



## Lahontan Regional Water Quality Control Board



# EXECUTIVE OFFICER'S REPORT

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## December 2015

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### NORTH

#### 1. **Third Annual Monitoring Report for the Silver King Creek Paiute Cutthroat Trout Restoration Project, Alpine County** – *Bruce Warden*

The California Department of Fish and Wildlife (CDFW) submitted its third Annual Report for rotenone treatment within the Silver King Creek Project area in November 2015.

CDFW conducted rotenone treatments in late August 2015 in compliance with the NPDES permit conditions. CDFW has no plans for further rotenone treatment. CDFW will restock Silver King Creek with Paiute Cutthroat Trout from source populations following monitoring as recommended by the CDFW Paiute Cutthroat Trout Genetics Management Plan.

During the August 2015 treatment, CDFW found three rainbow trout carcasses in the lower gorge below the SK7 drip station in the lower project area, about .5 mile above the neutralization station. The three rainbow trout are suspected to be survivors of the past treatments, having likely found a spring or seep of untreated water to escape the prior rotenone treatments. Discovery of these fish led to

two additional backpack sprayer rotenone treatments of the lower gorge at SK7 on August 27 and 29. No live fish were observed in the treatment area waters following completion of the treatment, nor during observations made days and weeks later.

CDFW collected water quality samples for rotenone during the 2015 Project and did not detect rotenone within the Project area two weeks post-treatment. All water samples were non-detect for rotenone at the lower Project boundary. No purple color was observed at the two-mile downstream site, indicating that the permanganate neutralization station was successful.

Benthic macroinvertebrate monitoring will continue as specified by the Project's NPDES permit Monitoring and Reporting Program. CDFW must submit a report authored by a fisheries biologist or related specialist from CDFW by August 29, 2017, certifying that beneficial uses associated with benthic macroinvertebrates have been restored in the treatment area. The Project will be considered completed upon written acceptance by the Executive Officer.

**2. Briggs Mine in Panamint Valley Going Idle** – *Jan M. Zimmerman*

ATNA Resources, Ltd., parent company of CR Briggs Corporation, is in the process of idling the Briggs Mine in Panamint Valley with the hope that the price of gold will rise to a marketable level in the near future. The Water Board issued Waste Discharge Requirements (WDRs) to CR Briggs Corporation in 2001. While active mining ceased at the site in July 2015, the focus has shifted to the recovery of remaining in-process gold inventory from the leach pad and scaling back operations. It is estimated that 12,400 ounces of gold still remain to be recovered through cyanide heap leach processes, which are scheduled to continue through June 2016. The bulk of the equipment fleet has been sold or moved to other mine sites, and the crushing plant is in the process of being dismantled and prepared for storage.

As the site transitions, Water Board staff organized a multi-agency meeting with Briggs management to discuss potential regulatory implications. The meeting was held on October 22, 2015, at the Briggs Mine and attended by staff from the California Department of Conservation Office of Mine and Reclamation, Bureau of Land Management, and Inyo County. Based on the information provided at the meeting, CR Briggs is at a decision point to either continue active mining at the site or lay idle until the price of gold is profitable. Since the leach pad has nearly reached full permitted capacity, continued active mining will require the Water Board revise the existing WDRs to allow for discharge to additional leach

pad area. If mining operations are to cease, Briggs Corporation is required to submit a Final Closure Plan a minimum of 180 days prior to any partial or final closure activities or at least 120 days prior to discontinuing the use of the site for waste treatment, storage or disposal, whichever is greater. The anticipated final application of cyanide solution to the leach pad in June 2016 will constitute partial closure activities and trigger the submittal of a Final Closure Plan to the Water Board in January 2016.

Briggs management has seen this scenario before. From 1998 through 2008, active mining at the site was idle while the management staff prepared for an increase in gold prices. During that time, the Water Board authorized an expansion to the existing leach pad, which nearly doubled the capacity of the mine. As gold prices soared to over \$1,600 per ounce, active mining resumed in 2008 and continued through July 2015. Briggs management admits that a restart in the future is supported by the uniqueness of the resource and the considerable reserve that remains untapped. However, under existing regulatory requirements, the restart potential for the mine requires a gold price of \$1,300 per ounce or higher. Major components associated with a restart include Water Board authorization to expand the permitted leach pad, upgrading the existing crushing plant, upgrading the electrical generation plant or installing a power line connection, investing in new fleet equipment, performing additional environment review, and revising existing local, state and federal permits. Briggs management estimates \$20-\$30

million in capital costs will be needed for a restart, but remains optimistic that favorable conditions will return and active mining at the Briggs Mine will resume. From the Water Board's perspective, January 2016 will be a pivotal point in the future of the Briggs Mine; we are expecting the submittal of either a Final Closure Plan to close the mine site or a Report of Waste Discharge to expand the leach pad and allow for future mining.

### **3. Barstow Area Groundwater Nitrate and Perchlorate Funding Meeting –** *Cindi Mitton and Jehiel Cass*

State Board staff from the Division of Financial Assistance met with City of Barstow to discuss its preliminary application submitted for grant funding to address the Barstow area groundwater issues. Meeting attendees included City staff and consultants, Golden State Water Company, Division of Drinking Water, and Lahontan Water Board staff. Jonathan Bishop, State Board Chief Deputy Director, clarified that for Barstow groundwater contamination issues, Proposition 1 and Senate Bill 445 grant funding may only be used to address perchlorate cleanup and may not be used to address nitrate cleanup which is the City's responsibility. Grant funds cannot be used for long-term operations and maintenance programs. Grant funding priorities are for projects that actually achieve clean up in the shortest amount of time and return safe and secure water supplies to as many residents as possible.

Groundwater nitrate pollution is the result of the City's disposal of wastewater treatment plant effluent and sludge to fields north of the Mojave River and south of Interstate 15

(I-15) in the area known as the Soapmine Road area. In 2004, the Board adopted a Cease and Desist Order requiring the City to cease further waste sludge biosolids disposal in its north field and upgrade its wastewater treatment plant for nitrate removal. In 2007, a Cleanup and Abatement Order required the City to supply replacement water to residents whose wells were affected with nitrate. In 2013, a Cleanup and Abatement Order required the City to clean up polluted groundwater.

In November 2010, perchlorate was found in groundwater northeast of the City's nitrate plume. When perchlorate was found comingled with nitrate, in 2015, I amended the Order to allow the City to explore funding options to address both plumes. The City is not responsible for the perchlorate discharged by a responsible party no longer solvent.

State Board staff used the meeting to obtain additional information regarding two preliminary grant applications submitted (one by the City and one by the Lahontan Water Board) to address perchlorate.

The City needs to differentiate the cost to treat nitrate separate from treating the comingled nitrate and perchlorate. Where a single treatment alternative addresses both nitrate and perchlorate, grant funds to address perchlorate may be used and would be allocated based on the pro-rated cost to treat only the perchlorate portion.

State Board staff identified potential funding sources:

- Dissolved phase nitrate and perchlorate could be treated using a combination of Proposition 1 grant

funds (for perchlorate) and State Revolving Loans (for nitrate).

- Source area perchlorate could be treated using Senate Bill 445 grant funds, followed by Proposition 1 grant funds.
- Source area nitrate could be cleaned up using State Revolving Wastewater Loans.
- Permanent replacement water for wells affected with perchlorate and nitrate may come from the State Revolving Fund loans.
- Golden State Water Company could apply for Proposition 1 funds to treat perchlorate at the wellhead and the Soapmine Road Well could be used to increase water supply.

State Board staff stressed that all grant funding will be on a competitive basis. Projects that achieve multi-benefits have priority. The more limited Senate Bill 445 funds will be released before the larger Proposition 1 funds. State Board staff hopes to finalize the Proposition 1 guidelines by the spring 2016 with the initial phase of Proposition 1 funds released in fall 2016 or early 2017. Senate Bill 445 funds are planned for award in early 2016.

#### 4. Snow Valley Ski Area Erosion Problems – *Tom Browne*

Water Board staff inspected the Snow Valley Ski Resort in the San Bernardino mountains to continue follow-up on deficiencies in slope maintenance, poor erosion control best management practices (BMP), lack of vegetation on ski runs, and correspondence regarding their plans to comply with a Notice of Violation issued in February 2015.

Sediment run-off in the spring 2014 resulted in a complaint to Cal-EPA from a local resident concerned about silt contamination running off the ski area

and through the parking lot into the south fork of Deep Creek. The October inspection found many locations with serious erosion problems. The sedimentation basin down gradient of the parking lot, which serves as the last catch for silt run-off, was completely full. Snow Valley staff shared draft plans and a schedule for repairs and installment of permanent BMPs. The schedule called for immediate repair of all problem areas identified in our inspections continuing through 2015. The most important best management practice, a permanent sedimentation basin on the west side of the parking lot, will not be installed until next spring. The following photographs illustrate some of the erosion problems found in October 2015.



10/15 - Erosion on "Big Bowl" slope



10/15 - Erosion exposing water line between a reservoir and storage tank for snow making

Snow Valley staff agreed to submit progress reports every other week to the Water Board. The November 6 report showed they are making progress on slope repairs (see the photographs below) and have stocked up on fiber rolls and jute matting to be ready for run-off events. Jute matting is an excellent BMP for erosion control on steeper slopes. Water Board staff will continue to monitor progress following review of the recently submitted Erosion Management Plan.



11/15 - Re-installed water bar near top of Chair 12



11/15 - Soil compaction and new water bars on "Mambo" slope; seeding is planned to be done before opening of their season

## 5. Modifications to Improve Nutrient Reductions at Wastewater Treatment Plants – *John Morales*

On October 15, 2015, staff attended an EPA-sponsored webcast on *Case Studies on Implementing Low-Cost Modifications to Improve Nutrient Reduction at Wastewater Treatment Plants*. EPA wants to demonstrate nutrient reduction performance at existing wastewater treatment plants using low cost techniques.

Biological treatment has been commonly used for over a century to stabilize and reduce the biodegradable organic matter of domestic wastewater. Alternatively, this is called secondary treatment and various configurations are used in plants large and small. Most plants constructed before today were not designed for nutrient removal (nitrogen and phosphorous). In recent decades, we are increasingly aware that nutrients from wastewater discharges and other sources have a profound impact on receiving waters. Nutrients in surface waters contribute to oxygen depleting algae that suffocates aquatic life and excessive nitrogen in groundwater may impact drinking water.

Modifying existing biological treatment systems to achieve biological nutrient removal is achieved by managing aerated (aerobic) zones to nitrify ammonia to nitrate, followed by anoxic (anoxic) zones to convert nitrate to nitrogen gas.

Recent modifications to the Victor Valley Wastewater Reclamation Authority (VWVRA) plant was one of the four case studies discussed. This plant discharges to both surface and groundwater. Before optimization, the plant effluent total nitrogen was 8.93 mg/L and following the upgrades, reported as 6.83 mg/L, a 24 percent reduction. This was achieved primarily through aeration and process modifications and resulted in an overall 10 percent operational cost savings.



VVWRA – New Aeration Basin Air Diffusers

*Aeration modifications* - Air control throughout the aeration basins was improved to establish and maintain aerobic and anoxic treatment zones. Aeration is the single largest power demand in a wastewater treatment plant because of power consumption to drive air compressor blowers. New diffusers and air blowers optimize the anoxic conditions that support denitrification for biological nutrient removal.



VVWRA – New Process Control Equipment

*Process modifications* - New return activated sludge pumps for internal recycling and on-line monitoring equipment were added to improve process control. New on-line monitoring equipment was installed allowing real-time adjustment to the correct amount of microorganism food supply and oxygen delivered, thereby optimizing treatment throughout the basins.

The VVWRA spent \$1.1 million dollars in improvements instead of \$80 million

dollars to replace its treatment plant system.

## 6. Summary of the High Desert El Nino Cooperators Meeting, San Bernardino County Fire Office of Emergency Services – Christy Hunter

On October 28, 2015, at least 100 participants representing local, County, State, and Federal agencies gathered in Victorville to share information regarding strategic preparations and emergency contingency plans. These plans are designed to ensure public safety and protect property and public infrastructure in response to floods that are likely this 2015/2016 winter season. The meeting provided a forum to facilitate exchange of information and encourage shared resources for public safety programs and services as a high priority. With public safety in mind, it is hoped that this meeting (which is one of many meetings scheduled throughout San Bernardino County) laid the groundwork for cooperative working relationships.

Alex Tardy, Warning Coordinator Meteorologist from the National Weather Service's San Diego office, presented an overview of this winter's long-range weather prognosis and potential weather-related impacts to public safety. He discussed California's historical El Niño-related and non El Niño-related damaging floods, as well as the current California drought situation. Mr. Tardy explained that this year's developing El Niño weather pattern is now among the strongest (of past El Niños) on record. Water temperatures in the Equatorial Pacific Ocean are nearly 6 degrees above average with the prognosis that it will likely influence weather and climate patterns by bringing the jet stream down from northern areas into Southern California. He noted that the recent, off-seasonal

storms have been influenced by the warmer-than-normal ocean temperatures that have developed since May of this year. He stated that above-average rainfall is equally likely along the coastal, mountains, and inland/desert areas in Southern California and is expected to start in December, peak in January, and possibly continue through the spring (Figure 1). Mr. Tardy highlighted the fact that the higher than average rainfall and snowfall this winter will not provide relief for California's drought condition, which in terms of the seasonal rainfall budget, shows California has a rainfall-deficit equivalent to 2-2.5 season's worth of precipitation. Mr. Tardy's message was a sobering reminder that the time to prepare for damaging flood events is **now** and not when these storms are upon us.

Doug McElvain, Superintendent of Hydro-Electric Plant Operations, California Department of Water Resources, presented information on the Cedar Springs Dam, which forms Silverwood Lake, and the downstream Mojave Forks Dam built to reduce peak-inflow rates from releases from Silverwood Lake and two other tributaries of the West Fork of the Mojave River. These structures are all within the catchment area of the headwaters of the Mojave River. Silverwood Lake reservoir, with a capacity of 73,000 acre-feet, is part of the State Water Project aqueduct system providing water for the San Bernardino Mountain and Mojave Desert areas and operated by the California Department of Water Resources. The Mojave Dam was designed to moderate design inflow rates of 94,000 cubic feet per second to a maximum outflow of about 23,500 feet per second to the Mojave River. The Mojave Dam is an ungated flood control structure that can

impound a net capacity of about 78,000 acre-feet of water (at the spillway crest) and is operated and maintained by the U.S. Army Corps of Engineers. Stream gages at several locations upstream of the Mojave Dam are monitored. During high-flow releases through the Mojave Dam outlet, San Bernardino County Flood Control District and the San Bernardino County Office of Emergency Services are notified, who in turn notify the public in affected areas along the Mojave River using the county's Telephone Emergency Notification System (TENS). Tim Franke, Dispatch Supervisor, San Bernardino County Communications Center, mentioned that it only takes minutes for information to go from initial release-notification to affected agencies. Mr. McElvain noted that water has never flowed over the spillway of the Mojave Dam.

Brendon Biggs, Deputy Director of Operations, San Bernardino County Department of Public Works, provided an update to their contingency plans and highlighted key sites where flood control preparedness and debris management work is underway in the High Desert. Mr. Biggs mentioned that meetings among U.S. Army Corps of Engineers, Water Boards, and other agencies have been conducted in anticipation of flooding conditions.

Information on ongoing preparations, road/highway construction projects, and staged resources that will be available to the public and other agencies in anticipation of damaging floods this winter was provided.

Figure 1. Taken from the Coast to Cactus Weather Examiner, National Weather Service – San Diego, Volume 22 No. 4. Weather.gov/sandeigo, Winter Outlook – NOAA story.

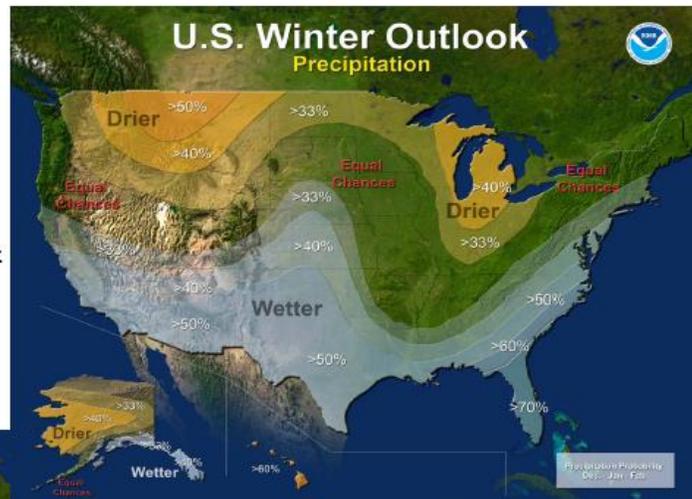
### The 2015 U.S. Winter Outlook (December through February)

#### Precipitation Outlook:

Wetter-than-average conditions most likely in the Southern Tier of the United States, from central and southern California, across Texas, to Florida, and up the East Coast to southern New England. Above-average precipitation is also favored in southeastern Alaska.

Drier-than-average conditions most likely for Hawaii, central and western Alaska, parts of the Pacific Northwest and northern Rockies, and for areas near the Great Lakes and Ohio Valley.

It's important to note that the



greater share of precipitation in Southern California is expected in January, February and March.

#### Temperature Outlook:

Above-average temperatures are favored across much of the West and the northern half of the contiguous United States. Temperatures are also favored to be above-average in Alaska and much of Hawaii. Below-average temperatures are most likely in the southern Plains and Southeast.

### 7. Engineering Evaluation/Cost Analysis, Small Arms Range Site, SR401 George Air Force Base - Linda Stone

The Air Force is proposing a cleanup (removal action) for a small arms range site, SR401, at the former George Air Force Base. The goal of the removal action to excavate and remove all soils that exceed risk-based screening levels so that the site can be closed without any restrictions on future uses (such as institutional controls).

SR401 is a 9-acre site that was used for rifle and pistol practice when the Base was still an active facility (1942 to 1992). Investigations of the site found that bullet fragments have resulted in lead contamination in soils to depths of about four feet. To a lesser extent, aluminum, antimony, copper, and zinc are also present in soils. All of these metals were detected at concentrations above risk-based screening levels for the protection of human health. The estimated volume of contaminated soils that will be removed is approximately 4,000 cubic yards. Because of the low mobility of the metals and the significant

depth to groundwater (i.e., approximately 140 feet), the metals at this site are not considered a threat to groundwater.

The Air Force will conduct the cleanup as a “non-time critical removal action” under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). To support this proposed action, the Air Force has submitted an Engineering Evaluation/Cost Analysis (EE/CA) for the site. The EE/CA documents the evaluation of the remedial alternatives, and analyzes the effectiveness and feasibility of the proposed action. After the EE/CA has been finalized, the Air Force will submit a Technical Memorandum, which serves as the decision document under CERCLA’s non-time critical removal action process. Lahontan Water Board staff will work with the Air Force and review the removal action for protection of human health and the environment.

## **8. Hinkley Background Study Technical Working Group Meeting - Anne Holden/Lisa Dernbach**

Work on the Hinkley chromium background study is progressing at an impressive pace. At the November 5, 2015 Technical Working Group (TWG) meeting, Dr. John Izbicki of the US Geological Survey provided updates on ongoing work, including drilling new wells near the Mojave River for groundwater flow-path investigations; collecting and analyzing core samples to understand depositional environments in the Hinkley Valley; depth-dependent sampling in four existing wells, and additional gravity data analysis to better define aquifer thickness. Some of the new data is already being used to refine and update the Hinkley aquifer groundwater model. A draft of the USGS

fact-sheet style report introducing the background study was provided to TWG members for review and comment. Plans for upcoming work, including well selection for the second round of groundwater sampling in March 2016 were discussed.

Prior to the meeting, USGS and Project Navigator staff hosted a field trip to see the USGS mobile lab, new groundwater flow-path wells, and to inspect and discuss sediment cores taken from those wells. Local community and TWG members were in attendance, showing a high level of engagement and interest.

**Summary of  
No Further Action Required Letters Issued  
October 16 - November 15, 2015  
December 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 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
November 12, 2015	TOSCO Bulk Plant No. 0769	702-190 Johnstonville Road Susanville, Lassen County	SL0603554229	<a href="http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0603554229">http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0603554229</a>
November 12, 2015	Plant 10, Building 617	1011 Lockheed Way Palmdale, Los Angeles County	6B1920021T	<a href="http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006375">http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006375</a>

**Additional links:**

General Policy information: [http://www.swrcb.ca.gov/ust/lt\\_cls\\_plcy.shtml#policy081712](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](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](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/110612_6_final_ltcp%20imp%20plan.pdf)

**EO's Monthly Report  
October 16, 2015 - November 15, 2015  
Unauthorized Waste Discharges\***

<b>COUNTY: EL DORADO</b>								
<b>Discharger/Facility</b>	<b>Location</b>	<b>Basin</b>	<b>Regulated Facility?</b>	<b>Discharge Date</b>	<b>Discharge Volume</b>	<b>Description of Failure</b>	<b>Additional Details</b>	<b>Status</b>
South Tahoe PUD/So. Tahoe Public Utility Dist. CS	Manhole No.534, 924 Emerald Bay Rd., South Lake Tahoe	North	Yes	11/11/2015	1,000 gallons	Manhole blockage resulted in 1,000 gallon spill of raw sewage to paved and unpaved surface	Grease deposition (FOG) caused 1,000 gallons of raw sewage to spill from a manhole to storm drain; paved and unpaved surface. No surface water body affected.	Cleared blockage, cleaned-up spill; recovered 700 gallons of spill, disinfected affected area.
<b>COUNTY: LOS ANGELES</b>								
<b>Discharger/Facility</b>	<b>Location</b>	<b>Basin</b>	<b>Regulated Facility?</b>	<b>Discharge Date</b>	<b>Discharge Volume</b>	<b>Description of Failure</b>	<b>Additional Details</b>	<b>Status</b>
Ca Dept of Corrections/California State Prison, Los Angeles County CS	Four manholes behind building C5-4, 44750 60th St W, Lancaster, CA 93536, USA	South	Yes	10/20/2015	1,950 gallons	Manhole blockage resulted in 1,950 gallon spill of raw sewage to paved surface	Debris from construction caused raw sewage to spill from 4 manholes behind building C5-4 paved surface; No surface water body affected.	Cleared blockage, recovered 100 gallons of spill, disinfected affected area, added the line to the preventative maintenance program.
<b>COUNTY: SAN BERNARDINO</b>								
Lake Arrowhead Community Service/Lake Arrowhead Csd CS	Lateral clean out at 27822 Greenway Dr., Lake Arrowhead	South	Yes	10/25/2015	400 gallons	Lateral cleanout blockage resulted in 400 gallon spill of raw sewage to paved and unpaved surface.	Debris-rags caused raw sewage to spill from lateral cleanout to paved and unpaved surface on Greenway Dr.. No surface water body affected.	Cleared blockage, contained the spill using dirt dikes, recovered 400 gallons of the spill and contaminated soil, disinfected the area.

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