CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
MEETING OF SEPTEMBER 14-15, 2016
APPLE VALLEY

ITEM 5
EXECUTIVE OFFICER'S REPORT

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ENCLOSURE 1

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EXECUTIVE OFFICER'S REPORT • SEPTEMBER 2016

State and Regional

1. Personnel Report – *Eric Shay*

New Hires – None

Vacancies – We will soon begin the process of recruiting for two Environmental Scientists to support our SWAMP program. In addition, we are currently recruiting for the following positions:

- Executive Assistant, South Lake Tahoe
- Staff Services Analyst, Leviathan Unit, South Lake Tahoe
- Supervising Engineering Geologist (Division Manager), Victorville

Departures – None

2. Staff Awards – *Lauri Kemper*

Tom Gavigan – Superior Accomplishment Award for Tom's major improvement in methods, organization, and products which have increased efficiency, consistency, transparency, and quality of work products. Tom led his unit team to develop a simplified, one-page, step-wise set of instructions with embedded template documents for internal review and processing of petroleum contamination cases. Tom and his team also developed a similar set of instructions for issuing closure on a non-petroleum contamination case.

Eric Taxer – Sustained Superior Accomplishment Award for the leadership and implementation roles Eric has played in the Water Board's efforts to improve the effectiveness, efficiency, and transparency of the its Enforcement Program; developing and implementing the Water Board's new Supplemental Environmental Project Program; and developing the Water Board's fledgling Cannabis Enforcement Program in coordination with state-wide efforts.

Rebecca Phillips – Sustained Superior Accomplishment Award for Rebecca's exemplary work over the past two years in taking on new and important assignments, such as assisting the Water Board in tracking performance targets; managing our regional lab contract; and planning, coordinating, and implementing the Victorville office relocation.

3. Climate Change Working Groups Update – *Mary Fiore-Wagner, Brian Judge, Laurie Scribe*

Our internal Climate Change Adaptation Working Groups have sent out a questionnaire on August 4, 2016 to stakeholders, infrastructure owners, governments and interested parties asking for their plans to address climate change and the challenges they face. As we identify additional stakeholders more surveys will be sent out. In the first two weeks of the survey we received over 60 responses and 38 individuals from organizations volunteered to help staff develop collaborative strategies, plans, and policies to further climate change adaptation in our region.
Several staff from the Water Board formed three Working Groups: Stormwater and Low Impact Development (Laurie Scribe lead), Wetlands and Floodplains (Mary Fiore-Wagner lead), and Infrastructure (Brian Judge lead) composed a series of survey questions along with targeted mailing lists to gather wide ranging responses from diverse groups. In addition to the mailed survey, staff plans to attend meetings of existing organizations, such as the IRWMPs, watershed groups, and other local organizations, to have more focused discussions about climate change and survey input from participants.

The questionnaire asks for feedback on the range of options the Water Board may consider to address climate change. The options range from a minimal of suggesting actions to a maximum of requiring actions. For example, the Water Board could either suggest or require implementing agencies to prepare plans and schedules to ensure infrastructure and other facilities are protected from anticipated climate change effects (e.g. higher and more frequent floods, increased erosion, depleted water supplies, catastrophic wildfires, etc.). Other options the Water Board may consider involve wetland and floodplain prohibitions similar to those in place for Lake Tahoe and Truckee watersheds, and requirements for storm water capture and use of low-impact development principles. The survey questions are divided into three main sections:

1. Who are you and what are you doing or planning for climate change?
2. What challenges do you face?
3. What is your opinion about actions and priorities the Water Board is considering?

The survey is available on the Water Board's public website and was distributed to the Water Board's existing lyris lists as well as the newly created climate change adaptation lyris list, which includes all participants from the past Climate Change workshops. In addition to email distribution Water Board staff will be presenting the survey and discussing the Water Board's efforts at various meetings throughout the region later this summer and fall. The survey is available here and under the "Announcements" section of the Water Board's home webpage and on the Water Board's climate change webpage.

Water Board staff plan a presentation at the November 9-10, 2016 Board meeting in South Lake Tahoe with results from the online survey and public outreach at meetings and a more developed range of alternatives to adapt to climate change.

4. CalEPA Environmental Justice Symposium – *Lisa Dernbach and Lauri Kemper*

Water Board staff attended the first CalEPA Environmental Justice Symposium, titled "Understanding the Importance of Equity: A Step Toward Environmental Justice," held at the CalEPA Building in Sacramento on August 8. Opening remarks were made by Matthew Rodriquez, Secretary for Environmental Protection at CalEPA, who iterated the agency's commitment to creating a more just and equitable California in environmental matters.

The first speaker was Dr. Rachel Morello-Frosch, Professor of Environmental Science, Policy and Management at Cal Berkeley. Considered an expert in her field, Dr. Morello-Frosch provided many examples and statistics demonstrating environmental justice instances in California and the nation. One example is industrial development occurring more often in poverty areas, where residents are subject to pollution burden more than other socioeconomic classes. People who live and work in these areas, often people of color, have chronic exposure to environmental stresses, such as poor air and water quality and excessive traffic and noise. These stresses affect pregnancies, babies' health, children's health, children's ability to concentrate and do well in school, and result in higher instances of hypertension, cardiovascular disease, and cancer in adults. Solutions offered by Dr. Morello-Frosch include more and better communication with affected populations and making them part of the decision-making process. She also suggested that regulatory agencies help with research by providing staff time to share data, equipment, lab analyses, and expertise.

Susana de Anda, Co-Founder of the Community Water Center, spoke second. She showed segments of the documentary "Thirsty for Justice" about the struggle of Central Valley residents and the human right for water. Ms. de Anda shared stories of poor and immigrant communities, who lack basic access to safe, clean, and affordable drinking water. She said polluted wells at schools and in communities were an assault on residents and workers' personal health and human dignity. She also spoke of domestic wells going dry due to excessive agricultural pumping, such as in East Porterville in Tulare County where some residents have not had running water for over a year. By not adequately regulating the agricultural business, she believed California was condemning future generations with polluted and insufficient water supply problems to solve and pay for later at extreme costs. Ms. de Anda spoke of the grassroots movement that made the Human Right to Water the law of the land in California, and the first of its kind in the nation. After release of the documentary, the State Water Board coordinated bottled water for East Porterville and will soon be hooking up the community to municipal supply from Porterville. Ms. de Anda concluded that government agencies need to step up to replace water sources that have gone dry or have been polluted at all applicable locations throughout the state. And agencies need to provide better communication and education to poor and immigrant communities on water quality, well design, installation, testing, and maintenance.

The final speaker was Vien Truong, Director of the non-profit Green for All. Ms. Thuong described and showed video clips of her organization's involvement in the Flint, Michigan, municipal water lead-poisoning crisis. Green for All conducts outreach using contemporary means including musicians and other celebrities to inspire social and

environmental action. While the major media outlets focused on government officials and other well-known persons, Green for All made sure that residents affected by lead-tainted water were heard and able to share their stories and sufferings. Green for All ensured the public got to see various degrees of lead-tainted water samples representing municipal water that made its way to homes and businesses. It is estimated that about 10,000 children in Flint were exposed to lead in water and many will likely suffer life-long effects, such as neurological problems. Ms. Thuong emphasized that environmental justice communities are connected to all other communities in one way or another. When states are equitable in providing environmental justice, the economy improves for everyone. This is seen in less frequent health issues requiring medical attention for residents, better school attendance for children, and better attendance and productivity for workers.

5. United States Environmental Protection Agency Partnership – *Robert Larsen*

Strong partnerships are critically important for water quality protection in the Lahontan Region. To that end, the Water Board maintains valuable relationships with federal, state, regional, and local representatives to ensure our shared water quality goals are met, and support mutual agency initiatives. Staff and agency management regularly meet with agency partners to share ideas and maintain ongoing discussion on important issues. Such coordination is a cornerstone of the Water Board's regulatory approach.

The United States Environmental Protection Agency (USEPA), Region 9 recently appointed Tomas Torres as the new Director of its Water Division. Mr. Torres visited Lake Tahoe in July to learn more about the Water Board's region and its unique water quality issues. Staff and management met with Mr. Torres, his staff, and Nevada Division of Environmental Protection staff on July 12, 2016 to review the history of the Lake Tahoe TMDL program and discuss current and upcoming TMDL implementation efforts. Water Board and NDEP staff also shared information regarding other program issues including ongoing remediation work at the Leviathan Mine, bacteria-impaired water bodies, environmental justice programs and ideas to focus basin planning efforts on addressing impairments of beneficial uses. The meeting

provided an invaluable opportunity to bring Mr. Torres up to speed on important Water Board and NDEP programs and continue ongoing dialogue with the USEPA. The Water Board and USEPA committed to having future annual meetings.

Later that week, the Tahoe Regional Planning Agency hosted Mr. Torres and US EPA, NDEP, and Water Board staff on a boat tour of Lake Tahoe to highlight ongoing protection efforts and emerging challenges. The group (pictured below) performed an informal measurement of Lake Tahoe's transparency using a Secchi disk, viewed invasive weed and Asian Clam control projects in Emerald Bay, and toured Tahoe Keys and Marla Bay to get a first-hand perspective on aquatic invasive species issues. Trip participants were able to network with peers and strengthen important connections needed to protect Lake Tahoe's fragile environment.

6. Joint California-Nevada Legislative Committee Session – *Robert Larsen*

The Nevada Legislative Committee for Review and Oversight of the Tahoe Regional Planning Agency (TRPA) and the Marlette Lake Water System is comprised of six Nevada Legislators, and its duties include reviewing the budget, programs, and accountability of the TRPA and coordinating with California Legislative members. The Committee invited several members of the California Legislature to its July 15, 2016 meeting and hosted Legislative members and staff on a Lake Tahoe boat tour that morning. The afternoon session was held at the TRPA offices, and Nevada Division of Environmental Protection Deputy Director Jennifer Carr and I briefed the Committee on Lake Tahoe TMDL program progress.

Ms. Carr opened the discussion with a review of the causes of clarity loss, and I followed with a review of the TMDL goals. We then talked about the various management practices and restoration efforts currently underway that are achieving our load reduction targets, followed by a brief overview of specific steps each state is taking in the coming year to implement the program. Finally, I provided a quick summary of the Water Board's nearshore assessment work and described our program for focusing nearshore monitoring to guide management actions. The group appreciated the report, was encouraged by TMDL program progress, and requested ongoing engagement to keep the committee abreast of ongoing work.

Ongoing engagement with state Legislative members remains important for educating government representatives on the important regulatory agency work to protect and restore Lake Tahoe. I welcome these opportunities to present to the Nevada Legislative committee and was happy to see members of the California Legislature join in the discussion. Staff will continue to engage with both California and Nevada Legislative members and staff in the future to maintain productive dialogue on important issues.

7. Testing Failure of Underground Storage Tanks in South Lake Tahoe, El Dorado County – *Lisa Dernbach*

This summer has seen a number of gas stations in South Lake Tahoe with underground storage tanks (USTs) failing leak tests. According to El Dorado County, Environmental Management Department, USTs at four gas stations have either failed annular spacing leak tests or have leak detection systems indicating failure.

The UST Regulations require owners/operators of USTs to test every three years the annular spacing between the primary and secondary walls of tanks and piping for leaks. Most of the USTs in the South Lake Tahoe were replaced in 1998 to meet the State's upgrade deadline and comply with the double-wall provision. The last annular testing for the sites discussed here was in 2013.

At the 7-11 Store on Lake Tahoe Boulevard in the middle of town, the tank alarm system indicated an inward leak in the 91 octane tank. An inward leak means a failure from the outer tank wall towards the inner tank wall and usually does not involve a release to the environment. After reporting the alarm system results, the responsible party worked with the County to conduct appropriate annular space testing that verified the problem. This resulted in product removal and the UST owner/operator placing the tank in "inactive" status. The tank can remain inactive for up to one year before the owner/operator needs to decide to either replace the tank or permanently close it. Since no leak was indicated in the 87 octane tank, it continues to operate by dispensing product.

During spring this year, the tank alarm system at the Tahoe Tom's Gas Station near Stateline repeatedly indicated failure in the annular spacing. Because the alarms were not reported and the tanks were past their annular spacing test due date, the County red-tagged them prior to the 4th of July weekend. Red-tagged tanks are prohibited from being filled by any party, such as a tanker truck driver, at the risk of a $25,000 fine. In mid-July, the responsible party of the site removed the concrete slab and pea gravel over the 87 and 91 octane tanks to expose pipelines, risers, and sumps, which all indicated leaks. Repairs continue to be made to correct tank equipment as of mid-August. The site owner has applied for a RUST (Replacing, Removing, or Upgrading Underground Storage Tanks) loan from the State Water Board.

As at Tahoe Tom's, the tank alarm system at the former USA Gas Station, now called American 1, indicated failure in the annular space for piping during Spring of this year. The gas station is located on Emerald Bay Road, south of the South Y intersection for Highways 50 and 89. The County red-tagged the tanks as they were past their annular spacing test due date. Even though repairs were made to above-ground tank equipment (dispensers, lines, and pans), test results continue to show failure within the tank system. The responsible party is planning to remove the concrete slab and pea gravel to expose the top of the tanks to attempt to locate other leaks. The owner of this site has also applied for a RUST loan.

The final site is the Swiss Mart Gas Station, also on Emerald Bay Road, but north of the South Y intersection. Besides records at the site showing the tank alarm system being triggered, County staff found hand-written instructions informing employees on how to override the alarm system. Since the tanks are not yet past their annular spacing test due date, the County has issued a new test due date. The operator, in the meantime, is allowed to continue dispensing product.

Of the four sites mentioned, only Tahoe Tom's is an active leaking underground storage tank case implementing corrective actions. Gasoline constituents from releases that

ceased in 2000 continue to adversely impact groundwater quality in a limited area near the tank basin on site and also off site. A high vacuum dual-phase extraction system sporadically operated at the site until excavation activities required it be turned off. Soil contamination remains beneath the tank basin despite 16 years of remedial actions using various methods.

In July, Water Board staff issued a letter that requires the responsible parties to remove all soil contamination in the tank basin in the event that the tanks have to be removed. In the meantime, a water sample collected by Water Board staff in June from the Mark Twain Lodge domestic well contained MTBE at 35 micrograms per liter, the highest detection thus far. Last year, the Lodge owner connected to municipal supply and sued the gas station owner to recover those costs. The County allows the well to continue to be used to provide water for landscaping and to fill the pool. Water Board staff is planning to require the responsible parties to submit a corrective action plan to address the off-site MTBE contamination in soil and groundwater.

8. (Standing Item) City of Barstow Wastewater Treatment Plant Compliance with Enforcement Orders – *Ghasem Pour-ghasemi*

Plant Upgrades Completed

The City of Barstow (City) completed Phase I improvement projects upgrading its wastewater treatment plant (plant) and disposal percolation ponds in July 2015. The cost was $8.1 million dollars, of which $2.8 million dollars was from federal grants. The improvements were discussed in the Executive Order (EO) report of September 2015. Phase II is not yet scheduled but will address additional improvements to wastewater treatment. Phase II project will be designed after Phase I loan is paid off (in fiscal year 2016-2017). 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. The effluent treated water is discharged to percolation ponds 1, 2, 3, and 5 as well as the Southern Irrigation Field.

Plant Nitrogen Removal

The effluent average total nitrogen over the last year has been 7.24 mg/L. This demonstrates that the improvements have been effective in reducing effluent total nitrogen levels. In 2004, the effluent total nitrogen concentration was 34 mg/L. Cease and Desist Order No. (CDO) R6V-2004-0029 required "effective immediately" that all effluent disposed to not exceed a total nitrogen concentration of 26 mg/L as nitrogen (30-day average) and required improvements to the plant by July 30, 2009. Thus, the City has fully complied with CDO No. R6V-2004-0029. However, we do not recommend rescinding this enforcement action until revised Waste Discharge Requirements (WDRs) are issued to establish an enforceable total nitrogen effluent limitation of 10 mg/L. Staff intends to prepare revised WDRs as soon as resources allow. The revised WDRs would also consolidate groundwater monitoring that are now required under both the WDRs and the groundwater cleanup order discussed below.

Nitrate Pollution Groundwater Cleanup

Cleanup and Abatement Order (CAO) No. R6V-2013-0045 required the City to design and construct a system to capture and treat nitrate polluted groundwater down gradient of the northern irrigation field in the Soapmine Road neighborhood. Three additional amendments to this CAO were made due to the presence of perchlorate that 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 simultaneously.

On July 23, 2015, the Executive Officer issued the latest amendment to the CAO No. (R6V-2013-0045-A3) granting an additional two-year extension until November 10, 2017 for the City to start the pump and treat system. In the meantime, the Executive Officer instructed the City and Water Board staff to meet regularly to establish reasonable actions that the City will take to limit the migration of the nitrate plume and address source areas by the new date. The City's consultant, BKT, has applied for and received a $1.7 million grant from the California Energy Commission (CEC) to conduct a small

amount of groundwater extraction (0.2 to 0.5 million gallons per day) to treat and remove both nitrate and perchlorate. The proposed extraction will not fully meet the requirements of the CAO. Water Board staff will meet with the City in early September to discuss details of the CEC grant project.

Residential Well Sampling 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 CAO No. R6V-2007-0017. In the third quarter of 2016, the City sampled 31 residential wells. Only one residential well exceeded the drinking water maximum contaminant level (MCL) for nitrate as nitrogen of 10 mg/L. A total of seven private wells showed nitrate as nitrogen concentrations exceeding 5 mg/L (e.g. above background). The nitrate concentration trends are going down. However, the groundwater elevation has been also decreasing due to lesser annual precipitation. When the groundwater elevation increases from storm flood events, it is likely that the nitrate concentrations will increase as nitrate is flushed from the source area soil. The City has been providing all residents within the required study area with uninterrupted replacement water service (bottled water) even though the CAO required it to provide bottled water only where nitrate has been detected at concentrations at or exceeding 5 mg/L nitrate-as N at any time in the past four quarters. However, starting July 1, 2016, the City is providing bottled water only to the residents that meet the CAO requirements. At this time, the City provides eight residents with bottled water. The City has also requested to reduce the frequency of the sampling of the number of residential wells that have not exceeded nitrate as nitrogen of 5 mg/L. Water Board staff intends to recommend allowing reduced sampling with triggers to resume sampling if groundwater elevations increase.

9. (Standing Item) 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 concentrated animal facilities (CAFs). Only three active and one inactive dairy are regulated under waste discharge requirements (see table below). The waste discharge requirements for inactive N & M Dairy will not be rescinded until site cleanup is completed. Some CAFs have cleanup and abatement orders issued to them requiring delivery of replacement water to affected residents.

Staff is developing a General Order that would regulate the CAFs and will 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 groundwater pollution. A stakeholders meeting was held on November 19, 2015 to introduce the CAF General Order concept. The stakeholders asked for creation of a Technical Advisory Committee (TAC) to research and make recommendations about minimum monitoring standards. On May 6, 2016, Water Board staff invited approximately 30 people for the first meeting to discuss the formation of TAC group. The group included people from the Mojave Resources Conservation District (RCD), Natural Resources Conservation Service (NRCS), Western United Dairymen, Mojave Water Agency, University of California-Davis cooperative extension, consultants, agronomist, dairymen, and agriculture industry. A second meeting took place on June 22, 2016 and a subgroup of six people

volunteered to provide recommendations for nutrient balance and performance monitoring. Water Board will develop a draft monitoring and reporting program (MRP) and meet with the subgroup in October 2016 to evaluate it before inviting the entire TAC group for another meeting to present the developed MRP.

Approximately 30 residents currently receive replacement drinking water from five dairies and a heifer ranch that have polluted down gradient 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 residents with nitrate and total dissolved solids concentrations close to and/or over the primary and secondary drinking water standards.

Staff conducted sampling of the residential supply wells near John Van Leeuwen Dairy in Newberry Springs on January 21, 2016. Results indicated none of the sampled wells exceeded primary or secondary maximum contaminant level for drinking water. Depth to groundwater in Newberry Springs is approximately 150 feet.
The table below summarizes the current status of all existing and recently closed CAFs.

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 was developed requiring discharge to the unlined wash water pond to cease. It will not be issued and the facility will be covered under the General Order which will likely prohibit use of unlined waste disposal ponds.
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	Yes	Yes	The dairy over applies wash water to irrigate a small pasture area. The facility will be covered under the General Order which will likely require wash water to be applied at agronomical rates or placed in lined ponds.
B & E Dairy	Yes	No	Yes	A draft CAO was released to the public requiring the dairy to provide replacement water. Water Board staff and dairy owner did additional discovery which indicate all residents within concerned area are connected to the Golden State Water Company with the exception of one resident. B & E sampled that well and nitrate was below drinking water standards, TDS was around 1300 mg/L. The Resident did not want bottled water supplied or routine

Facility	WDRs	CAO to Provide Water?	Groundwater Pollution?	Status
				sampling of his water supply well conducted.
John Van Leeuwen Dairy	No	No	Unknown	The dairy has unlined wash water disposal ponds. Staff sampled nearby residential wells on January 21, 2016. All wells were below the primary and secondary MCL.
Hinkley Dairy	No	Yes	Yes	Operating
High Desert Dairy	No	No	No	Operating
Active Heifers				
Desert View Dairy	No	yes	Yes	Dairy closed. Heifer ranch is 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 dairy location. Corrals and structures removed.

10. Summit for Low-Impact Development and Stormwater Best Management Practices (BMPs) for the High Desert, Mojave River Watershed Group
– Tom Browne

On July 26, 2016, the Mojave River Watershed Group hosted a one-day forum for consultants, designers, engineers, and city and county planners at Victorville City Hall. The forum topic was "Low-Impact Development and Stormwater Best Management Practices for the High Desert." The forum attracted 67 attendees, and there were excellent questions from the audience. This was the first forum held locally specifically to address new requirements contained in the statewide Construction and Small Municipal Separate Storm Sewer System (MS4) permits. The Small MS4 programs are required in portions of unincorporated San Bernardino County, Cities of Barstow, Hesperia, Victorville, and Town of Apple Valley, which are permittees. Low-Impact Development (LID) is a management strategy required in the permits to reduce water quality impacts associated with stormwater runoff.

Speakers included Mark Gray, Director of Environmental Affairs for the Building Industry Association of Southern California. Mark showed photos of recent commercial projects that installed very large stormwater capture / treatment devices below ground. The Building Industry Association is a strong advocate of stormwater LID technologies and

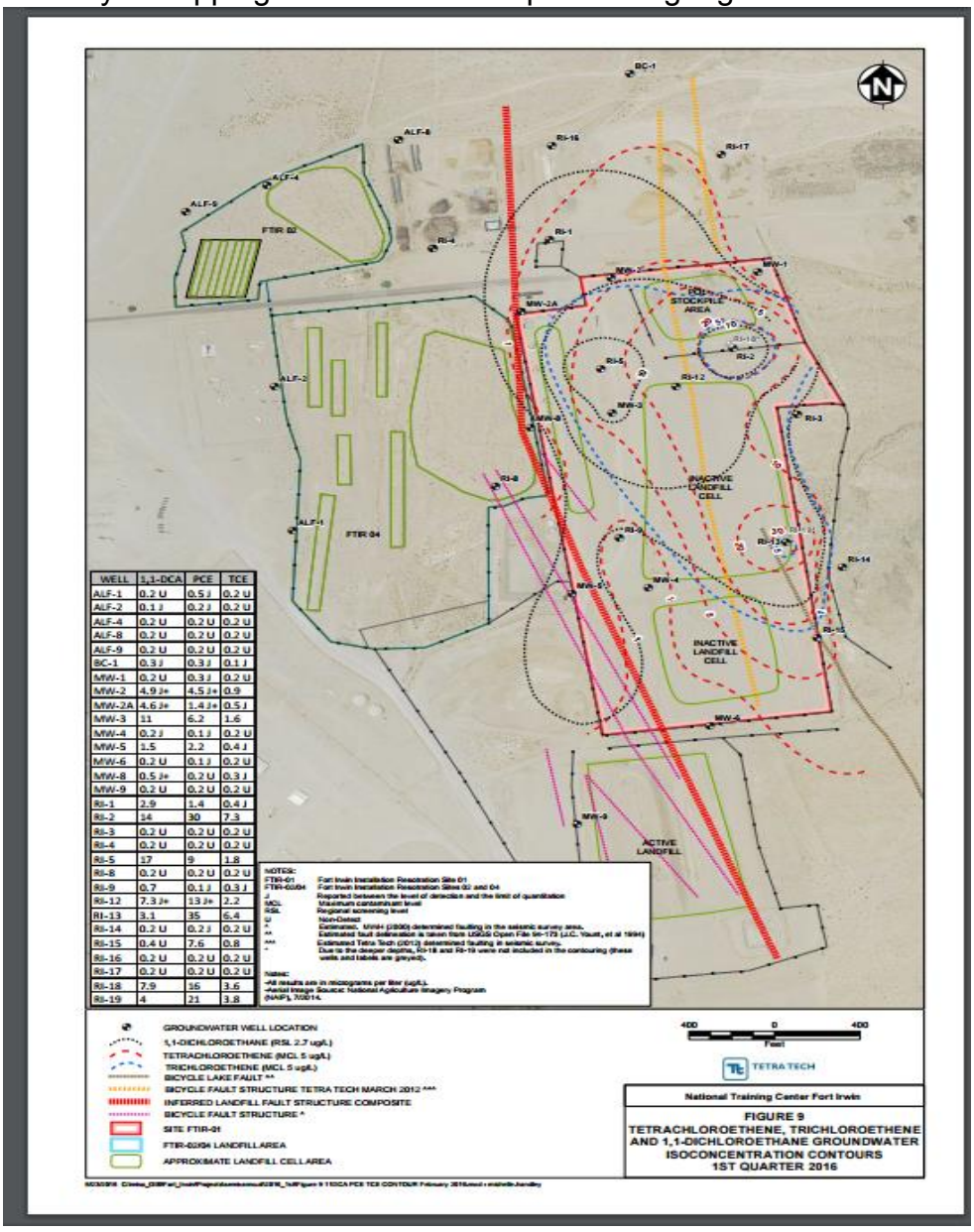
he presented costs for some of these technologies. Sri Srirajan, San Bernardino County Flood Control, and Cynthia Gabaldon, a consultant to San Bernardino County, gave a presentation directed to consultants that are helping cities and counties that have to comply with the MS4 Phase II Permit. Daniel Apt, president of the California Stormwater Quality Association (CASQA), showed examples of stormwater capture / treatment devices that have been installed throughout the state, and talked about their effectiveness and maintenance requirements. David Garcia of Riverside County Flood Control Agency, show-cased the stormwater capture / treatment devices installed at their Agency's headquarters in Riverside. They are gathering water quality data to measure the effectiveness of treatment provided by devices such as bio-swales, below-grade separators, and several types of porous pavement.

Tom Browne, a Water Resource Control Engineer in the Lahontan Victorville office, presented photos from his stormwater inspections over the last year highlighting successes and failures of *permanent post-construction best management practices* (BMPs), a new requirement of both the construction and Small MS4 Permits. Tom's presentation focused on the two largest growth industries in the High Desert: solar and residential construction. The brief, intense rains that are typical in the High Desert can really put post-construction BMPs to the test, but that test may not occur until long after construction is completed. Tom had photos of detention basins, swales, and storm drains that had been overwhelmed by such rain storms. Part of Tom's responsibilities at Lahontan include oversite of the Small MS4 permittees. The MS4 Phase II Permit requires new development and some retrofit development projects to incorporate LID features such as porous pavement, arid landscape designs (no grass), and larger detention basins than were previously required.

Tom Browne at the podium lecturing on "Post Construction BMPs in the High Desert"

11. Soil Vapor Extraction Pilot Study, Active/Inactive Landfill FTIR-01, Fort Irwin – *Alonzo Poach*

In July 2016, the Army installed soil vapor extraction system (SVE) and began running a 12-month long soil vapor extraction pilot study to evaluate clean-up of chlorinated solvents at the inactive portion of the permitted landfill at Fort Irwin (see plume figure below). Evaluation of additional remedial technologies is necessary at the site because groundwater pollution has increased even after the Army implemented the presumptive remedy of capping the landfill and implementing a groundwater monitoring program.



WELL	1,1-DCA	PCE	TCE
ALF-1	0.2 U	0.5 J	0.2 U
ALF-2	0.1 J	0.2 J	0.2 U
ALF-4	0.2 U	0.2 U	0.2 U
ALF-8	0.2 U	0.2 U	0.2 U
ALF-9	0.2 U	0.2 U	0.2 U
BC-1	0.3 J	0.3 J	0.1 J
MW-1	0.2 U	0.3 J	0.2 U
MW-2	4.9 J+	4.5 J+	0.9
MW-2A	4.6 J+	1.4 J+	0.5 J
MW-3	11	6.2	1.6
MW-4	0.2 J	0.1 J	0.2 U
MW-5	1.5	2.2	0.4 J
MW-6	0.2 U	0.1 J	0.2 U
MW-8	0.5 J+	0.2 U	0.3 J
MW-9	0.2 U	0.2 U	0.2 U
RI-1	2.9	1.4	0.4 J
RI-2	14	30	7.3
RI-3	0.2 U	0.2 U	0.2 U
RI-4	0.2 U	0.2 U	0.2 U
RI-5	17	9	1.8
RI-8	0.2 U	0.2 U	0.2 U
RI-9	0.7	0.1 J	0.3 J
RI-12	7.3 J+	13 J+	2.2
RI-13	3.1	35	6.4
RI-14	0.2 U	0.2 J	0.2 U
RI-15	0.4 U	7.6	0.8
RI-16	0.2 U	0.2 U	0.2 U
RI-17	0.2 U	0.2 U	0.2 U
RI-18	7.9	16	3.6
RI-19	4	21	3.8

NOTES:
FTIR-01 Fort Irwin Installation Restoration Site 01
FTIR-02/04 Fort Irwin Installation Restoration Sites 02 and 04
J Reported between the level of detection and the limit of quantitation
MCL Maximum contaminant level
RSL Regional screening level
U Non-Detect
* Estimated. MW-6 (2000) determined faulting in the seismic survey area.
** Estimated fault delineation is taken from USGS Open File 94-179 (J.C. Yount, et al 1994)
*** Estimated Tetra Tech (2012) determined faulting in seismic survey.
- Due to the deeper depths, RI-16 and RI-19 were not included in the contouring (these wells and labels are greyed).

Notes:
All results are in micrograms per liter (ug/L).
Aerial Image Source: National Agriculture Imagery Program (NAIP), 7/2014.

The presumptive remedy is not adequately addressing all contaminants at the site. Maximum concentrations of PCE and TCE are less than 50 µg/L in the source areas and should be conducive to remediation by SVE. The pilot study will provide both interim hot spot cleanup and data that will be used in the upcoming Feasibility Study report to assist in selecting a final remedy.

Initial startup results show approximately a 50-foot radius of influence and the system has run without major complications in the original step test. The initial startup results are encouraging considering the complex fault systems and bedrock geology of the site. A full report on the performance of the system is expected fourth quarter 2017.

12. (Standing Item) County Sanitation District No. 20 of Los Angeles County (District), Palmdale Water Reclamation Plant, Los Angeles County – *Cephas Hurr*

Compliance Status

The District's discharge is in compliance with its Waste Discharge Requirements (WDRs) contained in Board Order No. R6V-2011-0012, except for nitrate groundwater pollution caused by historical disposal practices that are separately addressed by a Cleanup and Abatement Order (CAO). With the combination of tertiary treatment, agricultural fields, and winter storage reservoirs, the District has achieved compliance with WDRs through irrigation of agricultural fields at agronomic rates. As discussed below, when offsite private well sampling is completed, additional monitoring wells will be proposed followed by re-assessment of the interim cleanup program.

Cleanup and Abatement Order

The Water Board issued CAO No. R6V 2003-056 requiring both the District and City of Los Angeles World Airports (LAWA) to cleanup and abate the effects of nitrate discharge that caused groundwater pollution. LAWA owns land leased to the District for the Palmdale wastewater reclamation plant and agricultural land where the District's effluent is applied to farm land at the crop agronomic rate. The CAO requires delineation of the groundwater nitrate pollution plume, containment of the nitrate plume using groundwater extraction wells, and implementation of a remediation plan to restore groundwater quality to background levels. Separately, the CAO requires incremental reduction in the amount of nitrogen reaching groundwater using the District's proposal consisting of: improved treatment, expanding the agricultural use of recycled water, and extracting nitrate polluted groundwater for agricultural use. Quarterly monitoring reports are required.

The District has submitted the plans required under the CAO. However, the requirements of achieving plume containment and implementing a final remedial alternative have not been met. Instead, the District has implemented an interim remedial measure with Water Board staff's concurrence that includes improved effluent management, construction and operation of six groundwater extraction wells, and application of extracted groundwater to crop land. Improved effluent management was implemented through expansion of the agricultural reuse site and construction of winter effluent storage reservoirs so that effluent is applied to crops at agronomic rates. This practice has been in effect beginning in calendar year 2010. Recent monitoring data indicate the plume's "hot spot" has shifted to the northwest.

Increasing nitrate concentrations have shifted to the northwest area of originally identified nitrate plume towards a drinking water well located at Air Force Plant 42, Site 4. While the District changed effluent management in the crop farmland area, there has been an approximate 30 feet of water level decline in the area since 2002 with deeper groundwater wells showing elevated nitrate concentration levels; the result of regional groundwater extraction activities in addition to the District's limited nitrate pollution interim extraction wells. Staff concluded that additional actions are needed to contain the plume from further migration to the northwest and to remediate the present high nitrate concentration areas.

The District reported that in the summer 2016, they have begun sampling private wells to assess risk potential to residential receptors down gradient of the plume north of Avenue M. The District proposes to install six additional monitoring wells to replace wells that are dry and also provide further plume delineation. In addition to replacing certain wells, the District would like to remove certain wells from the sampling network. Staff is also reviewing the District's request to convert certain extraction wells into monitoring wells. To address these issues, staff proposes to evaluate and revise the Groundwater Monitoring Program during Fiscal Year 2016/2017.

On June 9, 2016, LAWA submitted an agricultural cropping plan for its non-District farming operations. Staff accepted the plan and made recommendations and requested LAWA to submit its first annual report so that actual results can be compared to expected results.

Compliance Task Status Table
A table showing the status of compliance with actions related to the clean-up of groundwater is included at the end of this report.

SCHEDULE OF TASKS
PALMDALE WATER RECLAMATION PLANT (PWRP)
COUNTY SANITATION DISTRICT NO. 20 OF LOS ANGELES COUNTY (DISTRICT)

PERFORMANCE TASK	DUE DATE	STATUS
Required by Cleanup and Abatement Order R6V 2003-056		
Plume Delineation		
1.1.1 – Submit a plan to delineate the nitrate plume to background levels	Feb 16, 2004	Met
1.1.2 – Complete plume delineation	Aug 15, 2004	Met
Plume Containment		
1.2.2 - Submit a final plan (including extraction well locations and pumping rates) and time schedule for containing the plume	Sept 15, 2004	Met
1.2.3 – Achieve plume containment	Sept 30, 2005	Not met – Additional extraction wells are needed to limit plume movement toward an Air Force Plant 42, Site 4 domestic well.
Plume Remediation		
1.3.1 - Submit a plan describing the proposed plume remediation describing how groundwater will be restored to background or	Sept 15, 2004	Not met – The overall cleanup strategy should be evaluated in context of recent groundwater adjudication.

PERFORMANCE TASK	DUE DATE	STATUS
propose alternative cleanup levels pursuant to SWRCB Resolution 92-49		
1.3.2 – Implement the proposed plan for groundwater extraction and agricultural irrigation (or an equally acceptable alternative)	Sept 15, 2005	Not met — In progress
Abatement		
2.1 – Submit a plan describing proposed abatement actions	March 31, 2004	Met – LAWA submitted a Farm Management Plan describing how water and nutrients will be applied at the agronomic rate for their lessees other than the District.
Reporting 3.2 – Submit quarterly status reports until remediation is complete including actions completed in the last three months and expected in the next three months report	February 1, May 1, August 1, and November 1	Ongoing
Required by: Monitoring and Reporting Program No. R6V-2011-0012 *The itemized tasks are associated with groundwater cleanup activities*		
II.B.3 – Submit quarterly reports for - Groundwater Monitoring Report - Groundwater Extraction Operations Report - Agricultural Site Monitoring Report - Agricultural Vadose Zone Monitoring Report - Agricultural Site Monitoring, Operations, and Chemical Use Monitoring Report - Chemical Use Monitoring Report - Storage Reservoir Site Vadose Zone Monitoring Report - Biosolids Storage and Disposal Report	15th working day of the second month following each quarterly monitoring period	Ongoing
II.B.4. – Submit annual reports for - Treatment plant - Groundwater monitoring	March 1st of each year	Ongoing

PERFORMANCE TASK	DUE DATE	STATUS

13. Victorville Office Moves to New Location in Victorville – *Patrice J. Copeland*

After much searching and one false start, and with a lot of help from our staff and staff of the Department of General Services, our Victorville office has moved from the former building that was shared with Aladdin Bail Bonds to a new location at 15095 Amargosa Road, Victorville, 92394. The new office is located approximately 1 mile northwest of the former office, co-located with a few health offices and the High Desert Veterans Center. As a land-mark, it is just north of the Winco supermarket and is accessed via the same Interstate 15 exit (Roy Rogers Drive). A much more modern office, the new facility has a bigger and brighter foyer; larger kitchen/staff break room; additional quiet rooms; a public file review room and computer; a much larger conference room equipped with a 70-inch television, projection screen, and ceiling-mounted projector; supply room; lab supply room; large separate server room; larger file room/library; more rest rooms; a shower/locker room; and a caged area for our state vehicles. Space in the office has increased by 2,184 square feet relative to the previous office, allowing us to increase the number of offices for staff and visiting staff, with a separate office for the Division Manager and room to grow. New cubicle desks, partitions, and other furnishings were also installed. In addition, Rebecca Phillips procured a gently used stainless-steel refrigerator for the kitchen/break room, purchased with generous donations from our staff and a donation of $100 from the Professional Engineers in California Government (Bargaining Unit 9). Modern quartz countertops have been placed in both the foyer and the kitchen; complementary earth-tone painted walls and new carpets complete the look. A new perimeter and interior motion alarm system has also been installed. Water Board members and staff are invited to tour and enjoy our wonderful new office!

14. Wastewater Treatment Plant Improvements, Fort Irwin – *Alonzo Poach*

Fort Irwin's wastewater treatment plant has historically encountered issues with meeting effluent limits for nitrogen. Issues with removing nitrogen from effluent are especially a problem when there are higher populations of personnel onsite during troop training rotations. In November 2012, the Board amended Fort Irwin's Waste Discharge Requirements tthat require CH2M (owner of the plant) and the Army to construct a new oxidation ditch and make other renovations to the treatment plant to aid in meeting effluent requirements.

In late June 2016, the oxidation ditch for the Fort Irwin wastewater treatment plant was completed and put into full service. The improvements included a new oxidation ditch, new anoxic reactor and associated piping valves and structures. The new improvements are designed to handle and treat flows and increase the quality of the effluent from the plant. The new oxidation ditch is designed to produce effluent with less than 10 mg/L of nitrate as nitrogen. Additionally, having two oxidation ditches will allow for redundancy for maintenance/repair purposes. The cost of improvements was approximately $7.6 million. The old oxidation ditch is now offline and awaiting renovation. Renovation of the existing oxidation ditch is required to be complete by November 2017. Effluent is sent to percolation ponds (recharging groundwater resources) and tertiary effluent is used for irrigation. The higher quality effluent should improve water quality in the Irwin Basin.

15. Open House and Ground-Breaking Event for the Petersen Ranch Mitigation Bank *– Jan M. Zimmerman*

The Petersen Ranch Mitigation Bank (Bank), at more than 4,000 acres, is the largest mitigation bank in California and the first Bank in the Lahontan region. The Bank was approved by the Lahontan Regional Water Quality Control Board (Lahontan Water Board) along with other state and federal partners on May 11, 2016. To celebrate, the Bank sponsor's, Land Veritas is hosting an open house and ground-breaking event on Friday October 7, 2016, from 11 am to 2 pm. The event will be held at the Bank property in Leona Valley and will include a barbeque, tours of the restoration activities, and a program of speakers including Los Angeles County Supervisor Michael Antonovich and other local representatives. Representatives from the Lahontan Water Board, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and the California Department of Fish & Wildlife have been invited to come and speak as well. Other invitees include the press, local neighbors, environmental groups, consultants, and builders. This event presents an excellent opportunity to build good relations between regulatory agencies and the community, and to heighten awareness of the restoration and preservation going on at the Bank.

Seasonal wetlands and meadow habitats are among the many types of resources that will be preserved and enhanced within the Bank property. Photo provided by Land Veritas (2016).

ENCLOSURE 2

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2016 STANDING ITEMS
September

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	July 2016 January 2017
Status of Basin Plan Amendments	Annually	August 2016
Status of Grants	Annually	April 2017
Caltrans Statewide General Permit/Tahoe Basin	Annually	August 2016
Tahoe Municipal Permit	Annually	July 2016
County Sanitation Districts of Los Angeles – Dist. No. 14	Annually	February 2017
County Sanitation Districts of Los Angeles – Dist.t No. 20	Annually	September 2016
Status of Dairies	Semi-Annual	September 2016 February 2017
City of Barstow Nitrate/Orphan Perchlorate	Annually	September 2016
Pacific Gas & Electric Company	Southern Board Meetings	September 2016
Leviathan Mine	Semi-Annual	July 2016 January 2017
Salt & Nutrient Management Plans	Annually	May 2016
Onsite Septic Tanks	Annually	~~June 2016~~ Sept. Workshop Planned
Grazing Update	Annually	June 2016 (Item 4)
Bacteria Water Quality Objectives Project	Semi-Annual	May 2016 November 2016

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ENCLOSURE 3

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EO's Monthly Report July 16, 2016 - August 15, 2016
Unauthorized Waste Discharges*

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
COUNTY: LOS ANGELES								
Ca Dept of Corrections Soledad/ Los Angeles County, Lancaster	44750 60th St. West	South	Yes	7/20/2016	110 gallons	Lateral blockage caused 110 gallons of raw sewage to spill from lateral cleanout to unpaved surface. No surface water body affected.	Debris in the lateral caused blockage resulting in discharge.	Lateral unplugged, spill cleaned up.
COUNTY: MONO								
US Army/ Highway Accident	Highway 108 bridge over West Walker River, east of USMC Mountain Warfare Training Center	North	No	7/19/2016	5 gallons	Ruptured fuel tank caused discharge of 5 gallons of transmission fluid into West Walker River at Hwy 108 bridge. Surface water affected.	US Army truck and trailer lost control ending up in the river. Transmission fluid tank ruptured.	Booms placed in the river at two downstream locations. Contaminated soils cleaned up and booms removed.
COUNTY: PLACER								
James A. Streppy Trust/Boat House	4190 North Lake Blvd., Carnelian Bay	North	No	7/19/2016	NA	Private boat house fire caused debris to be discharged into Lake Tahoe. Surface water affected.	Burned boathouse debris to lake.	Large debris cleaned up by HazMat crews. Smaller debris washed ashore and was cleaned up by owner.
Unknown/40-Foot Powerboat	Private powerboat anchored to buoy south of High and Dry Homewood Marina, Homewood	North	No	7/23/2016	1 gallon	Private boat operation caused diesel fuel to discharge into Lake Tahoe. Surface water affected.	40 foot offshore boat releases partially combusted fuel when slammed into reverse. Surface water affected.	Homewood dock personnel deployed booms around the boat until the fuel was absorbed. Boat owner informed that releasing fuel is unacceptable.

*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, 2016 - August 15, 2016
Unauthorized Waste Discharges*

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Bechtel Power Corporation/Ivanpah Solar Electric Generating System	Ivanpah Valley	South	Yes	7/29/2016	330 gallons	Mechanical failure caused the discharge of approximately 330 gallons of oil to the secondary containment system. No surface water affected.	Lube oil from the Main Boiler Feed Pump Turbine was overpressurized due to faulty valve performance, overwhelming the system resulting in an unauthorized discharge.	Discharger cleaned up spill, removed contaminated soil, and made changes to the valve controls to ensure future over-pressurization does not occur.

*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, 2016
September 2016 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
August 4, 2016	Seven Acres Mobile Home Park	721-720 Tule Ave. Litchfield, Lassen County	6T0240A	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603500021

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

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ENCLOSURE 5

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Monthly Enforcement Action Report
August/September 2016

Facility	County	Enforcement Action	Current Status	Next Step
Water Board Actions				
None at this time				
Executive Officer Actions				
Caltrans District 8, Hwy 138 (Sheep Creek)	San Bernardino	**Proposed CAO** for unpermitted work and discharge of fill materials within Sheep Creek and other waters of the state.	Prosecution Team issued Response to Comments and Revised CAO.	EO signed the revised CAO on **8/16/2016**
Desert View Dairy	San Bernardino	**Proposed Amended CAO** expanding area for replacement water and monitoring and establishes TDS thresholds to address nitrate and TDS groundwater pollution.	Prosecution Team issued Response to Comments and Revised CAO. Advisory Team is reviewing all the information received.	Advisory Team will recommend EO to sign, reject or revise CAO. **September 2016**
Lake Tahoe Laundry Works CAO for additional cleanup and investigation.	El Dorado	**Proposed CAO** to conduct additional ground water investigation and remediation activities for PCE groundwater pollution.	Prosecution Team issued Response to Comments and Revised CAO. Advisory Team is reviewing all the information received.	Advisory Team will, recommend EO to sign, reject or revise CAO. **September 2016**
LACSD	San Bernardino	Terminated ACL Order R6V-2007-0034 and Resolution R6V-2010-0026, EO letter dated 8/2/2016	SEP projects are complete	None
Chevron Mining Inc.	San Bernardino	Recission of CAO No. 6-97-66 for Mining Discharges to Ivanpah Hydrologic Unit, EO letter dated 8/3/2016	Clean up and abatement of unauthorized mine wastewater releases satifactorily completed.	None
El Dorado County, Sierra Blvd Snow Storage Facility	El Dorado	13267 Order Submit GW Investigation workplan, RT2016-0019	RT-2015-0042 required groundwater investigation. Results indicate groundwater impacts, additional investigation requried.	Discharger submits new workplan, due **8/15/2016.**

Monthly Enforcement Action Report
August/September 2016

Facility	County	Enforcement Action	Current Status	Next Step
Prosecution Team Actions				
CDFW Mojave Fish Hatchery	San Bernardino	Effluent limit violations result in Mandatory Minimum Penalty of $3,000.	Discharger has accepted the settlement offer and proposed settlement is out for public comment.	Comment period closes **September 12, 2016.**
CDFW Hot Creek Hatchery	Mono	Effluent limit violations resulted in Mandatory Minimum Penalty of $6,000.	Discharger has accepted the settlement offer and proposed settlement is out for public comment.	Comment period closes **September 12, 2016.**

ENCLOSURE 6

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EXECUTIVE OFFICER'S REPORT • JULY 2016

State and Regional

1. **Personnel Report –** *Eric Shay*

   New Hires – None

   Vacancies – We are currently recruiting for an Executive Assistant (EA) and a Staff Services Analyst (SSA) in our South Lake Tahoe office. The EA will support the Water Board, Executive Officer and Assistant Executive Officer, and the SSA will be supporting our Leviathan Mine staff.

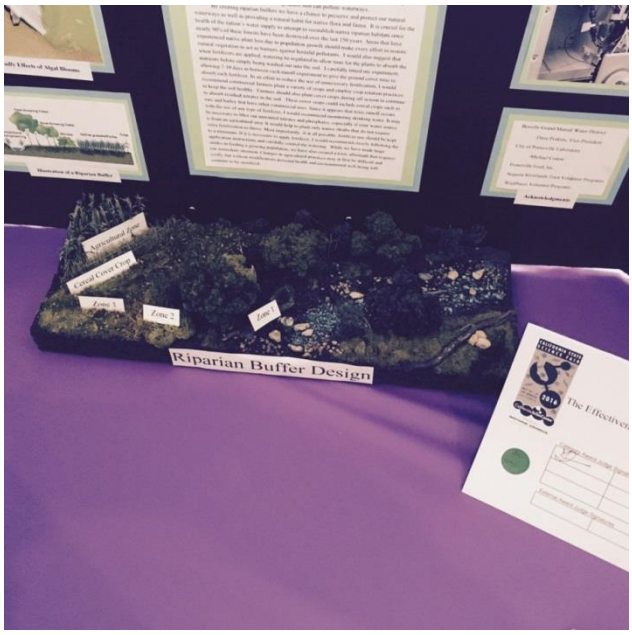
   Departures – None

2. **California State Science Fair Finalists in Environmental Engineering –** *Tom Browne*

   Tom Browne of the Victorville office volunteered a day to be a judge at the California State Science Fair finals on May 24 in Los Angeles, helping to judge the Junior High Environmental Engineering category. It was the 17th year that Tom has volunteered as a judge for this event.

   There were 32 finalists in the category this year. Each finalist had already won a first, second, or third place at their school district and county competition level, so these experiments were of very high quality. Many experiments were in the area of water conservation, motivated by the state-wide drought. Some experiments were in water treatment, looking for low-cost ways to make potable water from contaminated sources; some investigated solar-powered distillation; and two experiments tested ways for oil spill clean-up. Other noteworthy experiments included making biodiesel from algae oil, recycling the conductive paste inside old dry-cell batteries, using meal worms to eat plastics in landfills, making biodegradable plastics from food starch, and investigating the effects of increased CO2 in the atmosphere on the shells of sea urchins.

   The winning experiment was Adarsh Ambati, a 6th grader from San Jose, in an experiment designed to conserve water used on lawns. He developed a system that sent Twitter messages to ten participating households instructing them which days to water their lawn and how much. He employed a moisture sensor in a lawn that sent radio messages of soil moisture to his computer, and coupled that information with the next day's weather report. He developed an objective scale for evaluating the health of



A Diorama created by Mari O. Sanders of Porterville, depicting a design of a riparian buffer zone to reduce nitrate run-off from a farm. It received Honorable Mention.

the grass based on its color, and he correlated that with the readings of the moisture sensor. Judges were unanimously impressed with his ability to write a computer program that took remote moisture sensor data, daily weather reports, and translated the information into Twitter messages directing study participants when to water their lawns and how much.

Second place went to Arshia Mehta, an 8th grader from San Ramon, who developed a low-cost water purification device that reduced coliform, nitrate, TDS, turbidity, and copper to make water potable. Third place went to Meagan Lee of Anaheim, an 8th grader, who made commercial-quality biodiesel from algae oil using a well-known reaction of sodium hydroxide and methanol. Fourth place went to Cynthia Chen, an 8th grader from San Jose, who found a way to reduce the amount of water that seeds need during germination phase using a hydrophilic polymer in a biodegradable capsule, inserted in the soil with the seed.

All these experiments by these young students were very impressive, and give much hope and promise for the State's next generation of scientists and engineers in solving challenges of water conservation and water treatment.

3. East Fork Carson River Tour– *Kelly Huck and Carly Nilson*

On May 12th 2016, staff attended an East Fork Carson River tour to discuss restoration and stewardship needs and collaboration potential in the Carson River watershed. The Alpine Watershed Group (AWG) and the Carson Water Subconservancy District (CWSD) organized the tour. Travelling by raft, the tour started southeast of Markleeville and ended approximately 17 miles downstream at Ruhenstroth Dam in Nevada. Approximately 35 participants attended, representing 16 different State, county, and federal agencies, non-profit environmental conservation groups, and the Washoe Tribe.

Tour participants view the watershed from the river.

The USGS has recognized the East Fork Carson River as a potential Aquatic Diversity Area based on the presence of eight native fish species and a native amphibian, the mountain yellow-legged frog. The segment of the river located between Hangman's Bridge and the Nevada state line is designated as a State Wild and Scenic River. The watershed is popular for sport fishing, rafting, and other outdoor recreation activities that depend on high water quality. Unfortunately, historic mining practices, grazing, exotic species, and unregulated recreation have affected water quality along the East Fork Carson River.

During the tour AWG pointed out several areas where they have performed restoration projects to try and remediate impacts from some of these practices. They have added vegetation to the riparian areas and have blocked off informal camping near the river bank. The goals of their efforts are to reduce erosion and runoff as well as create healthy fish habitat.

East Fork Carson River hot springs.

A tour highlight was a stop at the hot springs where the group discussed conservation and stewardship of the springs, which are a sacred location for the Washoe tribe and surrounding areas. The hot springs are only accessible from a 4-wheel drive vehicle, a boat, or a six mile hike. There are concerns with the public driving through the river to gain access to the hot springs, leaving trash, shooting guns and leaving shells behind. Another problem is the lack of formal

restrooms. The US Forest Service owns the area and has tried using signage to inform the public about the concerns, but the signs disappear or are quickly vandalized.

The Carson River Coalition's July meeting will hold a follow-up discussion regarding preservation of the hot springs. The group would like to inform the public about stewardship responsibilities and the water quality issues from driving through the river. The US Forest Service is exploring the development of a formal pit toilet. The tour afforded staff the opportunity to coordinate bacteria monitoring in the Carson River watershed with AWG and collaborate with the Carson Water Subconservancy District on their Carson River Watershed Plan.

The East Fork Carson River is listed as impaired by total dissolved solids, boron, sulfate, and phosphorus. The boron and sulfate impacts are likely from natural sources. Though the exact sources for the total dissolved solids and phosphorus have not been identified, the historic and current impacts to the watershed may be contributors to the problem. Water Board staff are encouraged that the AWG, CWSD, and US Forest Service are continuing to address the water quality concerns.

4. *Standing Item* - Lake Tahoe Municipal NPDES Permit Update – *Robert Larsen*

As reported at the Water Board's May 2016 meeting, staff are working to update the Municipal NPDES storm water permit that regulates runoff discharges in the Lake Tahoe Basin from the City of South Lake Tahoe, El Dorado County, and Placer County. Each of the three co-permittees have submitted an updated Report of Waste Discharge and a preliminary Pollutant Load Reduction Plan outlining how local government plans to achieve the next 5-year pollutant load reduction target established by the Lake Tahoe TMDL. The next 5-year target requires a 21% fine sediment particle reduction, an 11% increase above the current term requirement. The municipal jurisdictions expect a combination of storm water treatment infrastructure and improved operations and maintenance practices to accomplish the required pollutant load reductions.

The co-permitees are currently working to register load reduction activities into the online Credit Accounting Platform to demonstrate compliance with existing load reduction requirements. They are also inspecting and maintaining treatment facilities in registered areas to ensure the treatment basins, infiltration galleries, and other practices are performing as expected. Although there has been a learning curve with the new Lake Clarity Crediting Program, the co-permittees remain committed to demonstrating the substantial benefit associated with their storm water program accomplishments.

Finally, Water Board staff are engaging with the co-permittees to continue improving TMDL tracking and accounting tools, document program compliance, and plan for the permit update. Staff attended an annual training with the El Dorado County maintenance crew to learn about the work they do and the challenges they face in balancing transportation and environmental priorities. The discussion highlighted the critical need to identify dedicated funding for storm water program operations and maintenance. Without such funding, infrastructure investments will be compromised and achieving long-term water quality goals at Lake Tahoe will be difficult.

Staff will continue to communicate closely with the co-permittees to draft an updated permit during the summer season. We are planning extensive stakeholder outreach and a formal public review period later this fall with an anticipated adoption of early next calendar year.

5. Lake Tahoe Nearshore Program Status – *Robert Larsen*

The Water Board and agency partners remain committed to learning more about Lake Tahoe's nearshore conditions and, if necessary, taking needed action to improve conditions. The Lake Tahoe Science and Lake Improvement Account was established by the California Legislature in part to fund targeted research and monitoring work to understand what factors influence Lake Tahoe's nearshore and explore management opportunities. Given the complexity of the nearshore issue and the scarcity of available resources, it is critical that funding decisions are carefully considered.

In coordination with the Tahoe Regional Planning Agency, United States Environmental Protection Agency, and the Nevada Division of Environmental Protection the Water Board is leading an effort to develop a Nearshore Resource Allocation Plan (NRAP) to guide research and monitoring investment. Environmental Incentives, LLC was selected through a competitive process to lead NRAP development. Contract agreements were signed in June 2016 and work will begin in early July. Initial tasks include a rapid state-of-the-knowledge review and a series of interviews with agency staff and public members to link information gaps to perceptions regarding nearshore condition. Once complete, the project will examine different metrics to ensure funded projects effectively achieve identified information needs and guide nearshore resource management.

The NRAP effort is scheduled to be finished by the end of the calendar year, and the first NRAP exercise will include a list of priority projects for immediate funding. Staff looks forward to working with our partners to thoughtfully and methodically address the growing concern about Lake Tahoe's nearshore and will update the Water Board in the late fall of 2016 with NRAP findings.

6. Susan River Toxicity Study Underway – *Alanna Misico*

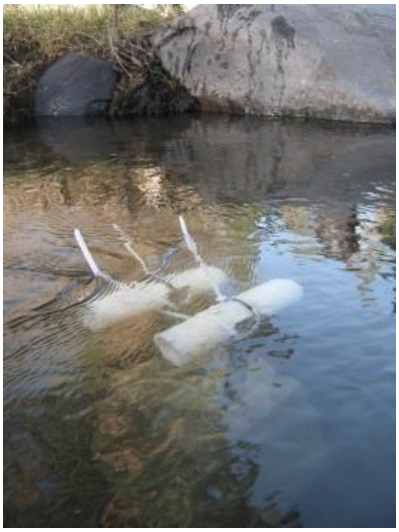
In spring 2016 Water Board staff and Surface Water Ambient Monitoring Program (SWAMP) contractors began a study to further investigate toxicity in the Susan River. The study the Water Board protecting aquatic life, surface water and human health. The Susan River was listed as impaired and placed on the 303(d) list in 1996 for unknown toxicity after a study performed by the US EPA in the early 1990's identified toxicity to larval fish, aquatic plants, and duckweed. The Water Board conducted a follow up study in 2003-2004 to determine the source of unknown toxicity. The results from the 2003-2004 study identified low-level toxicity to aquatic life; however, the results were non-conclusive in identifying the pollutant(s) and sources.

Susan River Toxicity, Monitoring Samples, April 2016

The science in toxicity testing has evolved tenfold over the past ten years and staff is hopeful that this study will provide definitive information on when the Susan River is impaired and cause of that impairment. Samples were collected in three segments of the Susan River from April to June of 2016. The monitoring in each segment consists of two parts:

1) Toxicity Sampling Toxicity testing will be conducted on four organisms to determine presence and level of toxicity. In cases where the water is determined toxic, Toxicity Identification Evaluations (TIEs) will be performed to characterize, identify and confirm the causes of measured toxicity.

UCD-ATL toxicity lab prep



Continuous Low-Level Aquatic Monitors

2) Continuous Low-Level Aquatic Monitoring Samples will be analyzed for pesticides, herbicides, polycyclic aromatic hydrocarbons and other trace organics using the EPA approved Solid Phase Extraction (SPE) disks. The Continuous Low-Level Aquatic Monitors draw water through extraction media to capture trace pollutants for analysis.

The study will help identify if there are any critical areas of concern in the three segments of the Susan River, identify sources of toxicity, determine whether additional action is necessary to provide protection to aquatic life. UCD-ATL will provide a final report of findings in May of 2017. The results will inform evaluation of the Susan River toxicity

listing for the 2018 Integrated Report, and is consistent with the Lahontan Water Board's Goals and Priorities.

Standing Item **- Leviathan Mine, Alpine County** – *Hannah Schembri*

Water Board staff continue coordinating with United States Environmental Protection Agency (USEPA) and Atlantic Richfield (AR) for the completion of current and proposed site work at Leviathan Mine.

Settlement Agreement Activities

Water Board staff completed reviewing AR's first Remedial Investigation/Feasibility Study (RI/FS) cost report covering the period of January 2013 through March 2015. Water Board identified and notified AR of a very limited number of costs requiring additional documentation/explanation; otherwise, the remaining costs were found to be acceptable per the Settlement Agreement. Staff and AR were able to successfully address the additional documentation/explanation issues through the Settlement Agreement's informal dispute resolution process.

Staff has subsequently received and completed its review of two additional quarterly cost reports. To date, AR has submitted and staff has accepted over $13,000,000 in RI/FS-related costs. This value exceeds the $11,000,000 value in the Settlement Agreement for initiating the Water Board/AR cost-sharing provision for RI/FS costs going forward. Staff's review of AR's RI/FS costs will continue for the next several years and is a critical element of a complex cost-sharing and accounting system established by the Settlement Agreement.

Water Board staff and AR also recently adjusted deadlines set forth in the Settlement Agreement to better accommodate a full-scale field demonstration of AR's High Density Sludge (HDS) treatment system. AR believes that the HDS treatment system will provide a cost effective means to treat specific sources of acid mine drainage that are currently treated separately by the Water Board's pond water treatment system and AR's HDS treatment system. Water Board staff will be spending the next two field seasons observing and evaluating the HDS treatment system. If AR successfully demonstrates the HDS system meets Settlement Agreement criteria, it is anticipated that the Water Board will take over operations of AR's system in either 2018 or 2019, and continue to do so until a final remedy is implemented.

Work Plan for 2016 Season

As part of its annual field season preparation activities, staff prepared and submitted the following documents:

- 2016 Work Plan for Leviathan Mine to USEPA;
- Updated Health and Safety Plan for Leviathan Mine with assistance from the State Water Board's Health and Safety Office to USEPA;
- Updated Annual Road Use Plan to the United States Forest Service; and
- 2016 Hazardous Materials Business Plan for Leviathan Mine to Alpine County.

As required, staff has entered these documents into the online California Emergency Response System.

Review and Comment Activities

Water Board staff reviewed approximately 67 technical documents since February 16, 2016 related to mine site activities. The documents addressed a wide-variety of subjects including RI/FS work plans, risk assessment work plans, interim combined treatment work plans, USEPA's 2015/2016 El Niño Contingency Plan, AR progress reports, historical surface water data evaluation, and revegetation feasibility study work plan. Staff has submitted comment letters on 17 of these documents.

Trainings and Presentations

- February 16, 2016 - Two Leviathan Mine staff attended snowmobile training hosted by the United States Geological Survey. The use of snowmobiles is occasionally necessary to access Leviathan Mine stream gage sites during winters with high snowfall.
- Feb 17-18, 2016 - Water Board staff attended Geosynthetic Liner Training and have arranged to host three additional two-hour follow-up webinars for interested staff.
- March 24, 2016 - AR provided a presentation to Water Board staff on the Natural Resource Damage Assessment process with examples from Leviathan Mine.
- April 20, 2016 - Leviathan Mine staff provided the Water Board's Administrative Unit training on future Staff Services Analyst (SSA) duties related to and background information on Leviathan Mine. The SSA position is expected to be filled after the beginning of the fiscal year.
- On May 26, 2016 Water Board Staff attended training on Water Quality Goals by State Board staff, which included demonstrations with the online database available for staff use.

New Staff Positions

Staff's responsibilities and workload have been steadily increasing since the Settlement Agreement was signed in March 2015. During the past five months, staff worked to secure funding for two additional positions. The additional funding will be used to:

1. Carry out provisions set forth in the Settlement Agreement, including preparation for operating HDS system following a successful AR demonstration project.
2. Review RI/FS work plans and reports prepared for the mine site pursuant to USEPA orders under CERCLA.
3. Participate in the Natural Resource Damage Assessment (NRDA) process for releases of pollutants associated with acid mine drainage from the Site that have impacted natural resources.

7. City of Bishop and Eastern Sierra Community Services District, Wastewater Treatment Plants – *Jehiel Cass*

The City of Bishop (City) and Eastern Sierra Community Services District (District) are developing plans to address groundwater nitrate pollution from their respective co-located wastewater treatment plants. A recently submitted Feasibility Report, jointly funded by both entities, evaluated four alternatives in detail. Each alternative considered combining the flow from both entities into joint treatment and operations, which is currently 1.5 million gallons per day (mgd), and assumed to increase to 2.5 mgd in 50 years. The estimated 50-yr lifecycle cost for the alternatives ranged from $30.5 million to $33.8 million dollars.

The District first provided its recommendation that Alternative C (Oxidation Ditch) be selected because of its superior operational control, improved effluent quality during cold weather, longer design life, and flexibility to meet future effluent quality requirements.

Staff responded to the District, copying the City that we looked forward to joint resolution between the District and City on the best treatment alternative. We requested information on: 1) formation of a joint operating agreement between the District and City, 2) submission of environmental documents, 3) funding arrangements, 4) construction schedule, and submission of a revised Report of Waste Discharge.

The City required more review time allowing them to bring the issue to its City Council and then provided its recommendation that Alternative A (Alternating Zone Treatment) be selected because it is the least cost alternative. However, the City pointed out that because of cost considerations and need to significantly raise sewer rates, it preferred to explore other less costly modifications to the existing treatment and disposal operations.

Staff met with both the City and District staff on June 16, 2016 to discuss these differences. Both entities expressed concern that the high cost and effect on rate payers of increasing sewer rates by about 2.5 times was the source of reluctance to implement any of the alternatives recommended by their consultant. Staff acknowledged that the City and District have made significant cooperative progress in the last two years including: 1) installation of new monitoring wells, 2) preparation of the joint Feasibility Study, and 3) completion of minor operational changes to the existing plants intended to reduce effluent total nitrogen concentrations. A number of additional improvements were suggested by the District and City that they believed would reduce groundwater nitrate pollution, primarily in regard to effluent disposal at the agricultural reuse sites. Staff indicated support for this approach and will be working with them to finalize a time schedule for completing these projects. Staff acknowledged that this approach, while appropriate, will require additional time. The City and District will

provide a path forward stating what other operational treatment and disposal alternatives will be evaluated, metrics for evaluating success, and a time line to complete projects and provide a final recommendation.

8. **Burrtec Expanding Facility to Include Composting Operation** – *Brianna St. Pierre*

On August 4, 2015, State Water Board adopted State Water Resources Control Board Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (General Compost Order). The General Compost Order requires owners and/or operators of compost facilities to construct compost pads and stormwater ponds with minimum requirements to protect water quality, and these requirements are less stringent than those prescribed in California Code of Regulations (CCR), title 27. The General Compost Order also requires routine sampling and monitoring activities. However, the General Compost Order does not require owners to maintain financial assurances for closure and corrective action activities for a known or reasonably foreseeable release.

Burrtec owns and operates a material recovery facility (MRF) on Abbey Lane in Victorville, San Bernardino County. The MRF sorts and processes recyclables. Burrtec has engaged in discussions with Regional Board staff to expand the MRF activities to include composting operations. Because the parcel for conducting composting operations is adjacent to the Mojave River floodplain, the proposed operations may not be eligible for coverage pursuant to the General Compost Order and may require coverage with individual waste discharge requirements pursuant to CCR, title 27. Based on knowledge of discharge from composting operations in the area, Burrtec may be required to construct a Class II waste pile and Class II surface impoundment. Burrtec may also be required to maintain financial assurance mechanisms for closure and corrective action activities for a known or reasonably foreseeable release from the facility. Burrtec has not yet submitted an application for waste discharge requirements; however, Water Board staff anticipates receiving the application within Fiscal Year 2016-2017. The Regional Board recently adopted individual waste discharge requirements pursuant to CCR, title 27 for the American Organics Victor Valley Regional Composting Facility, Board Order No. R6V-2016-0031, on June 9, 2016. The American Organics Victor Valley Regional Composting Facility is located approximately 5 miles downstream of the proposed Burrtec composting facility.

9. Nursery Products – *Brianna St. Pierre*

On March 10, 2010, the Water Board adopted Board Order No. R6V-2010-0010 (Board Order) to allow Nursery Products to construct and operate a composting facility 8 miles west of the community of Hinkley and 12 miles east of Kramer Junction, San Bernardino County. The Board Order requires the discharger to operate the facility in accordance with the requirements of California Code of Regulations (CCR), title 27. The Board Order included requirements to construct a Class II waste pile and Class II surface impoundments, to conduct routine sampling and monitoring, and maintain financial assurances for closure and corrective action activities for a known or reasonably foreseeable release.

On August 4, 2015, State Water Board adopted State Water Resources Control Board Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (General Compost Order). The General Compost Order requires owners and/or operators of compost facilities to construct compost pads and stormwater ponds with minimum requirements to protect water quality, though these requirements are less stringent than those prescribed in CCR, title 27. The General Compost Order also requires routine sampling and monitoring activities. However, the General Compost Order does not require owners to maintain financial assurances for closure and corrective action activities for a known or reasonably foreseeable release.

On June 13, 2016, Nursery Products representatives submitted a Notice of Intent to comply with the General Compost Order with a request to the Water Board to rescind the existing Board Order on the facility. Nursery Products is the first facility in our Region to submit a Notice of Intent to comply with the General Compost Order. Enrolling Nursery Products in the General Compost Order and rescinding the existing Board Order would reduce the list of constituents sampled on a quarterly basis and terminate the requirement for maintaining financial assurance mechanisms.

10. Los Angeles County Hauled Water Initiative – Draft environmental Impact Report Inadequate – *Jehiel Cass*

Staff reviewed a Draft Environmental Impact Report (EIR) for a Los Angeles County project that would adopt an ordinance allowing hauled water as the primary source of potable water for new single-family residential construction. This would allow new development on property in unincorporated northern areas of Los Angeles County where there is no available service from a public or private water purveyor and where it has been demonstrated that an on-site groundwater well is not feasible. The project would affect 42,872 undeveloped parcels covering 340,461 acres to build single family homes. The project area is near the cities of Palmdale and Lancaster. The EIR may be inadequate because it did not address our primary concern; namely the cumulative effect on receiving groundwater from domestic sewage discharged from tens of thousands of new homes.

We have completed a review of the EIR, and have concluded that groundwater quality impacts are not addressed. Los Angeles County staff confirms that cumulative groundwater impacts were not addressed in the EIR because impacts from septic tanks discharges did not pass environmental screening review as having a potential significant impact. County staff believes the normal septic system approval process would address this issue. However, the normal septic tank approval process only considers technical criteria on an individual house approval basis such as system flow and density, soil percolation rate, minimum set back distances, and maximum land slope. That approval process does not consider the cumulative impact to groundwater from a large number of potential new homes. Stormwater and climate change impacts have also not been properly addressed. The Antelope Valley groundwater basin is in overdrafted and is a hydrologically closed basin. A letter was sent from the Water Board to inform the County that the EIR is inadequate and recommend that the Board of Supervisors not approve this EIR until after a groundwater anti-degradation analysis is completed. Comments are due to the County by July 20, 2016.

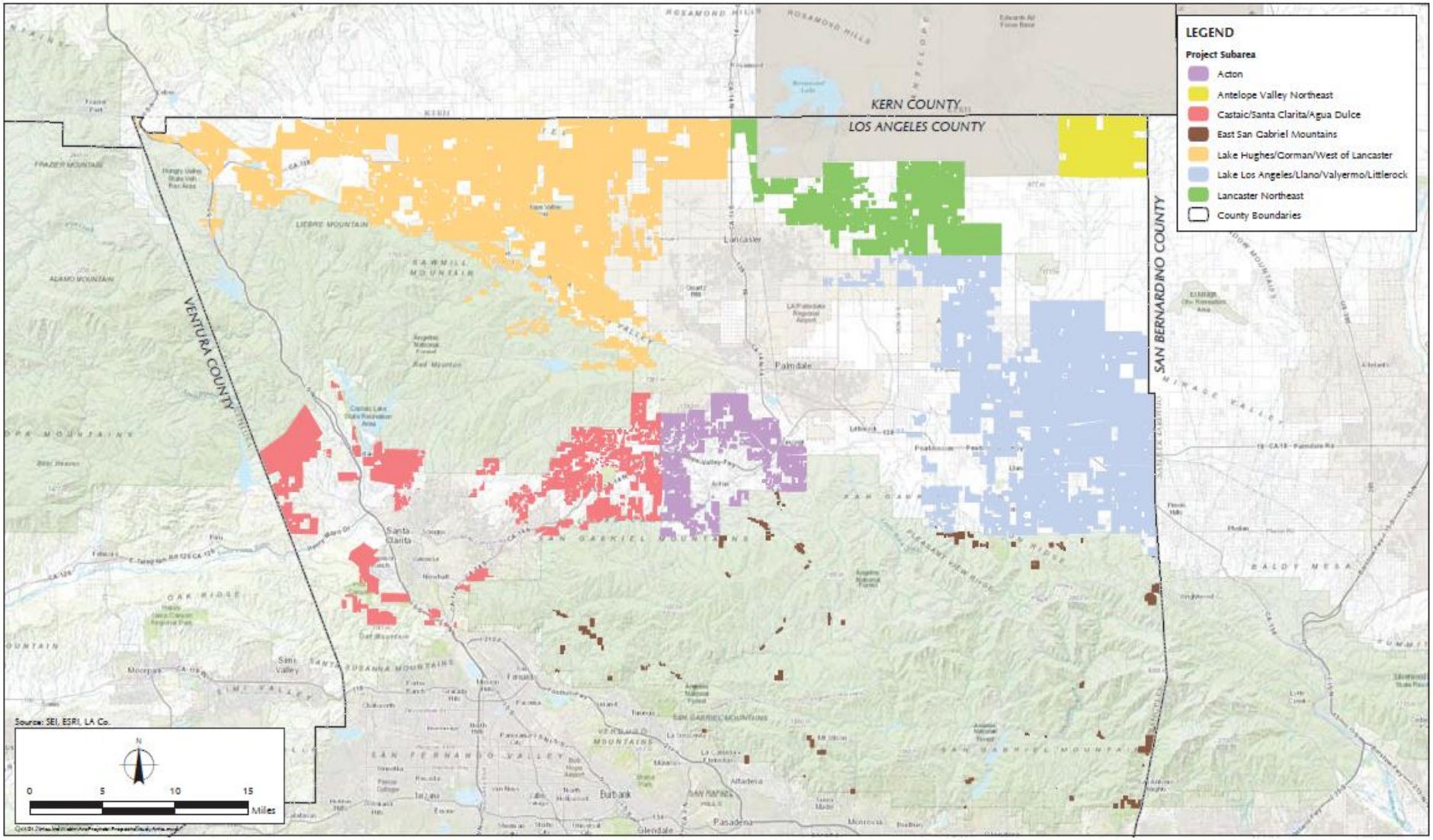


FIGURE 2.1-1
Proposed Initiative Study Area

11. **Site 76 Remedial Action Status Report, Operable Unit (OU) 2, Edwards Air Force Base –** *Christina Guerra*

Edwards Air Force base has been operating its full scale remedy to treat groundwater at OU 2 Site 76 for approximately 3 years. The primary components of the Site 76 groundwater remedy are in situ chemical oxidation (ISCO) utilizing potassium permanganate (permanganate), groundwater monitoring, and land use controls. Permanganate is being used to treat groundwater contaminated by chlorinated solvents consisting primarily of trichloroethene (TCE) and methyl tert-butyl ether (MTBE).

Analytical results show the technology to be effective. Three years after the last ISCO injection only isolated pockets of TCE and MTBE contamination remain above the maximum contaminant level.

The Air Force implemented the remedy in a two-phased approach. Sample data from the first phase of injections indicated effective distribution of permanganate after optimization. Analytical results for the full-scale project implementation have shown positive effects for both TCE and MTBE concentrations, with concentrations generally stable or decreasing throughout the groundwater plume.

The source of contamination at Site 76 was an assortment of facilities that consisted of maintenance shops, a gas station, a fire station, and storage buildings for paint and oils that were active from the 1940s until the mid-1950s. Trichloroethylene was a commonly used industrial solvent and likely was disposed of on the ground or leaked into to the subsurface. The detection of MTBE is likely a result of a recent release from activities at the Birk Flight Test Facility.

The Site 76 remedy is contained in the OU 2 Record of Decision signed in 2009. After designing the remedy, the first phase was implemented in December 2010 and the second phase, consisting of the full-scale remedy, was implemented in July 2013. Two ISCO injection events have been conducted to date.

Following the second phase of the remedial action, it was determined that the downgradient extent of the TCE plume needed additional delineation and treatment.

Additional ISCO treatment is scheduled for implementation in late 2016, both in the initial treatment area and the previously undelineated downgradient plume. Monitoring and evaluation of contaminant concentration trends will be provided by the Air Force in periodic Remedial Action Status Reports.

Summary of
No Further Action Required Letters Issued
May 16 - June 15, 2016
July 2016 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
May 18, 2016	Cow Creek - Death Valley NPS Site	4 Miles NE of Park Headquarters Death Valley National Park Furnace Creek, Inyo County	SLT6V011	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT6V0113838
May 31, 2016	Northrop Grumman Building 431	3520 East Columbia Way Palmdale, Los Angeles County	6B1920031T	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000008639
June 1, 2016	Chevron 9-9879	72063 Baker Boulevard Baker, San Bernardino County	6B3600441T	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100771

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

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EO's Monthly Report
May 16, 2016 - June 15, 2016
Unauthorized Waste Discharges*

COUNTY: EL DORADO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Tahoe Keys POA	Spinnaker Lagoon	North	No	5/25/2016	4 gallons	Boat owner error caused 4-gallon diesel discharge to Lake Tahoe.	Boat's bilge pump discharged water and diesel that had accumulated in boat's bilge area.	Clean Harbors (cleanup contractor) was mobilized to the area and performed site clean up with booms and skimmer.

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
San Bernardino Cnty Solid Waste Management Division/Heaps Peak Leachate Treatment & Disposal System	29898 HWY 18, Running Springs	South	Yes	5/17/2016	22,500 gallons	Mechanical failure caused 22,500-gallon untreated leachate discharge to unpaved surface. No surface water affected.	Pump system failure caused 22,500-gallons of untreated leachate to discharge to land.	Hose and check valve repaired and additional check valve installed. Added scheduled inspections of check valves, and an overall system evaluation will be conducted to identify additional measures that can be taken to prevent leachate release-failures.
Hesperia City/City of Hesperia CS	Mahole at 10662 Maple Ave., Hesperia	South	Yes	6/8/2016	250 gallons	Mechanical failure caused 250-gallon raw sewage discharge to paved surface. No surface water affected.	Pump station failure caused 250-gallons of raw sewage to discharge from a manhole to curb and gutter.	230-gallons of the spill was recovered. Area was cleaned and 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.

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Facility	County	Enforcement Action	Current Status	Next Step
Water Board Actions				
None at this time				
Executive Officer Actions				
None at this time				
Prosecution Team Actions				
Caltrans District 8, Hwy 138 (Sheep Creek)	San Bernardino	**Proposed CAO** for unpermitted work and discharge of fill materials within Sheep Creek and other waters of the state.	Prosecution Team and Caltrans reviewing Advisory Team's request for additional information. Responses due June 6, 2016.	Submit response to Advisory Team's request for information - **June 2006.**
Desert View Dairy	San Bernardino	**Proposed Amended CAO** expanding area for replacement water and monitoring and establishes TDS thresholds to address nitrate and TDS groundwater pollution.	Prosecution Team responding to comments received during public comment period.	Submit revisions to CAO for Advisory Team consideration - **June 2016**.
Lake Tahoe Laundry Works CAO for additional cleanup and investigation.	El Dorado	**Proposed CAO** to conduct additional ground water investigation and remediation activities.	Prosecution Team responding to comments received during public comment period.	Submit revisions to CAO for Advisory Team consideration - **June 2016**.

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ENCLOSURE 7

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EXECUTIVE OFFICER'S REPORT • AUGUST 2016

State and Regional

1. **The Surface Water Ambient Monitoring Program (SWAMP) First Annual Water Quality Science Symposium** – *Jane Covey*

   Staff attended the Science Symposium on June 29 and learned about the availability and use of data to model biodiversity and habitat health. The goal of the symposium was to bring attention to the challenges that water quality stakeholders face while managing California's waters. Current data management systems are fragmented and can be improved to increase data usability. Increasing access to reliable, comprehensive data is important to improving water quality planning, management and permitting.
   The symposium continues the focus on open data introduced at the Data Fair (see the May 2016 Executive Officer Reports for more information about the Data Fair). The symposium included topics on water quality monitoring and data management. Orange County Public Works and CloudCompli, who won a data innovation challenge sponsored by the Office of Information Management and Analysis (OIMA), presented a smart system that combines monitoring data from multiple databases to identify contaminant sources. The smart system, called WQExplorer, is in the beta stage but shows promise for analyzing water monitoring data in urban areas.

   The California Department of Fish and Wildlife presented the need for more comprehensive bioassessment of streams and rivers by using the California Stream Condition Index, the H2O Algae Index, and the California Rapid Assessment Method for riparian habitat condition. These methods, when used together, allow for a more complete assessment of a waterbody's biological and physical heath and can be used to verify impairment and pinpoint sources of pollutants.

   The symposium featured 13 other presentations that covered topics focused on bioassessment, habitat restoration, watershed assessment, bacteria and contaminant monitoring, and data management. The Water Board's programs will benefit from the improvements in data accessibility and assessment methods. Future updates and training of the SWAMP data series will be conducted by OIMA as lunchtime Web Seminars.

2. **(Standing Item) Annual Update on Basin Planning Activities –** *Daniel Sussman*

   The Water Board adopted the current Triennial Review Priorities on November 4, 2015. State and federal laws require periodic review and revision of Basin Plans. The federal process is called "Triennial Review." Due to resource limitations and the complexity of California's Basin Plan amendment process, Triennial Review in California is generally limited to identification of the highest priority planning projects to be addressed over the

three years between one Triennial Review cycle and the next. The 2015 Triennial Review priority list includes nine projects identified with available resources and twelve projects in need of additional resources. See Attachment A for the 2015 Triennial Review list of projects.
The February 2016 Executive Officer Report on Basin Planning activities described staffing transitions within the Basin Planning and TMDL Unit. Staffing changes will continue this fiscal year. The TMDL and Basin Planning Unit will add new Surface Water Ambient staff (SWAMP) to the Unit which will allow for improved integrational TMDL and Basin Planning needs within SWAMP program priorities. The FY 2016-2017 Budget Act included three permanent new positions for SWAMP. We anticipate filling these positions by the end of the year.

In January 2016 the Office of Administrative Law issued final approval of the China Lake Basin Plan amendment removing the MUN beneficial use from certain ground waters beneath Naval Air Weapons Station China Lake. You adopted this amendment in February 2015. In May staff visited the Hot Creek Hatchery to better understand hatchery infrastructure to inform work on a site specific objective for nitrate. This project was subsequently put on hold in favor of other Regional priorities.

Staff anticipates work on Basin Planning priorities such as Bacteria Water Quality Objective revisions Riparian Protection policies, and Lake Tahoe Nearshore this fiscal year. Staff is investigating and preparing work plans to address other priorities from the 2015 Triennial Review list when we fill our vacancies. Additionally, staff continues to compile a list of edits to the Basin Plan for the 2018 Triennial Review.

3. Personnel Report – *Eric Shay*

New Hires – None

Vacancies – We are currently recruiting for an Executive Assistant and a Staff Services Analyst (SSA) in our South Lake Tahoe office. The SSA will be supporting our Leviathan Mine staff. In addition, we will soon begin the recruitment process for a Supervising Engineering Geologist (Division Manager) for the Victorville office.

Departures

Mike Plaziak, Supervising Engineering Geologist, Victorville. Mike has accepted a position as manager of in the Drinking Water Program at the Maine Center for Disease Control. Lauri Kemper, Assistant Executive Officer, will serve as interim Division Manager until the position is filled.

4. (Standing Item) Caltrans Storm Water Program – *Bud Amorfini/Robert Larson*

Caltrans continues to make progress on water quality improvement activities in the North Lahontan Region. The following highlights of its storm water program are presented below, with a focus on the Lake Tahoe region.

Lake Tahoe Basin Highway Retrofit Program

Caltrans is approaching completion of its program to retrofit the state highway system in the Lake Tahoe Basin to reduce erosion and treat storm water runoff. There are 13 major highway segments included in the program. To date, nine segments have been completed and three will be finished this year, with one project left to be started next year (Highway 50 from the Y to Trout Creek). Storm water runoff is being controlled by sheet flow to forested and meadow areas where disconnected from surface waters, or by collecting and treating runoff using curbs, bio-swales, infiltration basins, sand filters, and other treatment devices. Initial monitoring efforts indicate that sand filters perform much better than other available cartridge-type treatment boxes in use at other sites. Large-capacity sand filters are in use at certain high-priority outfalls in the urbanized area along Highway 50, and smaller double-chambered vaults with the capacity to use sand as a media filter are in place, or being placed, along highways 89 and 28 in the west and north shore areas. Caltrans plans to start installing sand filter media in these double-chambered vaults this year.

Snow and Ice Management

In addition to installing roadway treatment facilities, Caltrans is improving its pollutant source controls by modifying its snow and ice management program. Traction sand applied to its roadways is now comprised of Washoe Septic Sand, which is hard granite and contains less fine particles and nutrients. Additionally, a brine solution is now applied to roadways prior to storms in favor of using solid rock salt. The brine uses less salt, covers the road more evenly, and adheres to the road better than solid salt applications. Using the combination of better quality sand and brine improves the quality of storm water runoff from the roadways.

In the urbanized area of the south and north shores, snow is collected from the highways and placed in holding areas where it can melt slowly and infiltrate into the ground rather than being discharged to surface waters. Although doing this protects surface water quality, the practice can adversely affect the quality of ground water. The Water Board has asked Caltrans through a Section 13267 Order to investigate the degree and extent of potential ground water effects at the Sierra Boulevard Snow Storage Site in South Lake Tahoe. Initial information indicates that shallow groundwater beneath the site has elevated levels of total dissolved solids and chloride. Staff anticipates that changes to the use of brine will reduce the amount of salt in snow stored at the site and mitigate its effects on ground water over time.

Caltrans has approached staff regarding the potential use of a “snow melter” instead of collecting, transporting, and storing snow at a site currently used in the urbanized Kings Beach area on the north shore. The snow melter is a trailer-mounted portable device that would allow Caltrans to load snow directly from the roadway, melt it, and discharge it to an appropriate location such as an infiltration basin with sufficient capacity. The snow melter

has an added benefit of providing pretreatment to remove oil and grease, and heavy particles before being discharged. Caltrans is likely to follow-up with more detailed information and a formal request for Water Board acceptance of the process at a future date.

Caltrans Statewide Storm Water Management Plan

The Caltrans statewide municipal permit issued by the State Water Board (Order 2012-0011-DWQ) requires that a Storm Water Management Plan (SWMP) be developed that implements the requirements of the permit. Caltrans is currently operating under its SWMP that was approved by the State Water Board in 2003 for the previous version of the municipal permit. In 2014, Caltrans revised the 2003 SWMP to comply with existing Permit requirements and submitted the revised SWMP to the State Water Board for approval by the Executive Director. State Water Board staff worked collaboratively with Department staff to ensure the revised SWMP is consistent with the Permit. The SWMP was circulated to the regions for review and comment and was subsequently posted for public comment ending in May 2016. The SWMP maintains the region-specific requirements for the Lahontan Region including:

- Designing project to infiltrate the 20-year, 1-hour storm volume in the Truckee River, Carson River, and Mammoth Creek (above 7,000 feet) hydrologic units;
- Prohibiting land disturbing activities between October 15 and May 1 of the following year in the snowy areas of the region; and
- Requiring early project design consultation with Water Board staff for projects in the Lake Tahoe, Truckee River, Carson River, and Mammoth Creek hydrologic units.

The revised SWMP is now pending State Water Board Executive Director approval.

Lake Tahoe Total Maximum Daily Load (TMDL)

Caltrans continues to be an important partner in Lake Tahoe TMDL implementation. Caltrans' statewide storm water permit requires the Department to comply with fine sediment particle (FSP) and nutrient load reductions specified by the TMDL program. Specifically, Caltrans must reduce FSP, total phosphorus, and total nitrogen loads by 10%, 7%, and 8%, respectively, by September 30, 2016. Caltrans is actively using the established Lake Clarity Crediting Program to demonstrate required load reductions and document ongoing maintenance actions. By improving traction abrasive management and sweeping activities, Caltrans plans to slightly improve road conditions on portions of Highways 50 and 89 above TMDL baseline condition to meet the first TMDL milestone. The Nevada Tahoe Conservation District is performing required roadway inspections on the Caltrans's behalf to confirm improved highway conditions are consistent with modeled expectations. Water Board staff look forward to reviewing inspection results and awarding Lake Clarity Credits in spring 2017.

5. **Regional Conservation Framework: A Pilot Program in Antelope Valley** – *Jan M. Zimmerman*

A Regional Conservation Framework (RCF) is a planning document intended to guide and coordinate public and private investments in wildlife and habitat conservation, including conservation actions needed to address climate change and protect wildlife corridors on a regional-scale. RCFs are voluntary, non-regulatory tools, developed by public or private entities, and can be used as a foundation for more comprehensive plans such as Natural Community Conservation Plans or regional Habitat Conservation Plans. In addition, RCFs may guide conservation investments by state, federal, local and private entities and provide a basis for the development of advance mitigation agreements. Though not yet part of California's statute, the RCF concept was introduced as Assembly Bill AB 2087, which would amend Fish and Game Code to include specific criteria for developing a RCF and to give the California Department of Fish and Wildlife the statutory authority to approve RCFs for the purpose of creating mitigation credits similar to a mitigation bank. AB 2087 passed the Assembly on June 2, 2016, and, with minor amendments, passed the Senate Natural Resources Committee on June 28, 2016; final approval by the Legislature is still pending.

The Antelope Valley RCF is one of four in a state-wide effort to pilot the RCF model under a variety of settings. The three other RCFs in the program include East San Francisco Bay, Santa Clara County, and Yolo County. With private foundation support and coordination by the Conservation Strategy Group, ICF International has teamed with the Conservation Biology Institute and Terry Watt Consulting to develop the draft Antelope Valley RCF. The Antelope Valley RCF will build on the data, analyses, and conservation strategies that were developed as part of the Desert Renewable Energy Conservation Plan, and create a framework that will expand the utility of that information beyond its current application for renewable energy planning. It is anticipated that very little new data will need to be collected or generated. The entire process is expected to take up to eight months to complete, with a draft Antelope Valley RCF scheduled to be completed by February 2017. The end result will be a planning document that identifies and prioritizes areas for habitat conservation within the Antelope Valley.

Water Board staff participated in the kick-off meeting for the Antelope RCF on June 22, 2016. Various other stakeholders engaged in the process include the Bureau of Land Management, United States Fish and Wildlife Service, California Department of Fish and Wildlife, California Energy Commission, California Department of Transportation, High Speed Rail Authority, Los Angeles County Department of Regional Planning, City of Lancaster, Edwards Air Force Base, various non-governmental organizations, and a number of solar utility companies. Water Board staff intend to participate in additional stakeholder meetings that are planned to be held between now and February of next year. Once developed, the Antelope Valley RCF will be an important tool that Water Board staff can use to guide and coordinate compensatory mitigation for regulated development projects in the Antelope Valley.

6. **Deep Infiltration and Dry Wells for Groundwater Recharge -** *Jehiel Cass*

State Board sponsored a public webinar describing the use of deep infiltration systems and dry wells to promote groundwater recharge and manage stormwater runoff. As the impervious surface area from development increases, infiltration to groundwater decreases. As this runoff

volume and intensity increases it carries pollutants and contributes to downstream erosion and sediment transport to riparian areas. Across the nation there is increasing use of infiltration systems to treat and remove pollutants from stormwater. In the desert southwest, deep infiltration also promotes groundwater recharge in over drafted aquifers. Many municipalities, as well as the State Board Municipal Stormwater permits, require infiltration to treat stormwater, maintain pre-development hydrology and achieve Low Impact Development standards. Shallow landscape infiltration systems are efficient with semi-porous soils and where space allows. In urbanizing areas proprietary systems are often used (Figure 1).

Figure 1 – Typical Stormwater Infiltration Systems

Factors to consider in the selection, design and use of infiltration or dry well systems include:

- Avoidance of sub-surface pollutant sources or known groundwater plumes.
- Measurement of percolation at the depth where infiltration occurs.
- Deep wells should penetrate at least 10 feet into permeable soil.
- The minimum distance above groundwater should be 10 feet or greater.
- Ensure maintenance to remove trash and sediment to increase longevity.

Many studies document the effectiveness of these systems and the US Environmental Protection Agency concluded that there is low potential for injection wells to endanger the drinking water supply. One study evaluated a single site in Arizona that had 7.5 inches of rainfall, typical for the high desert, and found that 3,800,000 gallons of water was recharged and all pollutants effectively mitigated. The City of Chandler, Arizona conducted a study and found that citywide, there was an estimated annual 191 acre-feet of recharge from undeveloped land and 2,610 acre-feet of recharge from urbanized land

using infiltration systems. Many high desert cities such as Hesperia, Victorville, and Palmdale have established specifications for, and approved, deep infiltration wells (Figure 2).

- ± 15,000 installations

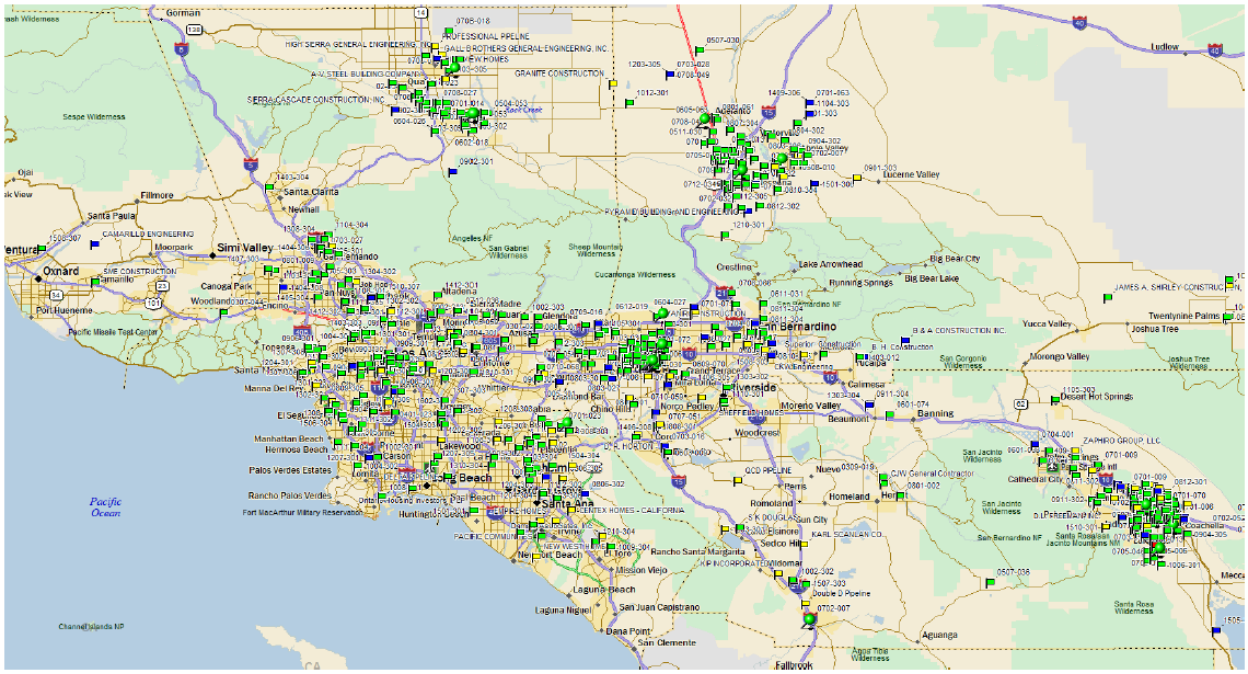

Figure 2 – Dry Well Installations in Southern California for one Proprietary System

Staff concludes that properly designed, located, and maintained deep infiltration and dry well systems are cost effective for stormwater management, promote groundwater recharge, and effectively remove pollutants from reaching groundwater.

7. **Support for Wrightwood Special District -** *Jehiel Cass*

The San Bernardino County Local Agency Formation Commission (LAFCO) is considering creating an independent Special District for the San Gabriel Mountain community of Wrightwood. The Water Board sent a letter to LAFCO stating our support for creating a Special District and indicated that authority should be included for managing long-term sewage treatment and disposal.

The Wrightwood community is at an elevation of about 6,000 ft. above sea level along the San Andreas Fault and has grown to about 4,500 residents. It is predominantly residential with some commercial businesses that support its recreational economic base. Sewage disposal is only to onsite wastewater treatment systems, also called septic systems. There is no centralized sewer collection or treatment system. Because Wrightwood crosses the San Bernardino and Los Angeles County boundaries, LAFCO said they would create a Special District crossing county lines.

Over the years, the Wrightwood community has had numerous septic issues that required staff involvement. During high precipitation years the groundwater table rises and, in some areas, surfaces in springs along the fault. Many decades ago, San Bernardino County and

the Water Board identified these problem areas and do not allow new septic systems to be installed. The older areas of the community are located on small lots that do not meet the current Basin Plan minimum lot size of 15,000 square feet for lots subdivided before 1987. The Executive Officer has granted an exemption allowing undeveloped lots to be built, but may require supplemental, or enhanced treatment systems to be used. Septic failures in the older portion of the community are increasing in recent years as waste loading to the subsurface soils reduce percolation. Some small lots do have sufficient replacement area for new leach lines or seepage pits that limit sewage disposal options. At least three previous sewerage Feasibility Studies were completed since the 1970's, but no systems were installed. Staff encourages the community to consider both centralized and decentralized systems with nitrogen removal to protect the underlying groundwater. Septic system maintenance (solids removal) should be required to extend existing system life. We look forward to working with a new Wrightwood Special District should it be formed.

Attachment A -
2015 Triennial Review Priority List
Triennial Review of Water Quality Control Plan for the Lahontan Region

Projects With Available Resources

Priority		PYs over 3 years	Cumulative PYs
1	Program Manager	0.3	0.3
2	2018 Triennial Review	0.2	0.5
3	Miscellaneous work that will not directly result in Basin Plan Amendments (e.g., regulatory assistance and corrections)	0.6	1.1
4	Bacteria Water Quality Objective revisions	1.0	2.1
5	Lake Tahoe Nearshore	0.5	2.6
6	Mojave River - add BIOL beneficial use to a reach Mojave River - remove COLD beneficial use from a reach Mojave River - SSOs for reach Mojave Basin - SSOs for select groundwater sub-basins	1.8	4.4
7	Squaw Valley groundwater withdrawal & in-stream flow	0.5	4.9
8	Evaluate appropriate statistical methods (e.g. replace Means of Monthly Means with annual averages, where appropriate, such as Truckee River and Pine Creek)	0.5	5.4
9	Riparian Protection Policy	0.6	6.0

Projects Needing Additional Resources

Priority			
10	Hot Creek Water Quality Objectives	0.6	6.6
11	Survey of surface waters to identify those we might want to consider creating in-steam flow requirements for the purposes of protecting beneficial uses	0.1	6.7
12	Biological indicators	0.9	7.6
13	Region-wide approach to TDS Water Quality Objectives for surface waters	1.5	9.1
14	Susan River site specific objectives	2.0	11.1
15	Deposited/embedded sediment standard for Middle Truckee River	0.9	12.0
16	Remove two beneficial uses from Piute Ponds wetlands	0.5	12.5
17	Clarify Lahontan Water Board policy on package plants	0.1	12.6
18	Fish Springs site specific objectives	1.0	13.6
19	Biotic Ligand Model for copper	0.5	14.1
20	Revise PCPs water quality objectives	1.0	15.1
21	Eagle Lake “building moratorium” related to septic systems	0.5	15.6

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Summary of
No Further Action Required Letters Issued
June 16 - July 15, 2016
August 2016 EO Report

State of California
Lahontan Regional Water Quality Control Board

The Executive Officer finds the release of petroleum products at the following site poses a low threat to human health, safety, and the environment. Therefore, the 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 8, 2016	Private Residence	Squaw Valley Placer County	6T0408A	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000008108

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

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EO's Monthly Report June 16, 2016 - July 15, 2016
Unauthorized Waste Discharges*

COUNTY: Inyo

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
June Lake PUD/June Lake PUD CS	Highway 158 at Arie Crag Day use camp	South	Yes	6/30/2016	157,083 gallons	Pipe failure caused 157,083 gallons of raw sewage to discharge. No surface water body affected.	Ten inch forcemain failed causing discharge to ground at day camp.	Diverted sewage to trench, replaced pipe segment (crack/rupture in line) disinfected area with bleach mixture. Pipe replaced and a plan is in place to replace the forcemain. 157,083 gallons of sewage were recovered.

COUNTY: Los Angeles

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Ca Dept of Corrections Soledad/ Los Angeles County, Lancaster	44750 60th St. West	South	Yes	7/5/2016	150 gallons	Toilet blockage caused 150 gallons of raw sewage to spill to a storm drain. No surface water body affected.	Toilet overflowed and raw sewage reached a storm drain.	Toilet unplugged, area cleaned up.

COUNTY: NEVADA

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Big Rig with Ruptured Fuel tank	Westbound Hwy 80 Truckee truck scales	North	No	7/7/2016	100 gallons	Ruptured fuel tank caused 100 gallons of diesel to discharge to Highway 80 on both west bound lanes. No surface water affected.	Spill was contained on the pavement.	Spill cleaned up, highway reopened.

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

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Victor Valley Wastewater Reclamation Authority/Victor Valley Wastewater CS	Upper Narrows Effluent Site # 1	South	Yes	6/30/2016	1,806 gallons	Construction bypass caused 1,806 gallons of raw sewage to spill from three manholes and a wet well at Upper Narrows Site#1 to unpaved surface. No surface water affected.	Temporary construction bypass pump overwhelmed Upper Narrows pump station # 1 resulting in manhole overflow.	Bypass was immediately suspended and redesigned to ensure pumping rate matched downstream pump station flows. All of the spill was recovered and the area was cleaned up and chlorinated.
US Marine Corps Barstow Logistic Base/Yermo Annex IWT Recycle Fac	Industrial Wastewater Treatment Facility-Facility 611	South	Yes	6/28/2016	200 gallons	Mechanical failure caused the discharge of approximately 200 gallons of industrial wastewater to the storm drain system. No surface water affected.	Industrial wastewater from Building 573 was being pumped to the IWTP and the pumps became overwhelmed resulting in an unauthorized discharge.	Discharger is ordering a larger pump, changing discharge practices and implementing inspection protocols.
US Marine Corps Barstow Logistic Base/Yermo Annex IWT Recycle Fac	Industrial Wastewater Treatment Facility-Facility 611	South	Yes	6/29/2016	200 gallons	Mechanical failure caused the discharge of approximately 200 gallons of industrial wastewater to the storm drain system. No surface water affected.	Industrial wastewater from Building 573 was being pumped to the IWTP and the pumps became overwhelmed resulting in an unauthorized discharge. Second discharge from facility in two days.	Discharger is ordering a larger pump, changing discharge practices and implementing inspection protocols.
Unknown Discharger/City of Hesperia	Mariposa Road and Powerline Rd to Grandview Rd/Mariposa Rd between Farmington and Jenny/East of Mariposa Rd on Farmington Rd	South	No	7/6/2016	Unknown	Illegal dumping of raw sewage in rural Oak Hills Area of Hesperia. This has happened on three occasions. Suspected sewage truck dumping raw sewage in the desert area during late night hours.	Coordinating with County Environmental Health and Hazmat to provide cleanup.	Investigate to determine identity of discharger.

*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 June 16, 2016 - July 15, 2016
Unauthorized Waste Discharges*

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Arrowhead Lake Association (ALA)	Lake Arrowhead beach west of North Shore Marina, below Hospital Rd and Old North Shore Rd.	South	No	7/5/2016	5-6 tons	Grey sand disposed of along the lakeshore after the fireworks, from the fireworks barge.	ALA removed the remaining grey sand to stockpile in maintenance yard. Testing is being done to determine final disposal location.	Report due to VV 7/27/2016.

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