. Moving average of stream condition from 2000-2012 in 4-year time blocks. Green boxes = percent of stream length in good condition for a 4-year time block; yellow boxes = fair condition; orange boxes = poor condition; red boxes = very poor condition. Margins of error range between 3% and 9% across the data series (not shown in box plots). Numbers of sites sampled per 4-year time block are shown above bars.

Question 3: What is the relative condition of streams draining agricultural, urban and forested landscapes?

Answer: Most of the stream length draining watersheds dominated by agricultural and urban land use practices[4] is in poor or very poor condition (Figures 4 and 5). By contrast, most of the stream length draining forested watersheds, and much of the stream length draining "other" watersheds, is in good condition.

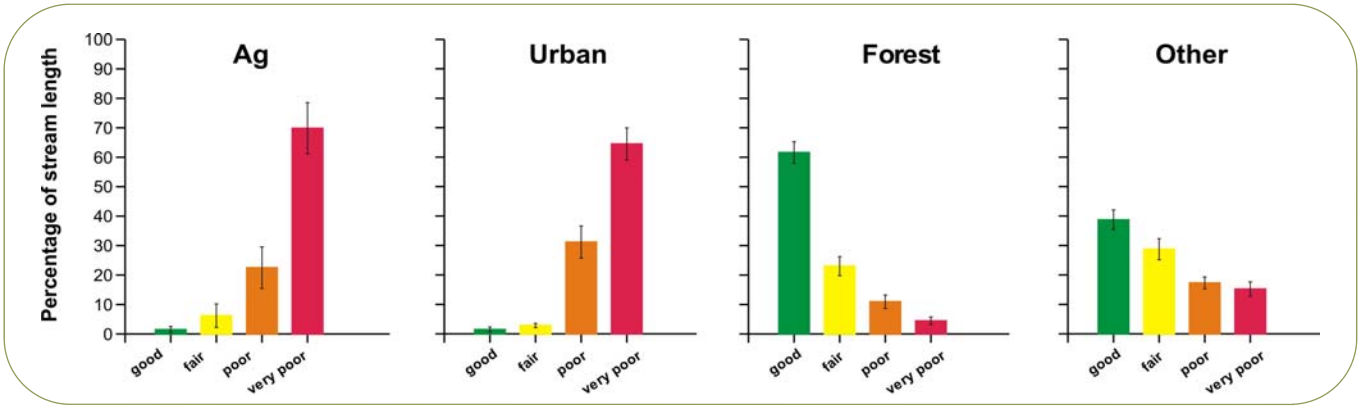


Figure 4. The percentage of wadeable, perennial stream length in each of 4 biological condition categories by predominant upstream land use. **NOTE**: Only 4% of sites were classified as "ag dominated" using the ≥25% criterion, calculated either by simple tally or by statistical weight.

Figure 5. Streams with agriculture and urbanization as the predominant land use at the local or watershed scale are rarely in good biological condition. Channelization, removal of riparian corridors, access to stream channels by livestock, and increased pesticide and nutrient loads all contribute to ecological degradation in these systems.

[4] Sites were classified into 4 categories based on land use/land cover in the local and full upstream watershed: ag sites had ≥25% agricultural land use at either local or watershed scale; urban sites had ≥50% urban land use at either local or watershed scale; forest sites had ≥75% forest land cover at either local or watershed scale; "other" sites did not meet any of these criteria.

Question 4: Which chemical and physical stressors have the strongest association with biological condition?

Answer: This question must be answered in two parts: First, thresholds were defined to identify "most-disturbed" conditions for a subset of 11 chemical and physical stressors shown by previous studies (e.g., Stoddard et al. 2005; Ode et al. 2011) to be associated with biological impairment (Table 1). The percent of stream length where stressor values exceeded the most-disturbed criteria varied among land use classes (Figure 6). Second, relative risk estimates were calculated for each of the 11 stressors (Figure 7). Relative risk is the increased risk of biological impairment when stressor values exceed criteria in Table 1. For example, the risk of biological impairment at stream sites where the phosphorous concentration exceeded most-disturbed thresholds was nearly 3 times greater than at sites where thresholds were not exceeded (Figure 7). By contrast, there was relatively little increased risk of biological impairment when conductivity thresholds were exceeded (Figure 7). Weighted distributions for the primary chemical and physical analytes assessed in statewide surveys are summarized by PSA region and by land use category in Appendix 1.

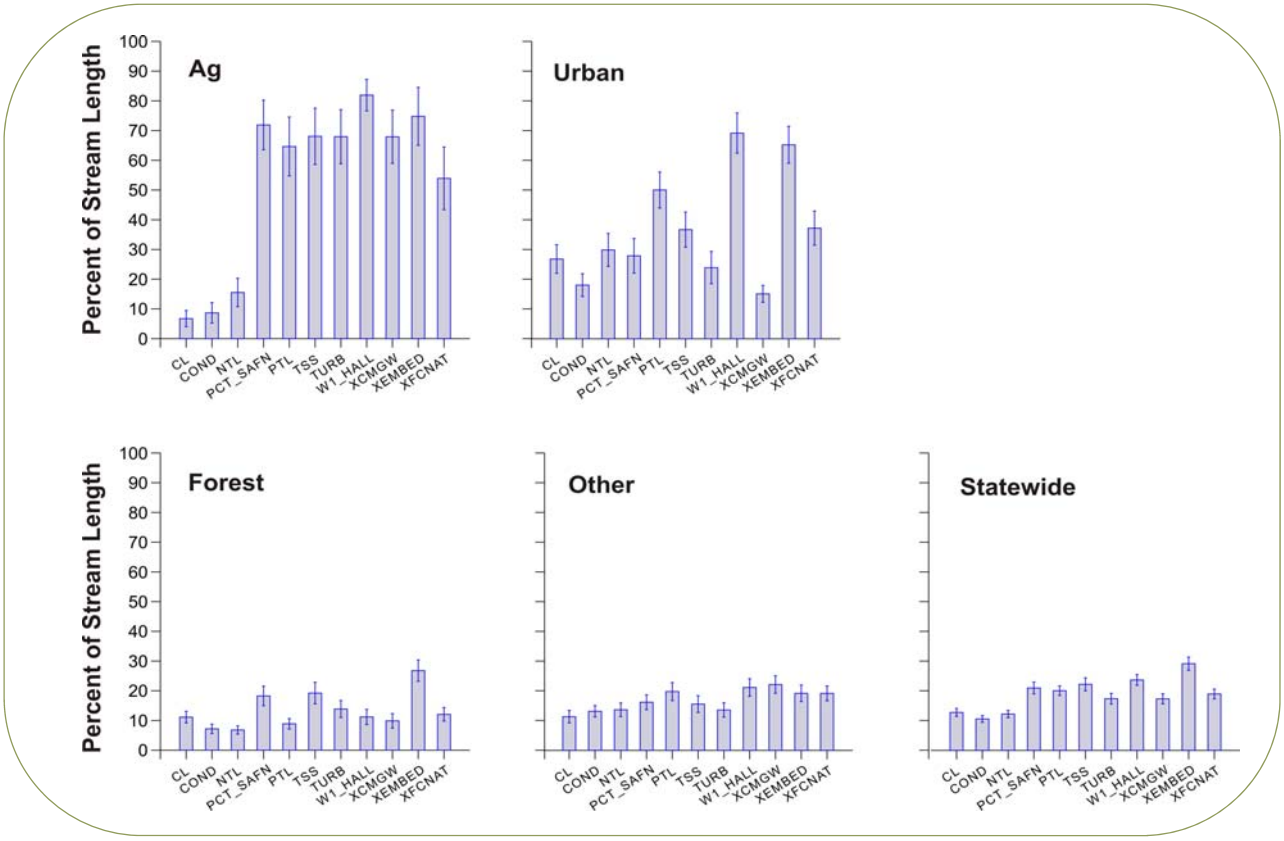


Figure 6. Percent of stream length exceeding most-disturbed stressor thresholds (see Table 1) by land use categories and statewide. Definitions of stressor acronyms are given in Table 1. Note that the variables XFC_NAT and XCMGW decline with degradation, so "exceedence" in these cases means a site has values *lower* than the thresholds in Table 1.

Figure 7. Examples of the relative risk of biological impairment when most-disturbed stressor thresholds are exceeded (left panel). Streams with excess sand and fine sediment (center panel) have more than 2 times the risk of degraded biological condition compared to streams without excess fine sediment. Streams with excess riparian disturbance (right panel) are nearly 3 times more likely to have degraded biological condition compared to streams with intact riparian zones. Definitions of stressor acronyms are given in Table 1. Note that the variables XFC_NAT and XCMGW decline with degradation, so "exceedence" in these cases means a site has values *lower* than the thresholds in Table 1.

Conclusions

California is a large and diverse landscape with wide geographic variation in the ecological condition of its streams. The CSCI is the first biological scoring tool that covers the entire state and allows streams in all regions to be evaluated with equivalent thresholds. The Sierra Nevada and North Coast have the majority of their stream length in good biological condition. By contrast, roughly 75% of stream length in the Central Valley is in very poor ecological condition. However, the Central Valley also has less stream length than all other PSA regions except Desert-Modoc. Ironically, even though the Valley has the highest proportion of stream length in poor biological condition, both the Sierra and the North Coast have more kilometers of stream in poor condition, because the stream resource is so much more extensive in those regions (Figure 8). The Chaparral and South Coast regions are intermediate between the North Coast and Sierra and the Central Valley, both in terms of the biological condition of those streams and the total stream length they contain.

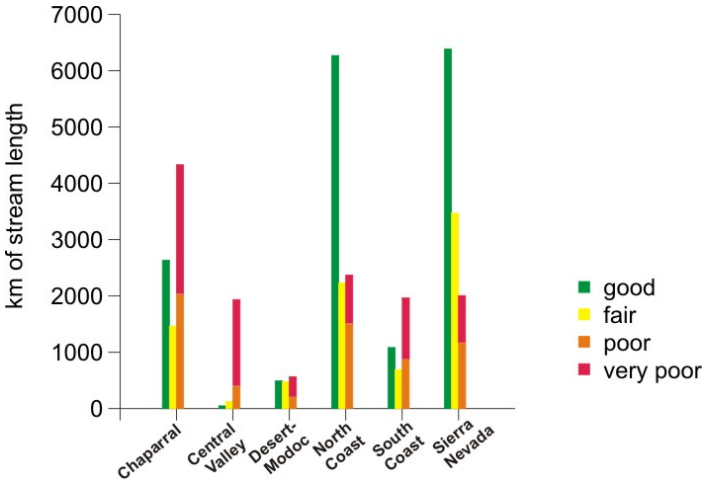


Figure 8. Number of kilometers of stream length in good, fair, poor and very poor condition per PSA region. Note that the Sierra Nevada and the North Coast have more kilometers of stream in poor or very poor condition than the Central Valley, even though a much larger *proportion* of Valley streams is in poor or very poor condition.

Watersheds where agriculture and urban are the dominant land uses have a much greater percentage of stream length in exceedence of most-disturbed stressor thresholds compared to forested watersheds or the statewide average. More than 50% of stream length in agricultural settings exceeded most-disturbed thresholds for all physical habitat variables evaluated. Phosphorous was the most prevalent chemical stressor in urban settings and was among the most prevalent chemical stressors in agricultural settings. Phosphorous also has the highest relative risk of all stressors evaluated for biological impairment when most-disturbed thresholds are exceeded, most likely through excessive growth of primary producers and a shift in algal community composition, both of which directly impact food webs and BMI community composition. Of the chemical stressors, phosphorous, total suspended solids and turbidity were more prevalent than nitrogen, chloride and conductivity. Despite the fact that none of the stressors evaluated was "by far" the most widespread on a statewide scale, they all contribute to degraded biological condition, given that 34% of statewide stream length is in poor or very poor biological condition and nearly all stressors have relative risk > 2.

Recommendations:

1. Monitoring programs using a probabilistic design should remain a core element of SWAMP's statewide monitoring. Probabilistic monitoring provides the only objective way to assess the condition of the entire stream population in California over time. In addition, PSA data provide a unique, unbiased perspective on the distribution of natural and stressor variables in different regions. For example, the evaluation of how well SWAMP's statewide reference site pool represents the natural environmental diversity of streams throughout California would not have been possible without PSA data (see Ode et al. *in press*). Continuing to track statewide stream condition over time in an objective way will provide the context in which data from targeted monitoring programs can be evaluated.

2. Maintaining an annual sampling schedule is essential for evaluating the effects of climate change. As interest in measuring the effects of short and long term changes in climate grows, PSA should retain the ability to provide inter-annual variation data that will guide management decisions.

3. SWAMP should consider adjusting the PSA design to shift resources toward more site revisits. The trends analysis presented here indicates that stream condition showed no directional change during the first 13 years of PSA, either for better or for worse, although data from the

drought years 2013-14 have not yet been included. This suggests that site-specific revisits may provide a more sensitive way to detect trends over time, rather than requiring an average directional change in the entire stream population (assessed by a different set of sites each year) before a trend can be detected. Annual revisits have been an infrequent component of PSA surveys (in recent years, only 5 sites have been revisited annually and only between 2008 and 2010). More annual site visits should be added to the program. SWAMP should consider the continued funding of 30 probabilistic sites annually, with half of those sites being revisited annually, and with revisits continuing for 3 to 5 years per site. In fact, one of SWAMP's key partners, the Southern Monitoring Coalition (SMC), has recently implemented a more intensive site revisit component in regional probabilistic surveys to improve site-specific trend detection.

4. SWAMP should build on previous success in fostering partnerships to extend the scope and scale of its probabilistic monitoring program. There is great opportunity for SWAMP to continue its partnerships with the many collaborators in California who have implemented regional probabilistic surveys so that survey designs are compatible with statewide questions, data sharing is maximized, and the costs of statewide monitoring can be shared by all interested partners. Examples of ongoing collaborations include the U.S. Forest Service (with surveys in the Sierra Nevada since 2009), the SMC (with surveys in southern coastal California since 2009), and the Regional Monitoring Coalition (with surveys in the Bay Area since 2012). In addition, private timber industry scientists have recently expressed interest in surveys of private timber lands. This partnership could fill key gaps in coverage and could lead to opportunities to build support for ecological monitoring of forested lands.

References

Mazor, R.D., A.C. Rehn, P.R. Ode, M. Engeln, K.C. Schiff, E.D. Stein, D. Gillett and C.P. Hawkins. *In review*. Improving consistency of a bioassessment index across environmentally diverse settings.

Ode, P.R., T.M. Kincaid, T. Fleming and A.C. Rehn. 2011. Ecological Condition Assessments of California's Perennial Wadeable Streams: Highlights from the Surface Water Ambient Monitoring Program's Perennial Streams Assessment (PSA) (2000-2007). A collaboration between the State Water Resources Control Board's Non-Point Source Pollution Control Program (NPS Program), Surface Water Ambient Monitoring Program (SWAMP), California Department of Fish and Game Aquatic Bioassessment Laboratory, and the U.S. Environmental Protection Agency.

Ode, P.R., A.C. Rehn, R.D. Mazor, K.C. Schiff, E.D. Stein, J.T. May, L.R. Brown, D.B. Herbst, D. Gillett, K. Lunde and C.P. Hawkins. *In press*. Evaluating the adequacy of a reference site pool for the ecological assessment of streams in environmentally complex regions.

Stoddard, J. L., D. V. Peck, S. G. Paulsen, J. Van Sickle, C. P. Hawkins, A. T. Herlihy, R. M. Hughes, P.R. Kaufmann, D. P. Larsen, G. Lomnicky, A. R. Olsen, S. A. Peterson, P. L. Ringold, and T. R. Whittier. 2005. *An Ecological Assessment of Western Streams and Rivers*. EPA 620/R-05/005, U.S. Environmental Protection Agency, Washington, DC.

Table 1. Criteria for identifying most-disturbed sites in 4 aggregate Level III ecoregions (see Stoddard et al. 2005 for aggregate ecoregion definitions). Criteria were developed using the biology-based approach suggested (but not actually used) by Ode et al. (2011). The 90th percentile of stressor values at sites in good biological condition defined the most-disturbed threshold for variables where higher values indicate more disturbance (i.e., chloride, conductivity, total nitrogen, % sand and fines, total phosphorous, total suspended solids, turbidity, riparian disturbance index, mean embeddedness). The 10th percentile of stressor values at sites in good biological condition defined the most-disturbed threshold for variables where lower values indicate more disturbance (i.e., woody riparian cover index, stream habitat diversity index). Aggregate ecoregions were used to define thresholds rather than PSA regions because the Central Valley has too few sites in good biological condition to establish robust thresholds, and because xeric and mountainous regions in the South Coast had very different distributions for the stressors evaluated. An illustrated example of the biology-based approach to setting stressor thresholds is shown below in Figure 9.

	Chloride mg/L (CL)	Conductivity µS/cm (COND)	Total Nitrogen mg/L (NTL)	Percent sand & fines (PCT_SAFN)	Total Phosphorous mg/L (PTL)	Total Suspended Solids mg/L (TSS)	Turbidity NTU (TURB)	Riparian disturbance index (W1_HALL)	Woody riparian cover index (XCMGW)	Mean percent embeddedness (XEMBED)	Stream habitat diversity index (XFC_NAT)
Sierra and North Coast	10.1	282	0.27	35	0.056	5.5	2.4	1.27	0.55	46	0.18
Southern California Mtns	25	930	0.586	54	0.19	10.1	3.2	0.73	0.37	59	0.27
Xeric California (= xeric SoCal, Central Valley and Chaparral)	122	1460	2.3	69	0.122	7.2	5.1	1.3	0.54	54	0.14
Xeric Southwest (= Desert-Modoc)	3.2	205	0.173	47	0.048	9.2	4.2	1.9	0.45	57	0.19

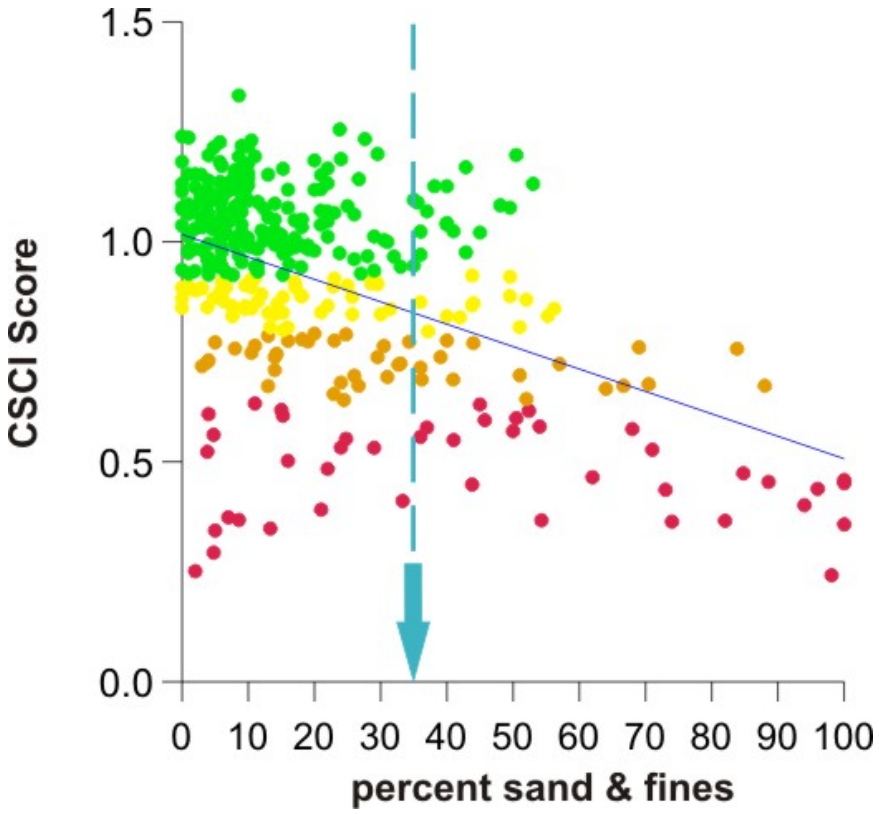
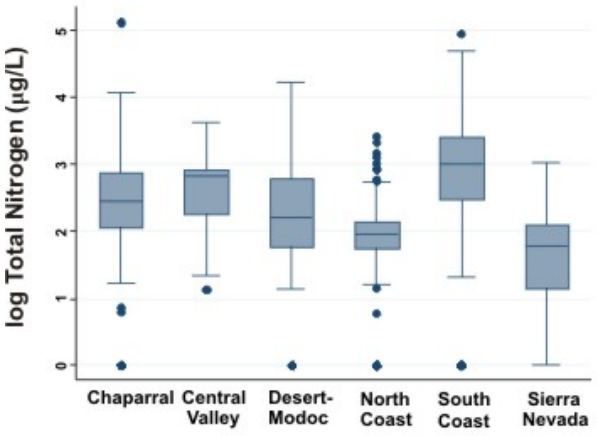
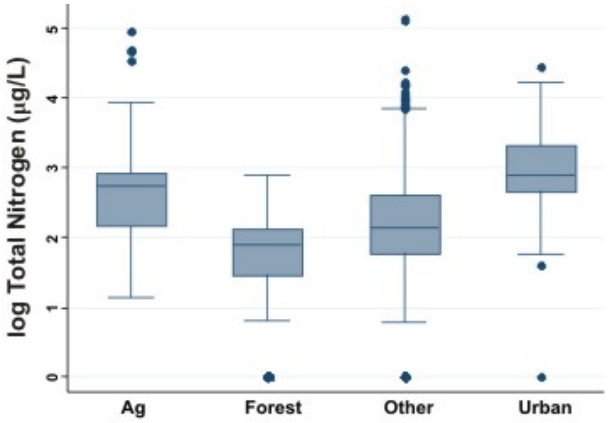
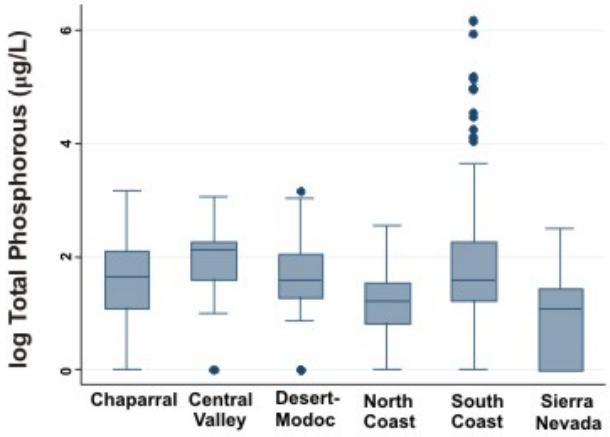


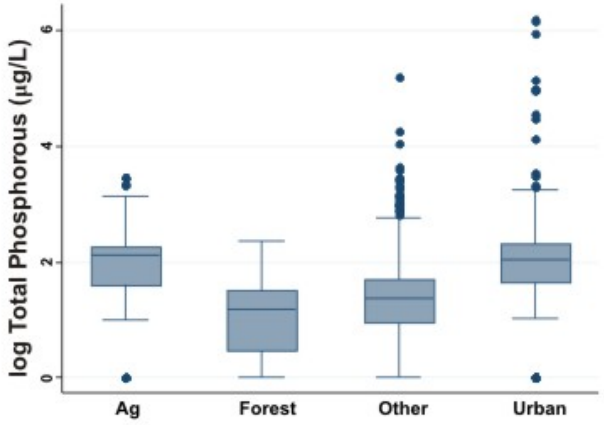
Figure 9. Example of how a biology-based stressor threshold was established for percent sand and fine sediment in the North Coast and Sierra Nevada (= the Pacific Northwest aggregate ecoregion of Stoddard et al. 2005). Green dots are sites in good biological condition, yellow dots are sites in fair biological condition, orange dots are sites in poor biological condition, and red dots are sites in very poor biological condition. The dashed blue arrow shows that the 90th percentile of percent sand and fine sediment observed at sites in good biological condition was 35%. Because biological condition tends to become degraded (i.e., is no longer in good condition) at sites with more than 35% sand and fine sediment, this value was used to define the most-disturbed threshold for this particular stressor in this aggregate ecoregion (Table 1).

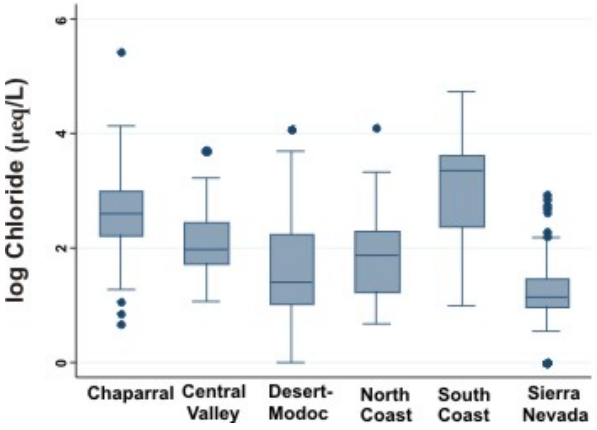
Appendix 1. Box plots showing weighted distributions of the primary chemical and physical stressors assessed in statewide surveys summarized by PSA region and land use category.

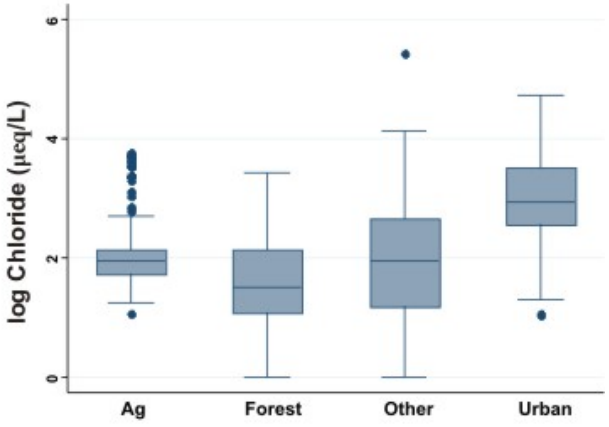












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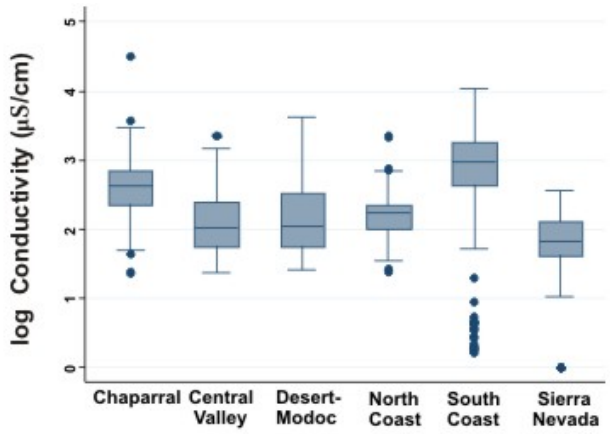

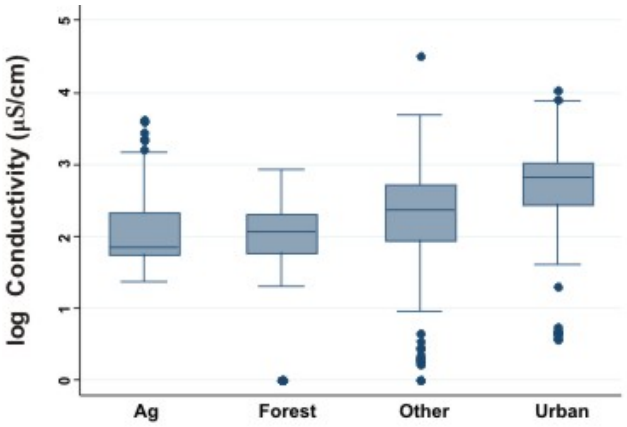

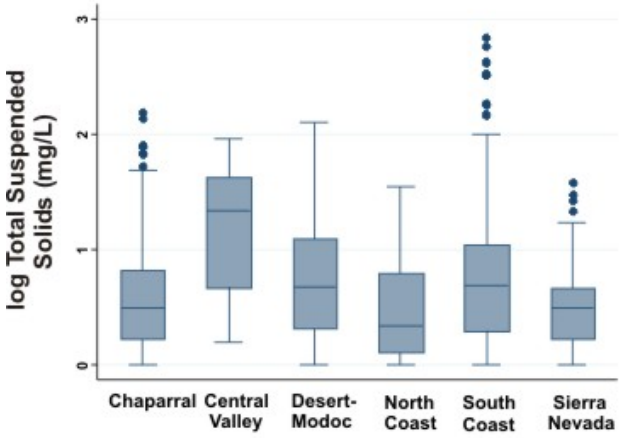

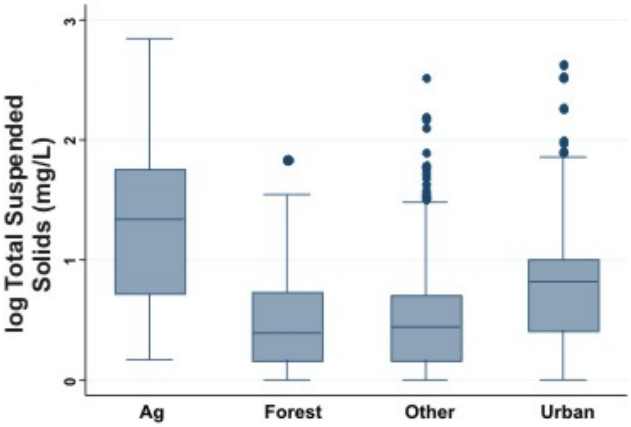

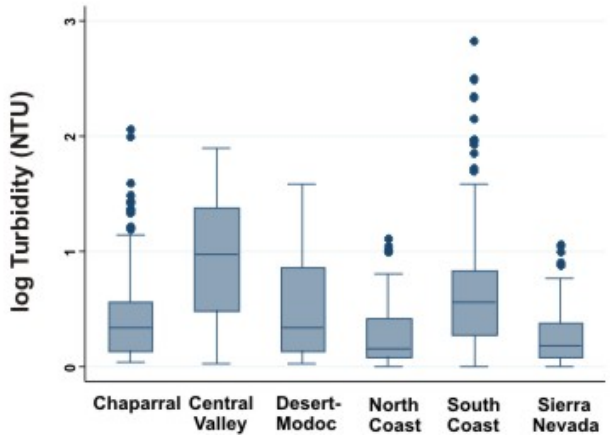

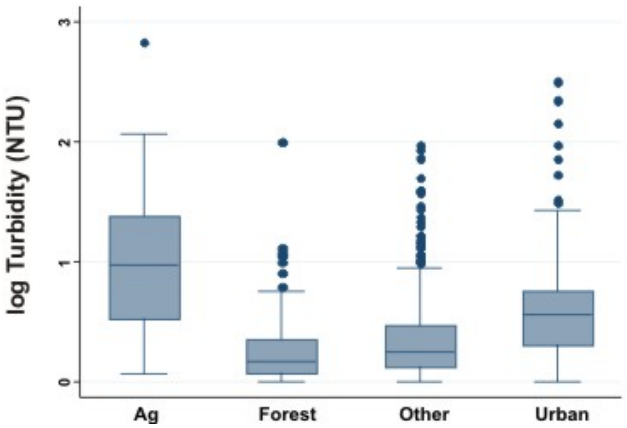

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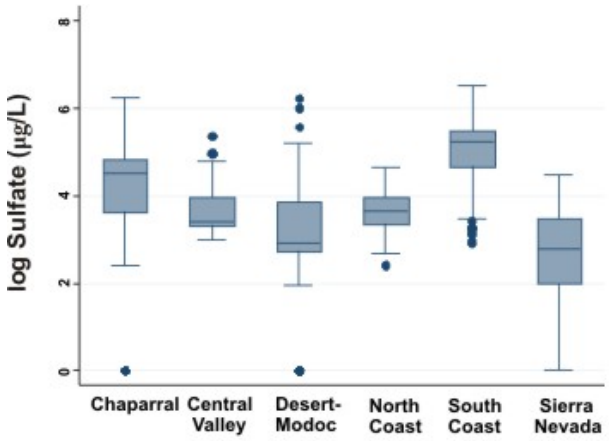

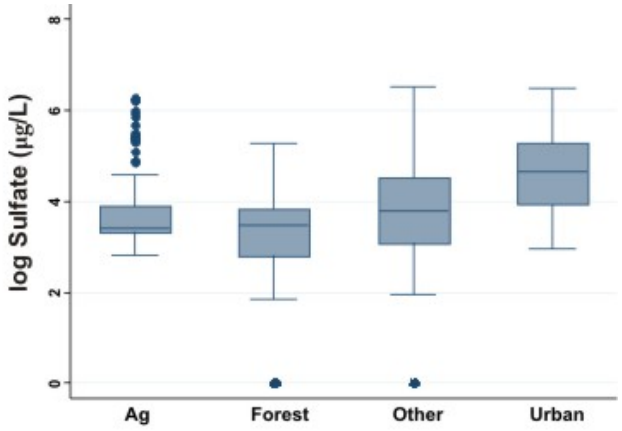

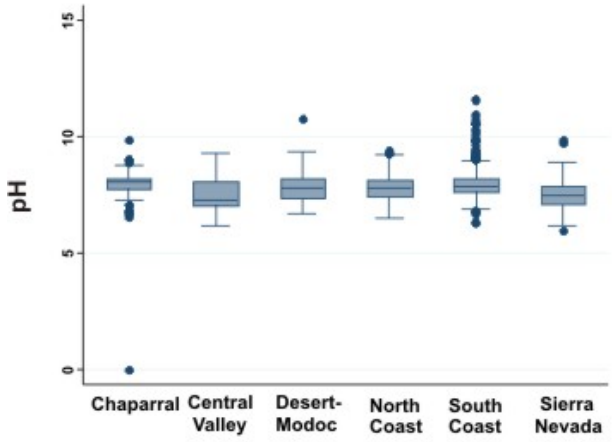

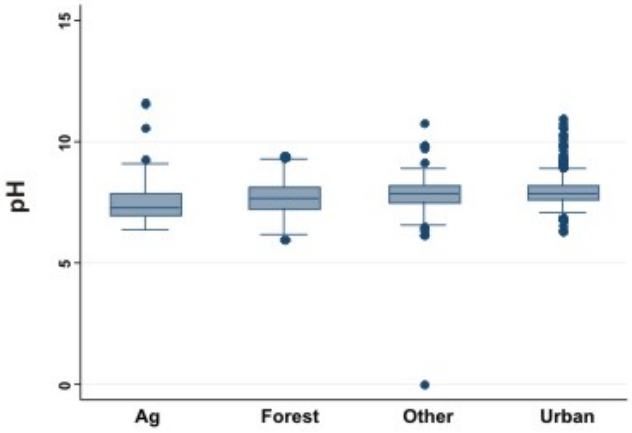

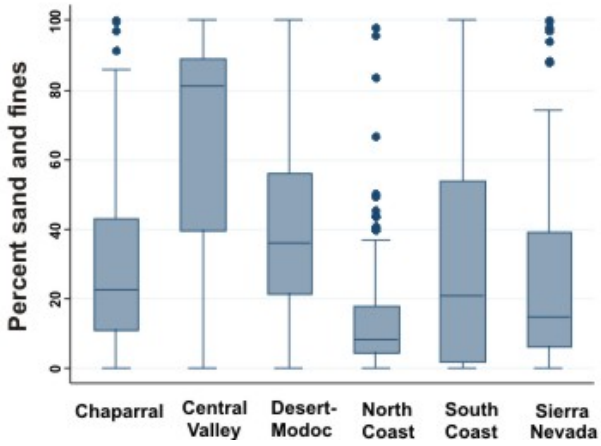

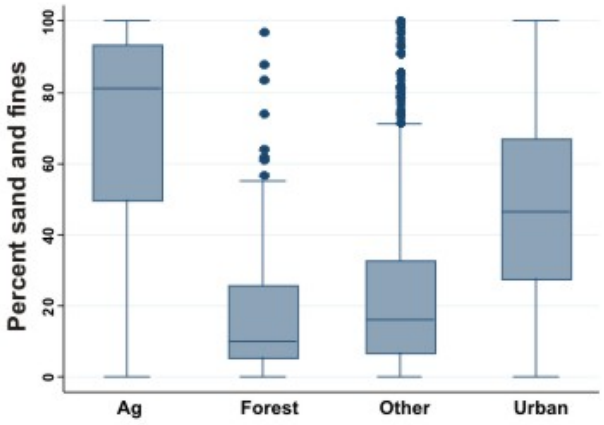

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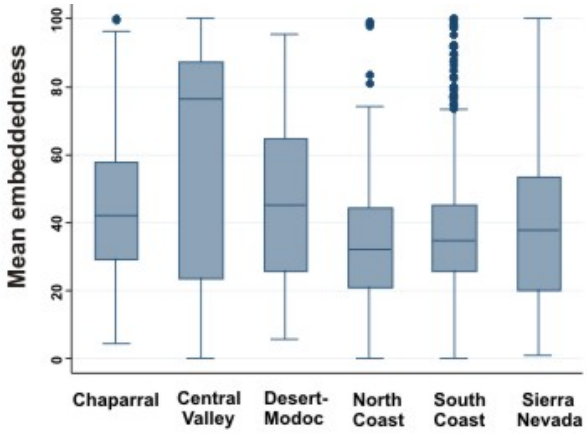

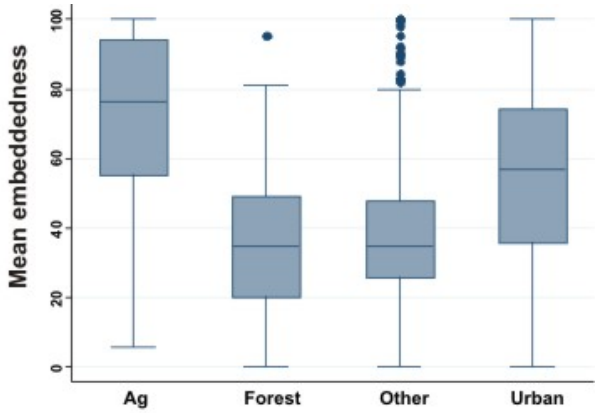

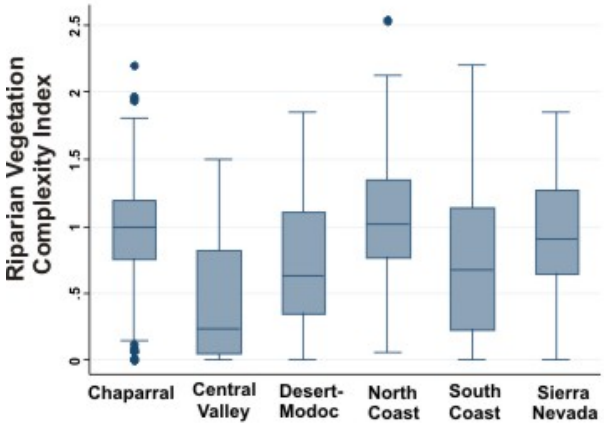

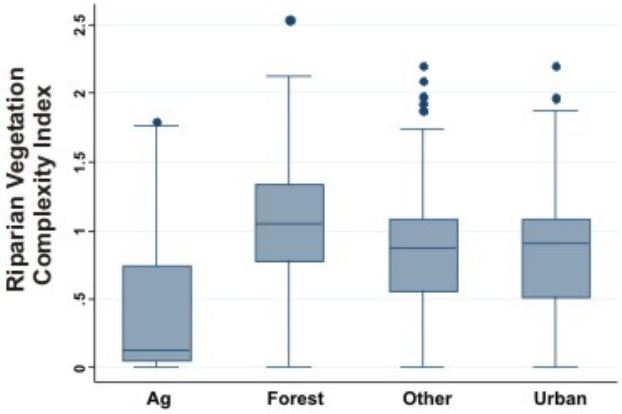

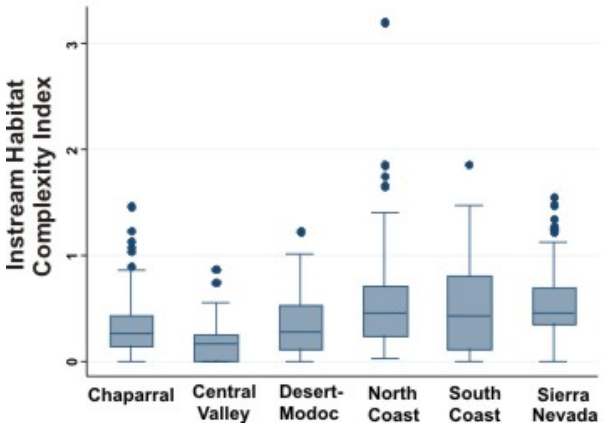

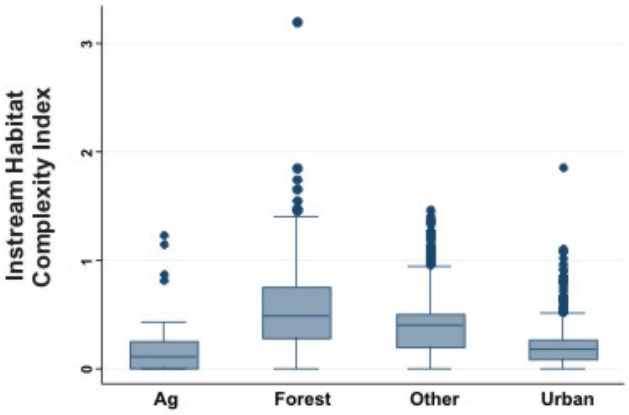

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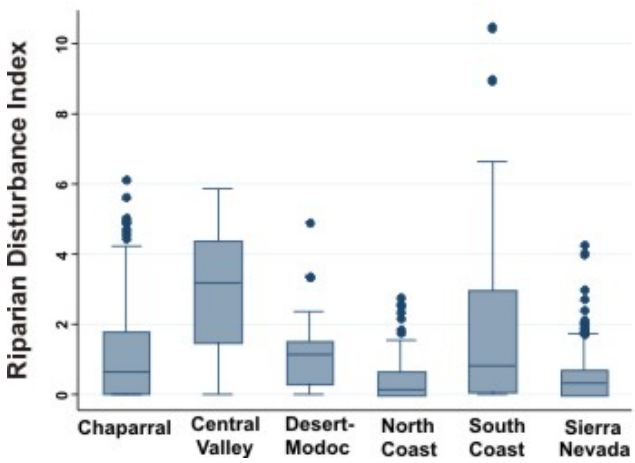

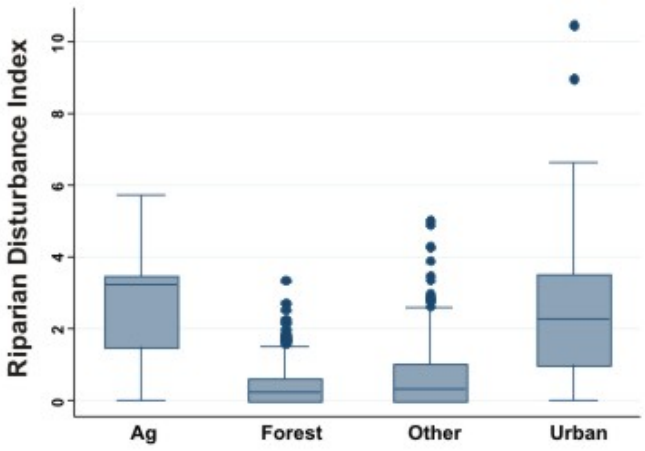

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ENCLOSURE 7

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STATE WATER RESOURCES CONTROL BOARD
(3940—SWRCB)

Fiscal Year 2015-16 Budget Highlights
(Dollars in Thousands)

FUND SOURCE	*Current Year 2014-15*	*Budget Year 2015-16*	*Change*	
			Amount	*Percentage*
General Fund	$51,391	$34,646	-$16,745	-33%
Special Funds	$441,001	$598,461	+$157,460	+36%
Bond Funds	$544,209	$1,491,300	+$947,091	+174%
Federal Funds	$295,545	$296,959	+$1,414	0%
Other Funds	$102,470	$102,217	-$253	0%
Total: All Funds	$1,434,616	$2,523,583	+$1,088,967	+76%
Positions	1,872.1	2,056.1	+184.0	+10%

The State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Boards) preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. SWRCB activities include regulatory oversight of the State's surface, ground and coastal waters; allocation of unappropriated water; control of unauthorized water diversions; protection of water quality in watersheds and coastal waters from point source and nonpoint sources of pollution; and protection and improvement of health from water contaminants used for consumption, cooking, and sanitary purposes.

The budget for Fiscal Year 2015-16 provides $2.5 billion and 2,056.1 positions for the State and Regional Water Boards. The major changes include:

Proposition 1 Acceleration ($1.4 billion)

- An increase of $1.4 billion ($71 million state operations and $1.357 billion local assistance) from the Water Quality Supply and Infrastructure Improvement Fund of 2014, to provide local assistance resources and to administer the programs under the Proposition 1 Bond Act established by the voters in November 4, 2014. The local assistance grant funding is distributed as follows:
  - $744M for Groundwater Contamination
  - $100M for Stormwater
  - $182M for Water Recycling
  - $157M for Small Community Grand Fund: Wastewater Infrastructure
  - $174M for Safe Drinking Water: Infrastructure Improvements

SB 445 USTCF ($187 million)

- An increase of 21.0 positions and $87 million as ongoing, and $100 million as one-time for Fiscal Year 2015-16 to implement the program changes required by SB 445 and to address Action Item #6 in the California Water Action Plan. The funding is as follows:
  - Underground Storage Tank Cleanup Fund: 20.0 positions and $39.5 million.
  - Petroleum Underground Storage Tank Financing Account: 1.0 position and $24.46 million.
  - Site Cleanup Subaccount: Redirection of 17.0 positions and: $24.47 million.
  - State Water Quality Control Fund: (-$1.43) million for the redirection of 17.0 positions to the Site Cleanup Subaccount.
  - One-time from Expedited Claims Account fund, $100 million.

Bay Delta Water Quality Control Plan ($7.8 million)

- An increase of 16.0 positions and $7.8 million from the General Fund to accelerate and complete the comprehensive update of the Bay-Delta Water Quality Control Plan, and implement the Plan within an adaptive management framework to support critical delta water supply and ecosystem resources.

Oil and Gas Field Regulatory ($4 million)

- An increase of 25.0 positions and $4 million (6.0 positions and $0.8 million from the Waste Discharge Permit Fund, and 19.0 positions and $3.2 million from the Oil, Gas, and Geothermal Administrative Fund) to investigate and alleviate public concerns and potential threats to public health and groundwater from wastewater disposal associated with oil and gas production.

AB 1492 Timber Regulation and Forest Restoration ($2.5 million)

- An increase of 4.0 positions (2 year, limited-term) and $2.5 million from the Timber Regulation and Forest Restoration Fund to implement accountability and forest restoration components of the Timber Regulation and Forest Restoration Program, as called for in AB 1492 (Blumenfield, Chapter 289, Statues of 2012).

Marijuana Cultivation Regulation ($1.54 million)

- An increase of 11.0 positions (2 year, limited-term) and $1.54 million from the General Fund to continue resources needed to address damage occurring to the State's natural resources resulting from marijuana cultivation on public and private lands in California. This was approved as a pilot project in the 2014-15 Budget Act.

Emergency Drought Executive Order ($1.4 million)

- An increase of 8.0 positions and $1.4 million from the General Fund to implement several requirements of Executive Order B-29-15, which proclaimed a Continued State of Emergency throughout the State of California of record dry conditions and continued diminishing water supplies in the State's major rivers and reservoirs, and drinking water emergencies.

SB 985 Stormwater Resource Planning ($381,000)

- An increase of 3.0 positions (2 year, limited-term) and $381,000 from the Waste Discharge Permit Fund to implement mandates of SB 985.

AB 91, Chapter 1, Statutes of 2015, was passed by the California state legislature and approved by the governor March 27, 2015. The legislation amended the Budget Act of 2014, and accelerated approved FY2015/16 funds to FY2014/15 for the following:

- An increase of $268.3 million from the Water Quality Supply and Infrastructure Improvement Fund of 2014 to provide local assistance resources and to administer the programs under the Proposition 1 Bond Act established by the voters in November 4, 2014. (55.0 positions become active July 1, 2015).

- A limited term (FY14/15 and 15/16 only) increase of $22.6 million ($6.7M from the General fund, $15.9M from the State Water Quality Control Fund, Cleanup and Abatement Account) to support drought related activities. (42.5 1 year, limited-term positions become active July 1, 2015).

- A limited term (FY14/15 and 15/16 only) local assistance increase of $4 million from the State Water Quality Control Fund, Cleanup and Abatement Account) to provide interim drinking water to disadvantaged communities with contaminated drinking water supplies.

- An increase of $2.4 million General to contribute to the implementation of Action 4 of the California Water Action Plan to protect and restore important ecosystems, which includes enhancing flow in stream systems statewide. (10.0 positions become active July 1, 2015).