



EXECUTIVE OFFICER'S REPORT • February 2018 Covers December 16, 2017 – January 15, 2018

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State and Regional

1. **Personnel Report – Eric Shay**

New Hires

- Kathleen Doran, Scientific Aid, Non-Point Source Unit, South Lake Tahoe. This position compiles and organizes scientific data from water quality investigations and implementation and effectiveness monitoring reports; and assists technical staff in collecting data during field visits for various activities, including timber harvest, stream restoration, meadow restoration, and grazing projects. The previous incumbent was Ed Hancock.

Promotions

- Eric Shay, Staff Services Manager I, promoted from Administrative Officer II. This position oversees administrative support staff in the region’s three office buildings.

Vacancies – We are currently recruiting for the following positions:

- Scientific Aid, Department of Defense / Site Cleanup Program Unit, Victorville. This position reviews, compiles, and organizes scientific data from water quality investigations, dischargers’ self-monitoring reports, quarterly monitoring reports, and groundwater sampling information collected by Water Board staff; and assists technical staff with the collection of groundwater samples, data entry, and data presentation. The previous incumbent was Sandra Lopez. (The position was reclassified from Seasonal Clerk.)
- Water Resources Control Engineer, Cleanup/Site Investigation & Enforcement Unit, South Lake Tahoe. This position drafts permits, reviews and comments on technical reports and work plans, prepares technical reports and enforcement documents and orders, inspects sites for planning and compliance, coordinates with federal, state, and local agencies, conducts engineering and hydrologic/hydrogeologic analyses regarding

water quality impacts, and conducts investigations into environmental complaints. The previous incumbent was Eric Taxer.

- Senior Water Resources Control Engineer, North Basin Regulatory Unit, South Lake Tahoe. This position oversees staff work on waste discharge requirements (WDRs), National Pollutant Discharge Elimination System (NPDES) permits, and Clean Water Act certifications for municipal and industrial wastes, storm water, stream and wetland restoration projects, and other dredge and fill activities. The current incumbent, Alan Miller, will be retiring in June 2018.
- Supervising Engineering Geologist, South Lake Tahoe. This position serves as the Division Manager for the North Lahontan Regulatory Division, overseeing the North Basin Regulatory Unit, Cannabis Regulatory Unit, and Non-Point Source Unit. The previous incumbent was Doug Smith.
- Water Resources Control Engineer, Waste Water & Agricultural Operations Unit, Victorville. This position provides regulatory oversight of projects involving discharges to groundwater or surface waters and projects intended to restore and/or enhance water quality in the WDRs, NPDES, and Site Cleanup Programs. The previous incumbent was Cephas Hurr.

Departures - None

North Lahontan Region

2. Donner Lake Dam Emergency Dredging Project – Dale Payne

The Donner Lake Dam Emergency Dredging Project (Project) by the Truckee Meadows Water Authority is located in the Town of Truckee, at Donner State Park in the vicinity of Donner Lake Dam. A Clean Water Act Section 401 General Water Quality Certification (WQC) Order certifying the Army Corps of Engineers' Regional General Permit 8 for Repair and Protection Activities in Emergency Situations was issued for the Project in late December.

The Project entailed dredging the dam outlet channel, which had over time become choked with sediment and woody debris, to provide critically needed dam discharge capacity and help prevent future flooding along the lakeshore. The late-season work included isolating the Project area with a substantial water-filled barrier in Donner Lake to remove water and dredge approximately 1300 linear feet to remove about 6500 cubic yards of materials. With mostly-clear weather to abet the Project, dredging was completed the week of January 8, 2018.

A component to the Project included bypass, diversion and dewatering activities, which moved water from outside and within the work area to Donner Creek, downstream of Donner Lake. This Project activity was covered under the Lahontan Water Board's Limited Threat Discharge General Permit. Monitoring requirements for Donner Creek, the receiving waters for discharges from the dewatering treatment system, were included in the permit.

Disposal of the dredged material was to a nearby planned residential development site covered under the Statewide Stormwater Construction General Permit. Sediment toxicity analyses were conducted to determine whether the dredged material was acceptable for use as fill at the specified disposal site, due to fish consumption advisories for mercury and chlorinated organics (PCBs). The analyses showed that samples collected within the project area were deemed non-toxic under California Code of Regulations title 27 criteria. Disposal activities began concurrently with dredging and have been completed. Cold Stream Creek and runoff from the stockpiles are subject to additional monitoring requirements as required under a separate Order.

Staff inspected the Project on January 10 and noted compliance issues in Donner Creek downstream from the dredging site from water being reintroduced from Donner Lake. A post-Project monitoring report will follow soon detailing the compliance issues. Staff also noted

inadequate source control and runoff control measures at the stockpile area and met with the Project staff to assist them with compliance; staff will continue to verify whether storm water discharges from the stockpiles located adjacent to Cold Stream Creek are adversely affecting water quality over the winter and spring.

3. Stampede Dam Project Update, and New Boca Dam Project – Alan Miller

The U.S. Bureau of Reclamation (Bureau) owns and operates the Stampede Dam, located on the Little Truckee River, approximately 10 miles northeast of Truckee, California. The last report on this project was in 2014. The Bureau is raising Stampede Dam by 11.5 feet to address dam safety concerns related to large flood events. Major project features include constructing a Mechanically Stabilized Earth (MSE) wall over the dam and dike, constructing two small dikes near the south end of the reservoir to fill low-lying areas of the reservoir rim, and reconstructing the spillway crest structure to limit outflows during large floods to the current spillway chute capacity. The Water Board was CEQA lead agency and regulates the site under a Water Quality Certification Order and Construction General Permit (CGP).

The construction contract for this work was \$21.8 million, and construction activities began in September 2016. Construction is planned to be complete in August 2018, ahead of the October 2018 schedule. Construction of the MSE wall is 95% complete and the spillway crest structure has been removed and reconstructed. As of mid-November 2017, the project site has been winterized and construction activities will resume in April or May of 2018. Public access has been restricted during construction and Dog Valley Road over Stampede Dam remains closed and is expected to reopen in August 2018. Public access to Stampede Reservoir is available from a detour route and provides campground access to both Logger Campground and the Emigrant Group Campground, scheduled to reopen in the 2018 recreation season.

The Bureau also owns and operates the Boca Dam and reservoir, which is smaller than Stampede reservoir, on the Little Truckee River a short distance downstream from the Stampede Dam. The Bureau plans to reinforce the Boca Dam to prevent overtopping due to earthquake. The Boca Dam project involves reducing the reservoir storage to obtain soil from

the reservoir to replace a section of the earthen dam subject to failure. A “shear key” will be constructed from compacting the soil obtained to bolster the dam. The project involves similar Water Board regulatory actions and public use restrictions as the Stampede Dam project. The Water Board is CEQA lead agency for a mitigated negative declaration that was developed with the Bureau, jointly with their NEPA process, and recently posted on the Water Board’s website. Comments are due by February 8, 2018, with construction scheduled to begin in 2018.



Figure 1 Vicinity Map - Boca and Stampede Reservoirs



Figure 2 - Features of Boca Dam

4. Fremont Basin Regional Water Management Group Meeting – Jan M. Zimmerman

The Fremont Basin Regional Water Management Group (RWMG) held a stakeholder meeting in California City on December 17, 2017. Member agencies of the RWMG include Antelope Valley East Kern Water Agency, Mojave Public Utilities District, and the City of California City. The meeting was attended by Water Board staff, Jan Zimmerman, multiple staff from each of the member agencies, and representatives from the Rand Communities Water District. The purpose of this meeting was to present to the stakeholders a progress report on the efforts related to development of the Integrated Regional Water Management Plan (IRWMP) and to discuss other matters pertaining to the RWMG. Brian Deitrick and Brenda Ponton of Woodard & Curran led the stakeholder meeting.

Last year, the Fremont Basin RWMG was awarded \$841,000 from the Department of Water Resources to develop an IRWMP, and Woodard & Curran are in the process of putting that plan together. A majority of the plan has since been drafted with only a few sections remaining. The IRWMP is on schedule for a public draft to be published June 2018, with an expected adoption date by the RWMG member agencies mid-summer 2018. At the meeting, the group discussed the climate change vulnerabilities section of the IRWMP and brainstormed objectives and strategies to be identified in the plan. Because Fremont Basin stakeholders are fully dependent upon groundwater resources and no State Water Project water is distributed to the basin, group members identified groundwater storage and groundwater supply as their highest vulnerabilities associated with climate change. Other climate change vulnerabilities identified were increased inland flooding, increased crop demands, limited ability to conserve water, and increased constituent concentrations in groundwater (specifically, salts and bromides). Concurrently with IRWMP development, Woodard & Curran is also preparing a Salt and Nutrient Management Plan (SNMP). Details of the SNMP were not discussed at the meeting, but the SNMP is expected to be completed April 2018.

Following the RWMG meeting, several stakeholders participated in a separate meeting regarding objectives for scoring and prioritizing the projects to be included in the IRWMP. Group members agreed unanimously that water supply projects were their highest priority and should be scored higher. The group agreed that water quality projects would rank second highest, with storm water-related project ranking the lowest in terms of basin priorities. California City's highest priority projects are related to well installation, development, and pipeline replacement. Mojave Public Utilities District representatives identified their highest priority projects as being related to their distribution system, including installation of approximately 260 water meters, installation of strategically placed shut-off valves (i.e., at fire hydrants), and an upgraded remote management system (i.e., Supervisory Control And Data Acquisition [SCADA]). Currently, the list of projects for the IRWMP is short, so stakeholders were urged to submit any and all projects to the group for prioritization. The next RWMG meeting is scheduled for January 18, 2018, in California City.

5. San Bernardino County Environmental Task Crimes Strike Force Meeting – Jeff Fitzsimmons

On December 14, 2017, Water Board staff, Jeff Fitzsimmons, attended the San Bernardino County Environmental Crimes Strike Force Meeting (Strike Force) at the offices of Community Safety and Hazardous Materials Division of the San Bernardino County Fire Department. Those in attendance at the meeting included representatives from the San Bernardino County Deputy District Attorney's Office, San Bernardino County Fire Department, Santa Ana Regional Water Quality Control Board, State of California Department of Toxic Substances Control, and State of California Department of Fish and Wildlife. Cases discussed during the meeting have been ongoing for several months or longer, pertain to individual or collective business locations within San Bernardino County (County), and in some instances, are part of a larger statewide

investigation. Threats to the environment discussed during the meeting included willful and prolonged negligence cases related to discharges to air, water, and soil associated with commercial, industrial, retail, and illegal disposal of hazardous wastes at various locations within the County. Potential environmental threats that could be anticipated from the cultivation, processing, waste, and distribution of commercial cannabis was also discussed. The general consensus of the attendees is that the environmental threats associated with the cannabis industry are yet to be fully identified.

The Strike Force meetings had previously been held monthly to provide a forum where representatives of city, county, state, and federal governments could be briefed regarding any new and pending cases within the County. Beginning February 2018, the Strike Force will meet every other month (during even months) in an effort to avoid conflicts with similar meetings in Riverside County that occur during odd months. The monthly meetings will continue to promote networking, sharing of thoughts and ideas, strategizing, and partnering in efforts to successfully protect the environment. Awareness training with respect to pertinent topics at future meetings will be discussed during the next Strike Force meeting on February 15, 2018.

6. Tire-Derived Aggregate as a Stormwater BMP: A Review of a Humboldt State Department of Environmental Engineering Study for the Storm Water Roundtable – Tom Browne

At the December 2017 Storm Water Roundtable, Lahontan Water Board staff Tom Browne gave a 15-minute presentation to the group reviewing a recent study by professors Rachela Maeda and Brad Finney at Humboldt State University on the use of Tire-Derived Aggregate (TDA) as a storm water best management practice (BMP). The study was funded by CalRecycle and is part of its efforts at finding some beneficial uses for the 42 million waste tires that are produced every year in California. Approximately 15 percent of waste tires are still being landfilled today.

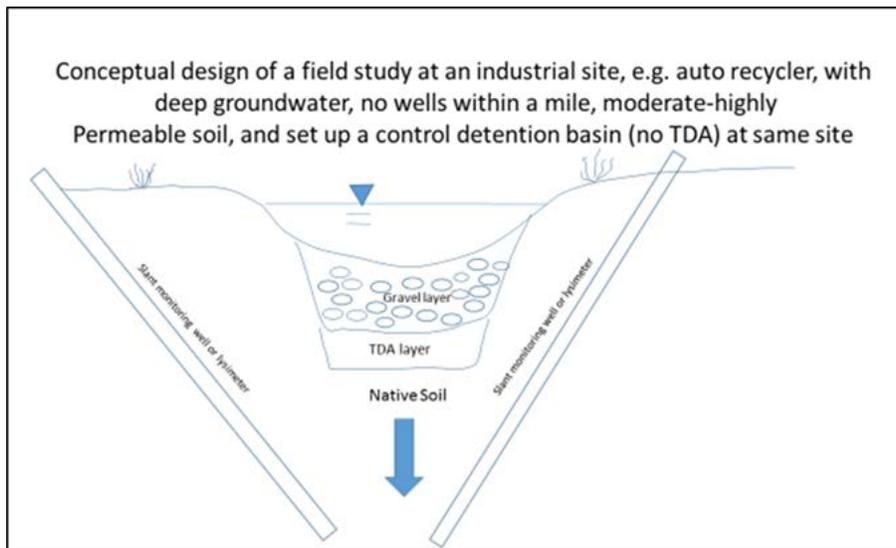
TDA should not be confused with crumb rubber, a more ground-up product also derived from tires, which is used widely on synthetic football fields and new asphalt roads. TDA pieces are chunks characteristically three- to eight-inches in size with the polyester and steel belts exposed. The study included analyses of 83 chemical constituents and was conducted over a 15-month period, measuring rates of chemical release and equilibrium partitioning from the TDA into water. The study also included a field project site located in the City of Arcata. In the field project, storm water flowed from a gutter through a 10-foot deep vault of TDA equipped with sampling points, then to the storm drain, which leads to the ocean.

The results of the study appeared to be promising on many fronts, but showed that iron and manganese continued leaching at very small rates even after 15 months of water immersion with alternating periods of wet and dry, which were intended to simulate varying lengths of rain followed by dry spells. A minority of samples (2 out of 17) showed that equilibrium concentrations of iron and manganese were above their respective secondary drinking water standard limits. Of the organics leached, the two most predominant were the heterocycle hydroxybenzothiazole and aniline (aminobenzene). These compounds are used as softening agents in the manufacture of tires, and though these compounds have no drinking water standard limits, they are undesirable for water quality. On the promising side of the study, the results showed that TDA removed a significant fraction of many volatile organic compounds (VOCs). Naphthalene and oil & grease were removed by the TDA in the range of 50 to 90 percent. Though total petroleum hydrocarbons were not specifically targeted during the study, it is likely that TDA could also successfully remove total petroleum hydrocarbons in storm water runoff.

At the round table meeting, members of the group recommended that State Board not issue a universal endorsement for use of TDA based on the results of the study that showed leaching of metals and organics. Lahontan Water Board staff agree that TDA should not be used where its leachate has the potential to reach a surface water or drinking water source. However, use of TDA could be considered on a case-by-case basis where groundwater is deep, no water wells

are nearby, soils have average or better fractional organic carbon, and soils are permeable near the surface.

Water Board staff recommend that TDA be pilot-tested in the Lahontan region as a storm water BMP to study the removal of organics and to monitor the amount of leached iron and manganese in an arid environment. Water Board staff have developed the following preliminary design for the use of TDA in a detention basin at an industrial site such as an auto recycler facility. The TDA material would be placed on native soil at the bottom of the basin and be overlain by a gravel layer; several slant monitoring wells or lysimeters would need to be installed around the perimeter of the basin. During or following a rain event, samples of the basin influent would be collected (or grab samples collected from standing water in the basin) as well as samples of soil-pore water beneath the basin (lysimeter samples) and analyzed for various constituents including VOCs, iron, and manganese.



The results of the analyses would be compared and tracked over time. A minimum of six sample sets would be needed for a statistically valid data set. At the end of the pilot study, it would be necessary to collect soil samples at discrete depths from beneath the basin to evaluate the attenuation of constituents in the soil column. Finding a discharger willing to pilot this study at their site may be the largest limiting factor.

7. Dairy Status Report – *Ghasem Pour-ghasemi*

There are seven dairies and three heifer ranches in operation in the Lahontan Region for a total of ten active confined animal facilities (CAFs). Three active and one closed dairy are regulated under WDRs (see table below).

General Order

Staff is developing a draft General Order intended to regulate all current active CAFs. The General Order intends to prohibit unlined wash water ponds, establish criteria for applying manure and wash water to cropped areas, and establish standards for storm water management within the corrals and dairy sites. The General Order will not address cleanup of polluted groundwater. Letters will be sent to eight Native American Tribes indicating that we are preparing a document to satisfy the California Environmental Quality Act and are seeking their consultation. When completed, that document will be circulated for public comment, as required, and considered by the Water Board prior to adoption of the General Order. An Administrative Draft General Order will be given to the California Department of Food and Agriculture for a 30-day review. Staff then intends to circulate the Administrative Draft General Order to the affected dairymen and hold a stakeholder meeting before circulating the Tentative General Order for public review and comment.

Replacement Water

The Lahontan Water Board has cleanup and abatement orders (CAOs) or other agreements in place requiring delivery of replacement water to affected residents (see table below). Approximately 30 residents currently receive replacement drinking water from five dairies and a heifer ranch that have polluted downgradient residential supply wells. The associated enforcement orders require dairy owners to sample residential wells around the dairies every nine months. Replacement drinking water must be provided to any resident within the affected area having nitrate and total dissolved solids concentrations close to and/or over the primary and secondary drinking water standards.

Facility	WDRs?	Provide Water?	Groundwater Pollution?	Status
Active Dairies				
Harmsen Dairy	No	Yes	Yes	<ul style="list-style-type: none"> A CAO requires sampling of residential wells every nine months and providing replacement drinking water to any residents with nitrate and total dissolved solids concentrations close to and/or over the drinking water standards. The facility will be covered under the General Order.
A & H Dairy	Yes	No	Yes	<ul style="list-style-type: none"> The facility will be covered under the General Order.
Dutch Dairy	Yes	Yes	Yes	<ul style="list-style-type: none"> An agreement between the Water Board and the dairy requires Dutch Dairy to provide bottled water to downgradient residents with nitrate and total dissolved solids concentrations close to and/or over drinking water standards. The facility will be covered under the General Order.
B & E Dairy	Yes	No	Yes	<ul style="list-style-type: none"> The facility will be covered under the General Order.
John Van Leeuwen Dairy	No	No	Unknown	<ul style="list-style-type: none"> The dairy has unlined wash water disposal ponds. The facility will be covered under the General Order.
Hinkley Dairy	No	Yes	Yes	<ul style="list-style-type: none"> A CAO requires sampling of residential wells every nine months and providing replacement drinking water to any residents with nitrate and total dissolved solids concentrations close to and/or over the drinking water standards. The facility will be covered under the General Order.
High Desert Dairy	No	No	No	<ul style="list-style-type: none"> The facility will be covered under the General Order.
Active Heifer Ranches				
DVD Heifer Ranch	No	Yes	Yes	<ul style="list-style-type: none"> Desert View Dairy closed and DVD Heifer Ranch moved in. The facility will be covered under the General Order.
Green Valley Farms	No	No	Yes	<ul style="list-style-type: none"> The facility will be covered under the General Order.
Alamo Mocho	No	No	Unknown	<ul style="list-style-type: none"> The facility will be covered under the General Order.

Facility	WDRs?	Provide Water?	Groundwater Pollution?	Status
Closed Facilities				
N & M Dairy	Yes	Yes	Yes	<ul style="list-style-type: none"> Dairy ceased operation as of July 2013. Cleanup in progress. Permit will be rescinded after completion of cleanup. A CAO requires sampling of residential wells every nine months and providing replacement drinking water to any residents with nitrate and total dissolved solids concentrations close to and/or over the drinking water standards.
Meadow Brook Dairy	No	No	No	<ul style="list-style-type: none"> Dairy closed and permit rescinded in June 2013.
DVD Heifer Ranch (former)	No	Yes	Yes	<ul style="list-style-type: none"> Moved into former Desert View Dairy location, with corrals and structures removed. A CAO requires sampling of residential wells every nine months and providing replacement drinking water to any residents with nitrate and total dissolved solids concentrations close to and/or over the drinking water standards.