CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MEETING OF SEPTEMBER 16, 2020

ITEM 5
EXECUTIVE OFFICER'S REPORT

ENCLOSURE 1

EXECUTIVE OFFICER'S REPORT • July 2020
Covers May 16, 2020 – June 15, 2020

Contents

State and Regional

1. **Personnel Report** – *Eric Shay*

New Hires – None

Vacancies:

- Senior Environmental Scientist (Specialist), Compliance & Planning Division, South Lake Tahoe. This position serves as the Regional Monitoring Coordinator; lead for coordinating implementation of the Region's Climate Change Adaptation and Mitigation Strategy; and regional specialist for monitoring related special studies, investigations, and projects. The position will provide the lead responsibility for making policy recommendations, providing technical expertise

orally and in written documents, evaluating and drafting environmental documents, and performing analysis on technically complex and politically sensitive assignments related to water quality monitoring and Water Board response to climate change in the Lahontan Region.

- Engineering Geologist, Department of Defense / Site Cleanup Program Unit, Victorville. This position analyzes threat of pollutants to groundwater and surface waters, reviews technical reports for cleanup strategies, reviews site investigation results, reviews proposed cleanup alternatives to ensure compliance with water quality objectives, prepares enforcement orders, investigates spills, and conducts inspections of cleanup sites and facilities.
- Water Resource Control Engineer, Wastewater & Agricultural Operations Unit, Victorville. This position provides regulatory oversight of projects involving discharges to ground or surface waters and projects intended to restore and/or enhance water quality.
- Scientific Aid, Cleanup/Site Investigation & Enforcement Unit, South Lake Tahoe. This position assists staff with administering the site cleanup, underground storage tank, land disposal, and enforcement programs; reviewing reports, and maintaining databases; reviews self-monitoring reports, permits and enforcement actions; reviews project files and water quality data to prepare for field inspections and permit updates; assists with field inspections; and reviews California Environmental Quality Act documents.

Departures – None.

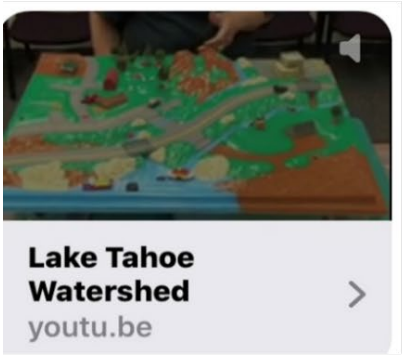
North Lahontan Region

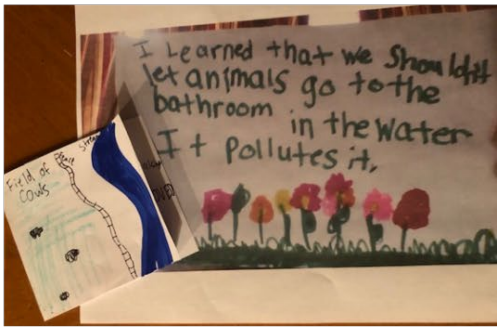
2. Virtual Outreach: A Successful and Safe Approach While Sheltering-in-Place – *Mary Fiore-Wagner*

During this time of social distancing, Water Board Staff (Staff) Sabrina Rice, Mike Suglian, and Mary Fiore-Wagner had to think of a new approach for outreach when contacted by the Girl Scouts of America – Sierra Nevada Troop 722, Lake Tahoe asking for a presentation about water quality protection. Using the Watershed Model, Staff created a series of short videos to demonstrate the sources and impacts of nonpoint source pollution, and how to prevent it.

Brownies and Girl Scouts learned about how pollutants associated with residential, recreation, and grazing activities can impact water quality. The videos highlighted how stormwater can mobilize pollutants associated with (1) careless habits when recreating outdoors, (2) overwatering and pesticide and fertilizer use when landscaping, (3) improper car and boat maintenance, and (4) grazing activities near rivers and streams. A follow-up series of videos demonstrated how pollutants from these non-point sources of pollution could be minimized by (1) practicing Leave No Trace ethics, (2) following proper engine maintenance, (3) planting native and drought tolerant species, and (4) fencing and placing alternate water sources to minimize cattle access to streams. The short videos were knit into a short YouTube movie that effectively communicated the watershed/stormwater concept while encouraging young girls to become stewards of the land. Showcasing the work of environmental scientists also helped pique the interest of young girls about careers in resource protection and water quality control.

As a former Brownie and Girl Scout, Mary was happy to help 10-year old South Lake Tahoe native, Gabi Lancelloti, earn her Leader-In-Action badge for helping the Brownies with their Wonders of Water Journey. By continuing to participate in environmental education, Staff hope to instill a sense of stewardship in children, so they make better life choices that lead to the long-term protection of our water and other environmental resources.





Photo(s) 2.1: Left - Watershed Model YouTube; Center - Gabby Lancelloti, Leader-In-Action, Troop 722 (printed with permission), Right - Thank you notes.

3. **Snapshot Day – A 20-Year Volunteer Commitment from Regional Water Board Staff** – *Sabrina Rice*

On May 30, 2020, Water Board staff participated in the 20th annual Snapshot day: a volunteer, citizen science water quality monitoring event that provides a snapshot of the health of streams in the Tahoe and Truckee watersheds. This event is organized by the League to Save Lake Tahoe (League) and incorporates a collaborative effort between the League, citizens of our community, the South Lake Tahoe Public Utility District, and the Lahontan Water Board's South Lake Tahoe Office.

This year's event marked a huge celebration for Lahontan Water Board staff, Dr. Bruce Warden: it was his 20-year anniversary as a "water quality warrior," who stepped up once again to contribute to the success of this event. For 20 years straight, Bruce has assisted with this citizen science effort by serving as a team leader, recruiting volunteers, and by providing high-quality bacteria analysis. Thank you for your time and dedication, Bruce!

Photo 3.2: Dr. Bruce Warden counting E.coli colonies under the microscope.

Though the recent COVID-19 pandemic changed the dynamic of this year's event, thirty-four streams and meadows were

evaluated by field and laboratory volunteers who followed proper safety protocols. Lahontan Water Board staff safely ran analyses while practicing social distancing and wearing masks.

Samples collected on Snapshot Day include measurements of dissolved oxygen, total dissolved solids, pH, and temperature. The South Tahoe Public Utility District analyzed the samples for nutrients, while Lahontan Water Board staff performed analyses of turbidity and bacteria (i.e., fecal coliform and E. coli).

This event has created a long-term dataset, which can be found on the California Environmental Data Exchange Network (CEDEN). Results indicated elevated bacteria levels at the mouths of Taylor and Burke Creeks. Staff will consider information provided on the League's field data sheets to learn if any observations (e.g., presence of birds, domestic pet or homeless activity) may indicate sources of bacteria, and the need for further investigation of these areas.

4. **Standing Item - Regional Grazing Status, 2020 Update** – *Bruce Warden*

Extent of grazed lands in the in the Lahontan Region: Grazing lands comprise 76% of the 407,802 agricultural acres in the Lahontan Region. Because of precipitation differences, grazing lands in the north have high forage value and readily available water. Forage is sparse and water is scarce in low-rainfall grazed lands in the south, requiring much more acreage to support livestock. Water quality, streambank erosion, and the ecology of riparian areas can be heavily impacted by grazing, and the Water Board identified grazing issues as an area of priority work. This is particularly germane as the Water Board is developing an Irrigated Lands Regulatory Program (ILRP). Irrigated pastures are the largest proportion of irrigated lands in the Lahontan Region, and can be subject to tailwater runoff carrying elevated concentrations of bacteria to local surface waters. Bridgeport Valley operations subject to the grazing waiver and Los Angeles Department of Water and Power grazing leases are the largest irrigated pasture operations in the Lahontan Region.

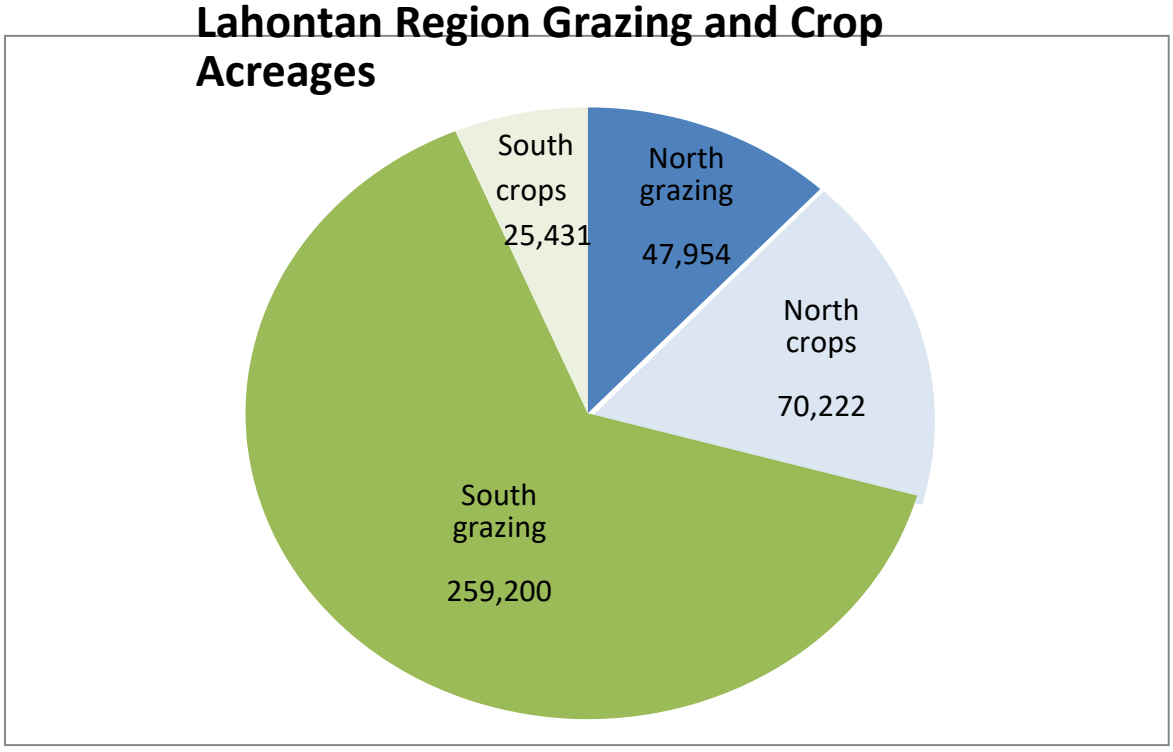


Figure 4.1 - {2016} Grazing acreage includes grass & pasture. South Lahontan includes parts of Inyo, Mono, San Bernardino, Kern and Los Angeles Counties; North Lahontan includes parts of Alpine, El Dorado, Lassen, Modoc, Nevada, and Sierra Counties. Source: USDA National Agricultural Statistics Service Cropland Data Layer.

Most grazed acreage in the north is located on US Forest Service (USFS) allotments in the Sierra Nevada and Cascade mountain ranges, with fewer Bureau of Land Management (BLM) and privately-owned grazing in valley plains. While the predominantly BLM-managed grazing lands in the south may cover large acreages, livestock tend to gather in the limited acreage of riparian zones of desert springs, seeps, and streams, reducing beneficial uses and ecological function of these sensitive water sources. There are also privately owned grazing lands in both the north and south. Crop acreages identified in the above chart are on private lands.

California Rangeland Water Quality Management Plan Update: Water Board staff are engaged with the State Water Board and UC Cooperative Extension in efforts to update the 1995 California Rangeland Water Quality Management Plan to incorporate recent best management practices and science as well as changes to Water Board policies since 1995.

Federal Grazing Issues: In the last 2019 Regional grazing status update, livestock grazing, and range management was being considered as a covered activity in the Federal Non-Point Source permit. However, in early 2020, executives from the USFS, BLM, Central Valley Water Board, and Lahontan Water Board decided to remove grazing as a covered activity for the following reasons:

- Incorporating grazing as a covered activity in the permit could delay permit adoption due to the additional level of data and analysis needed to develop performance measures and permit requirements. Any delay could impact the ability to meet timelines for California's fire and fuel management goals on federal lands by impacting the Water Boards' regulatory coverage for vegetation management and fuel reduction projects. The Federal NPS permit should be developed consistent with Executive Orders issued by the Governor's Office and with goals established on private and federal lands to increase the pace and scale of forestry projects that help to address the current wildfire crisis in California.
- There are current efforts by UC Davis, UC Cooperative Extension, and the Water Boards to update the Ranch Water Quality Management Plan (1995), which can be leveraged to conduct evaluations of water quality impacts and benefits associated with grazing on both private and federal lands.
- Removing grazing as a covered activity from the Federal NPS permit allows more time for the Regional Water Boards to work with federal partners to conduct additional assessments of grazing allotments on USFS and BLM-managed lands.

The Regional Water Boards will continue to use their independent enforcement authority to address water quality issues related to grazing activities on federal lands. Examples could include Investigative Orders or Clean-up and Abatement Orders. Where appropriate, the Water Board may issue Waste Discharge Requirements, Waivers of Waste Discharge Requirements, or Basin Plan Prohibitions to address grazing related water quality issues on federal lands, at either site-specific locations or at a watershed/regional scale.

As directed by State Water Board Resolution 2015-0062, which dissolved the Grazing Regulatory Action Project (GRAP), the Regional Water Boards should and will continue to:

- Take actions they determine to be necessary to protect water quality and the beneficial uses of water from pollution, consistent with state and federal laws. Actions may be regulatory, based on non-regulatory efforts for BMP implementation, or a combination of the two.
- Consider establishment of monitoring requirements, including watershed-wide or regional monitoring programs, to assess the effectiveness of BMPs implemented under regulatory and non-regulatory actions.
- Consider prioritizing actions to address livestock grazing operations that cause water quality impairment, or have the likelihood to do so, based on the unique hydrology, topography, climate, and land use of that specific region.

Bridgeport Valley: The 2019 Water Quality data report and individual ranch Grazing Management Practice Implementation Annual Report for Grazing Season Year 2019 was due March 15, 2020, around the time of the onset of COVID-19 shelter-in-place restrictions in California. We have received five of the seven annual ranch reports. Two reports are outstanding, and Water Board Staff are contacting ranchers. All enrollees to the Bridgeport waiver have reached 100% compliance for required submittals of reports from 2007 to 2018.

Eagle Lake: In compliance with the 2019 California Water Code section 13267 Investigative Order for Eagle Lake shoreline grazing operations, Five-Dot and Mapes ranches (owners/operators Swickard family) and McClelland ranch have submitted acceptable Ranch Water Quality Management Plan annual updates for 2020. The USFS has submitted Annual Operating Instructions (AOIs) for both the North and South Basins of Eagle Lake. This submittal is under review by Water Board staff for completeness. The BLM has not yet submitted AOIs for 2020.

Water quality monitoring efforts are continuing in 2020 at four in-lake stations, in cooperation with Eagle Lake Guardian volunteers. On a monthly frequency through November, field measurements will be taken to correspond with water samples that will be analyzed for nutrients and chlorophyll-a. If field crews suspect the presence of a harmful algal bloom based on site observations of discolored water and/or floating algal mats or surface scum, then the suite of analytes will include cyanobacteria and their associated toxins.

Los Angeles Department of Water and Power (LADWP): LADWP owns large areas of land in the Owens Valley and has approximately 50 grazing leases on parcels ranging in size from 33 to 26,065 acres. Extensive water quality sampling indicates that livestock with unrestricted access to surface waters has caused exceedance of water quality standards for nutrients, bacteria (100 cfu/100 ml E. coli) and turbidity along Bishop, Horton, and Lower Pine Creeks within lands owned by LADWP. Hundreds of water quality samples and genetic microbial source tracking studies confirm that ruminant livestock are the predominant source of bacteria in waters that have a high degree of contact by the public. Other landowners in the Owens Valley and throughout the Region managing grazing cause similar impacts.

Water Board staff are considering including irrigated pasture into the upcoming ILRP for all irrigated pasture in the Region, including LADWP land. Livestock grazing on irrigated pasture has a higher risk of impacting water quality compared to grazing on non-irrigated lands. The strategy would focus on higher risk grazing lands and cover a wider area resulting in more mitigation of potential impacts. Staff is currently working on developing a

Staff Report with a recommended approach for an ILRP in the Lahontan Region for Water Board consideration in November.

Recent impacts to staff resources associated with the COVID-19 emergency may require reprioritization of grazing related work. In the near term, staff anticipates that efforts to address grazing related water quality issues will focus on Bishop Creek in the Owens Valley as part of the Bishop Creek Vision Project; and will continue to work with the Bridgeport Ranchers Organization to develop a watershed-wide approach to address similar issues in Bridgeport Valley. Staff will also coordinate across units internally to determine where to focus limited resources and take actions necessary to protect water quality and beneficial uses consistent with state and federal laws. These actions may be regulatory, or based on non-regulatory efforts for BMP implementation, or a combination of the two approaches.

5. Better Together - Bishop Paiute Tribe & Water Board Bishop Creek Partnering *– Ed Hancock and Cindy Wise*

In coordination with the Bishop Paiute Tribe's Water Quality Program Coordinator, BryAnna Vaughan, staff participated in the May 28 session titled "State-Tribal Partnerships on TMDLs and Impaired Waters Listings" at the 2020 National CWA 303(d) Virtual Training Workshop (Workshop). The Workshop was hosted by the U.S. Environmental Protection Agency (USEPA) with assistance from the Environmental Law Institute, a non-partisan environmental education and policy research center. The overall purpose of the Workshop was to provide an opportunity for staff from state, territorial, and tribal water quality programs to learn about and discuss program implementation approaches and tools. Workshop audience was representatives from USEPA Headquarters and Regions, States, U.S. Territories, and Tribes.

Photo 5.1 - This photo was shared as part of the presentation. It is South Lake in the headwaters of Bishop Creek. (Photo courtesy of BryAnna Vaughan)

Ms. Vaughan and Ed Hancock shared their presentation titled *Better Together - Bishop Paiute Tribe & California Regional Water Board Partnering to Address Impaired Water of Bishop Creek*. The focus of the presentation was the success in sharing water quality data

to characterize the bacteria impacts to Bishop Creek both on the Paiute Reservation and in the middle reaches of the Creek upstream and downstream of the Reservation. The presentation explained the process from assessment of data to listing on the CWA 303(d) list, and how the listing does not apply on the Creek reach through the Reservation. It went on to explain next steps in implementation measures to address the impairment.

Bishop Creek, along with the West Fork Carson, are the two Vision Projects in the Region. For Vision Projects, staff have more flexibility in addressing water quality impairments than developing a Total Maximum Daily Load (TMDL). Bishop Creek was identified as a Vision Project because of the human health concerns about bacteria contamination, and in large part, because of the opportunities to collaborate with the Paiute Tribe. This collaboration includes integration of CWA 303(d) program requirements with the monitoring and strong partnership already in place, plus a shared data set to help characterize the watershed. A final report will be prepared by USEPA and the Environmental Law Institute summarizing the proceedings of the training workshop, which may assist in future Vision planning, and serve as a reference for program personnel implementing their responsibilities consistent with the current vision for the CWA 303(d) and TMDL programs.

6. **Society for Rangeland Management - California Pacific Section Spring Virtual Campfire** – *Ed Hancock and Cindy Wise*

On June 11, Water Board Staff, Ed Hancock and Cindy Wise, participated in the semi-annual meeting of the California Pacific Section of the Society for Rangeland Management (SRM). The SRM is a professional scientific society and conservation organization whose members are concerned with studying, conserving, managing and sustaining rangeland resources. The theme of the meeting was *Beef, Water, Fish, And People. Multiple Perspectives on Lahontan 303d Listings.* Due to Covid19 restrictions on in-person meetings and on travel, the meeting was held as a Virtual Campfire.

Staff presented the data assessment that resulted in Bishop, Pine and Horton Creeks being listed as impaired for violations of the Region's bacteria water quality standards. Staff described the Bishop Creek Vision Project. Bishop Creek, along with the West Fork Carson River, are the two Vision Projects in the Region. For Vision Projects, the Regional Water Board has more flexibility in addressing water quality impairments than developing a Total Maximum Daily Load (TMDL). Pine and Horton Creeks are not included in the Bishop Creek Vision Project.

Bishop Paiute Tribe's Water Quality Program Coordinator BryAnna Vaughan was also a presenter and shared some of the grazing management practices that are in place to control impacts to Bishop Creek on tribal lands. She expressed her appreciation of the benefits of collaborating with Regional Water Board staff on monitoring and data sharing. USDA Natural Resources Conservation Service Rangeland Specialist Rob Pearce gave a summary of the complex history of water management in the Owens Valley. Dr. Pearce, as a former local rancher, also shared his perspective on the need to balance water quality with potentially big costs to the ranching community in attaining that water quality. Danielle Mendiburu of Flying M Cattle Incorporated, a local rancher in the Round Valley area of Inyo County, shared those same concerns and showed video footage of her ranch, and of some of its irrigation and grazing management practices.

The meeting's facilitator was Dr. Marc Horney, a member of the SRM, a professor at Cal Poly San Luis Obispo, and Chair of the California Rangeland Management Technical Advisory Committee. Dr. Horney stressed the importance of continuing the dialogue

between the ranching community and the Regional Water Board in working together to address the water quality impairments in Bishop, Pine and Horton Creeks. Regional Water Board staff intends to continue discussions with ranchers while developing its Bishop Vision Project and other grazing control strategies.

Photo 6.1 Bishop Area Ranch

7. **Truckee River Watershed Council Supplemental Environmental Project Pilot Program** – *Jeff Brooks*

This past May, Water Board Staff, Jeff Brooks, inspected three of the four completed restoration projects that make up the Truckee River Watershed Council (TRWC) Supplemental Environmental Project (SEP) Pilot Program. The inspections are one of the final steps in closing out the TRWC SEP Pilot Program that was funded through a settlement of administrative civil liabilities imposed upon NorthStar Mountain Properties, LLC (NMP).

In March 2009, the Water Board adopted an Administrative Civil Liability (ACL) Order for NMP that incorporated a settlement for alleged violations of stormwater permits, water quality certifications, and waste discharge prohibitions. The settlement included (1) cash payments to the State Water Board's Cleanup and Abatement Account and Waste Discharge Permit Fund and (2) a Supplemental Environmental Project (SEP).

NMP had begun implementing the SEP (Waddle Ranch Assessment and Restoration Project; NorthStar Vegetation Management Project) when NMP's parent company filed for bankruptcy. The Water Board received a partial payout on the remaining SEP value, which could not fully fund the original SEP. In response to this situation, the Water Board decided to redirect the unspent SEP funds from the settlement on projects that could be completed.

The Water Board subsequently adopted Resolution No. R6T-2014-0015 approving the TRWC SEP Pilot Program to evaluate the Water Board's newly developed SEP Program. The Water Board's SEP Program establishes partnerships with independent third parties who develop, publicly vet, and implement a variety of watershed-based projects intended to improve or protect water quality and aquatic habitat in the Lahontan Region.

The TRWC SEP Pilot Program originally consisted of three projects with a fourth project being added due to efficiencies in implementing one of the original three projects. Those projects include:

Project A - Elizabethtown Meadows Restoration - Completed 2017.
Project B - Dry Creek Restoration Site 1 - Completed 2017.
Project C - Middle Martis Creek Wetlands Restoration - Completed 2018.

Project D - Merrill Davies Stream and Meadow Restoration Site 8 - Completed 2015. This project was incorporated into the TRWC SEP Pilot Program as a result of cost savings achieved with the Dry Creek Restoration Site 1 Project (Project B, above). The $15,000 in cost savings filled a funding gap allowing TRWC and its partners to go forward and fully implement this project.

In May 2020, Water Board staff inspected Projects A through C with TRWC Restoration Director Beth Christman.

At the Elizabethtown Meadows Project area, historic access roads were constructed to enable development of the property. None of the roads were maintained and portions of the road network were capturing dispersed seasonal drainages from upslope and releasing the water at several concentrated points. Additionally, an active fault zone dominates the topography and hydrology of the area, creating a series of springs. These springs support wetlands and fens. The roads, combined with their inappropriate use, caused several significant problems including channel instability, erosion, and head-cutting, wetland and fen degradation, sediment loading directly to Middle Martis Creek, and impacts to recreation and access infrastructure. The restoration activities for the project included drainage reconnection, meadow restoration, culvert removal, and partial road decommissioning (see Photo 7.1). The project is resulting in meadow and fen recovery and reduction of erosion and associated sediment transport from decommissioned dirt roads to surface waters.

In the Dry Creek (locally known as Russell Valley) Project area, the entire south side of the Dry Creek watershed was heavily logged, starting in 1896. A system of roads and skid trails heavily impacted the existing meadows and stream channels. The stream, its tributaries, and the meadows were no longer hydrologically connected, and some head-cuts had developed in the stream channels. The restoration activities included restoring the stream and tributaries back to remnant channels on meadow surfaces and plugging gullies. Sections of historic roads that are no longer needed were restored with grading, placement of woody debris and boulders, and planting of native vegetation (see Photo 7.2). The project is resulting in meadow recovery and reduction of erosion and associated sediment transport to surface waters.

For the Middle Martis Creek Project, creek flow was confined to an undersized stream channel on the south side of Hwy 267 when it was constructed. This led to erosion, head-cutting and general creek channel instability, degradation of the wetland meadow area north of the highway, and periodic flooding of Hwy 267. The restoration activities included channel realignment and reconfiguration at the Hwy 267 crossing, removal of abandoned road fill to restore flow paths, placements of logs and willows in the actively incising channel to promote aggradation, improving drainage across access roads to eliminate erosion, gully repair and riffle construction to halt erosion and promote fish passage, and stakeholder coordination and communication. The project restored surface water flow to the north side of Hwy 267 (see Photo 7.3) and is resulting in recovery of wetlands on the north side of the Hwy 267 and restoration of appropriate flow volumes in channels on both sides of the highway. The project area was tested soon after initial construction was completed in late 2016, with runoff from heavy precipitation. The project performed up to expectations, as was shown during a presentation to the Water Board in November 2017.

All project areas viewed during the inspections are recovering well from construction with meadows, stream channels, and vegetation responding well to the completed work. The work is expected to result in long-term improvement of water quality and habitat in the project areas. Water Board staff will be completing the final steps to close out the TRWC SEP Pilot Project during the following month.

Photo 7.1 - Decommissioned portion of historic access road in Elizabethtown Meadows Project area.

Photo 7.2 - Decommissioned historic road in Dry Creek (Site 8) Project area.

Photo 7.3 - Flow restored in historic Middle Martis Creek channel on north side of Hwy 267 in Middle Martis Creek Project area. channel on north side of Hwy 267 in Middle Martis Creek Project area.

The SEP Program is an important part of the Water Board's Enforcement Program and facilitates work (e.g. restoration projects, residential hookup to municipal sewer service, etc.) that is important to water quality and aquatic habitat improvement and protection within the Lahontan Region. The success and importance of such projects supports continued pursuit of additional partnerships and SEPs through the Water Board's SEP Program

8. Standing Item - Leviathan Mine, Alpine County – *Leviathan Unit*

Water Board staff continues coordinating with United States Environmental Protection Agency (USEPA), Atlantic Richfield Company (AR), and project stakeholders (including the Washoe Tribe of Nevada and California, Nevada Division of Environmental Protection, and the United States Forest Service) for the completion of current and proposed work at Leviathan Mine.

Remedial Investigation and Feasibility Study

Site Characterization Report: Under order from the USEPA, AR submitted a Site Characterization Report (SCR) for the Leviathan Mine Site on December 31, 2017. Water Board staff reviewed the SCR and the Executive Officer provided comments to the USEPA by letter dated August 7, 2018. In the letter, the Executive Officer discussed several key issues regarding information presented in the SCR. Of the issues raised by Water Board, those pertaining to statistical analyses set forth in the SCR were largely supported by AR consultants who were hired to review and address Water Board comments. The AR consultants newly proposed statistical process requires recalculation of all Reference Threshold Values (RTV) presented in the 2017 SCR. According to USEPA, a revised SCR will not be prepared; instead, the new RTV calculations and other revisions will be presented in the draft sitewide Remedial Investigation (RI) report.

Water Board staff continues to work with USEPA and AR on resolving additional issues identified in the Water Board's August 7, 2018 letter and other issues that staff hopes are addressed prior to AR's release of a draft RI, including those related to the selection of a reference stream for stream sediment and floodplain soils. USEPA is currently reassessing the schedule for completing the sitewide RI report and Feasibility Study (FS), taking into consideration the current effort to develop an Early Final Remedial Action for treating the primary sources of surfacing Acid Mine Drainage (AMD) at the mine.

Groundwater Report: On May 14, 2020, AR submitted to the Water Board an evaluation of groundwater conditions for Leviathan Mine. Water Board staff is in the process of reviewing the evaluation. The evaluation puts forth a conceptual groundwater model based upon various data from the site. State Water Board Division of Administrative Services (DAS) has been working with Water Board staff to develop a contract with the Desert Research Institute to assist the Water Board staff in reviewing AR's groundwater evaluation. Water Board staff expects the contract with DRI to be finalized through DAS early in Fiscal Year 2020/2021. Thorough documentation of groundwater conditions at the site and the development of a representative conceptual model will be critical components to the sitewide RI/FS and the selection of appropriate remedial actions for the mine site.

Early Final Remedial Action (EFRA)

Discussions between USEPA, AR, and Water Board regarding the possibility of implementing an EFRA at Leviathan Mine have occurred intermittently over the past several months. The proposed EFRA would encompass year-round capture and treatment of the five main sources of AMD for purposes of reducing metals loading to Leviathan Creek. To inform the selection of a treatment process and for consideration of performance standards and effluent discharge limits, AR has agreed to conduct a treatability pilot test at the mine during the 2020 field season. The pilot project calls for the treatment of AMD directly from the five primary sources of mine site AMD by means of High-Density Sludge (HDS) treatment processes. The pilot test will be conducted using various configurations of the HDS process with the primary objective of determining which configuration yields the best results for metals removal while producing a high-density sludge (greater than 15 percent solids by weight). This will be the first time AR has performed a pilot test to evaluate combined treatment of AMD from the five primary sources of AMD without use of the evaporation ponds. The treatability pilot test is expected to wrap up in September 2020, with a final report coming out in January 2021. Under the Settlement Agreement between the Water Board and AR, the costs of the treatability pilot testing will be shared with 40 percent of the costs being paid by the Water Board and 60 percent of the costs being paid by AR. Water Board Leviathan field staff will be coordinating closely with AR during the pilot test to track performance and observe operations.

With regard to the EFRA, according to the Settlement Agreement, the Water Board would be responsible for the design and construction of the EFRA and the costs for that work will be shared with 25 percent of the costs being paid by the Water Board, and 75 percent of the costs being paid by AR. Water Board staff will continue to work with USEPA and AR in this process to ensure compliance with CERCLA, including Applicable, Appropriate, and Relevant Requirements (ARARs) of the State of California.

Settlement Agreement Activities

Water Board staff has continued staff's efforts to review quarterly cost reports submitted by AR for Remedial Investigation and Feasibility Study (RI/FS) activities AR has conducted. During the past six months, Water Board staff and AR have resolved issues with AR's cost reports for the 2nd and 3rd quarters of 2019. The 4th quarter cost report for 2019 is still in review. Water Board 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 between the Water Board and AR. The Settlement Agreement provides that for every dollar AR spends for RI/FS work over $11 million, AR is to receive a 40-cent credit from the Water Board towards the amount AR will have to pay for construction of the final Remedial Action for Leviathan Mine. Through the 3rd quarter 2019, the agreed upon total of RI/FS expenses paid by AR is just over $50 million, and the credit due from the Water Board is just under $16 million.

Water Board Work Activities for 2020 Field Season

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

- 2020 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.

Working under a contract agreement administered on the Water Board's behalf by the California Department of General Services (DGS), Spectrum Services Group mobilized to the mine site in early June 2020 to conduct maintenance activities on components to the Water Board's Pond Water Treatment system, including repair and replacement of the Pit Clarifier outlet structure and flow measurement weir box. Spectrum plans to start removing sludge from the Pit Clarifier on June 22, 2020 and to start treatment operations on or about July 5, 2020. Pond Water Treatment activities are expected to run into September 2020.

Water Board staff is also coordinating with DGS on a contract for the design of various site improvements near Pond 3 to better accommodate spring treatment activities when necessary. These improvements are likely to include regrading/resurfacing of the service road to the area where spring treatment activities are conducted and construction of a concrete pad to provide a stable service for placing spring treatment equipment, when needed. Water Board staff expects completion of project design by the fall of 2020, and construction completion during the 2021 field season.

South Lahontan Region

9. Update on Edwards AFB Operable Unit 4/9 Arroyos Dispute, June 2020 – *Alonzo Poach*

An Edwards Air Force Base (Edwards AFB) Arroyos Record of Decision (ROD) dispute was initiated in November 2014 by the Department of Toxic Substances Control (DTSC) and United States Environmental Protection Agency (USEPA), Region 9. The dispute is currently transitioning from the dispute resolution committee (DRC) to the senior executive committee (SEC), following the process outlined in the Edwards AFB Federal Facilities Agreement (FFA). The dispute focuses on 11 disputed items in the Arroyos ROD, primarily focusing on various risk management and toxicity criteria issues. Eight of the eleven issues have been conceptually resolved through meetings and correspondence between the agencies. However, three remaining issues regarding appropriate toxicity criteria and proper application of the risk management range (volatile organic compounds [VOCs] detected in vapor at the 10^{-4} to 10^{-6} risk range) remain unresolved.

The Air Force asserts that Federal toxicity criteria (typically established by USEPA) takes a higher hierarchy when both Federal and State criteria exist regardless of which value is more stringent (i.e., is more protective). Also, the Air Force asserts that the risk triggers within the risk range are acceptable without mitigation or institutional controls. USEPA, Water Board, and DTSC are parties to this dispute. Over a series of DRC meetings in 2017, members of the DRC from all agencies agreed to work through the remaining items using the *informal dispute process* outlined in the FFA at the staff level (i.e., via the Remedial Project Manager representatives from each agency). In a letter dated October 2, 2019, the Air Force stated that working the issues through the technical working groups is no longer the most efficient way of settling the disputed items. The October 2019 letter also called for a DRC meeting to discuss the next steps with the DRC members. In November 2019, staff from all agencies collaboratively developed a dispute status summary of the proposed path forward as a result of the technical working group meetings. Each agency provided a summary to their respective DRC member. As a follow-up to the October 2019 correspondence and the November 2019 teleconference, the Air Force requested formal comments on their Written Decision via e-mail in February 2020.

On April 17, 2020, Mr. Enrique Manzanilla, Director of Superfund and Emergency Management Division, USEPA Region 9, sent correspondence to the Air Force outlining a path forward to elevate 10 of 11 items to the SEC because the actual language and necessary changes to the remedy require additional coordination to ensure that all parties are in agreement. On April 30, 2020, Water Board staff responded in support of the USEPA Region 9 approach and outlined our concern with aligning a new smaller technical impracticability waiver zone/containment zone boundary in accordance with applicable State Water Board resolutions. DTSC provided their response to the Air Force on May 14, 2020, agreeing to the approach and acknowledging all the work to date to get to a settlement.

The three items with no conceptual agreement include (1) application of 1 x 10^{-4} cumulative risk as the remedy decision point; (2) application of 1x10^{-5} risk cleanup levels for individual VOCs through an industrial VI pathway; and (3) application of the California Toxicity Criteria Rule. Those three items were elevated to the SEC by the Air Force on April 30, 2020. On June 5, 2020, USEPA Region 9 elevated seven additional issues to the SEC proposed settlement of a soil dispute item at the DRC level and a schedule for an SEC meeting. The seven additional items are:

1. DTSC Dispute Item 3: “Insufficient characterization for selecting the remedy for six buildings and the selected remedy for Building 8753;”
2. EPA Dispute Item 1: “Adequacy of Vapor Pathway Characterization;”
3. EPA Dispute Item 2: “Short-Term Non-Cancer Risk from TCE Inhalation;”
4. EPA Dispute Item 3: “Measuring Compliance with Numerical Action Levels;”
5. EPA Dispute Item 4: “The ROD does not clearly define and discuss the term ‘occupancy patterns’ within the context of VIP land use controls (LUCs);”
6. EPA Dispute Item 5: “The frequencies of verification sampling and other required sampling for VIP land use controls (e.g., presumably for the evaluation of new buildings) are not described and justified;” and
7. EPA Dispute Item 7: “As written, the draft ROD does not adequately explain the rationale for a technical impracticability (TI) decision and a waiver of cleanup standards.”

USEPA Region 9 proposed the SEC meeting take place approximately 45-days after the Air Force issues a draft report of vapor intrusion sampling conducted for the Arroyos in February 2020. This draft report is currently expected to be submitted to the regulatory agencies in July 2020.

10. Professional Geologist Panel Discussion - California State University, San Bernardino – *Jeff Fitzsimmons*

Jeff Fitzsimmons, Engineering Geologist from our Victorville office, participated as a professional panel member for an interactive web-based discussion as part of an Engineering Geology Class session with California State University, San Bernardino on May 29, 2020. Throughout the Spring 2020 quarter, professionals from the field of geologic sciences have been asked to participate in professional panel discussions with university students. As part of the discussion, students shared information about themselves and the career paths they were interested in; similarly, panel members shared information about their education, career paths, and various aspects of current job assignments. Panelists also discussed potential career opportunities with their respective agencies and elsewhere in industry and answered questions posed by the students.

COVID-19 has limited the amount of interaction students would typically have with industry professionals at societal meetings, conferences, or job fairs. The professional panel discussion hosted by the university provides students another opportunity to interact with professionals practicing in the field of geology. In addition, Water Board staff participation in these types of web-based panel discussions serves to increase public awareness of water quality, encourage and recruit new talent to the Water Boards, and help build and maintain relationships with the communities that we serve.

11. New Fuel Recovery Technique Tested at Edwards Air Force Base, Site 31, Former Bulk Fuel Storage Facility – *Alonzo Poach*

The former main Edwards Air Force Base (AFB) bulk fuels storage facility (Site 31) was a bulk jet fuel storage facility that consisted of five large aboveground storage tanks (ASTs). The ASTs stored jet fuel delivered to Edwards Air Force Base via a commercial pipeline service company (CAL/Nev pipeline) and range in size from 336,000 gallons to 840,000 gallons. Currently, one AST onsite stores jet propellent-8 (JP-8) for specific missions (Department of Defense now primarily uses Jet-A fuel). In the early 1990s, several fuel pipeline leaks at the facility released jet fuel to the subsurface. The leaks were discovered and repaired. When the leaks were discovered, the Air Force began an investigation of the site. A monitoring well network was installed and light non-aqueous phase liquid (LNAPL) was discovered floating on the groundwater. LNAPL recovery efforts began shortly after the discovery. The early LNAPL recovery efforts were effective in recovering thousands of gallons of floating jet fuel from the subsurface; however, as with many LNAPL recovery techniques, it was expensive and difficult to maintain.

Since December 2013, the Air Force has recovered approximately 3,500 gallons of LNAPL from the subsurface using manual bailing/pumping and dedicated XiTech® product recovery pumps. Even with these product recovery efforts, several groundwater monitoring wells still have measurable LNAPL (maximum of 4.63 feet of apparent thickness in March 2020). In June 2020, the Air Force began pilot-testing two NET™ Systems at Site 31 in an effort to enhance LNAPL recovery at the site. The process, known as Non-aqueous Extraction Technique (NET™), utilizes an oleophilic/ hydrophobic fabric capable of adsorbing the product with a 99% recovery-efficiency. The fabric is conveyed in a continuous loop into the well to intercept the oil-water interface. As the fabric travels through the interface, product is adsorbed. The adsorbed product is removed in a specially designed de-sorption unit and the recovered product is gravity drained into a storage drum or tank.[1] The fabric resembles bristles on a broom and the systems are mounted on a small utility trailer so they can be moved around the site where they are most effective (see photos below). The systems require very little energy to run and are powered by a solar panel and batteries. Recovered LNAPL is transferred to the base hazardous waste facility for proper disposal or recycling. The Air Force is testing the NET™ systems at four wells and will be moved around the site, as necessary. The pilot testing of the system is scheduled to continue for 12 months.

[1] http://www.eicusa.com/NAPL.PDF

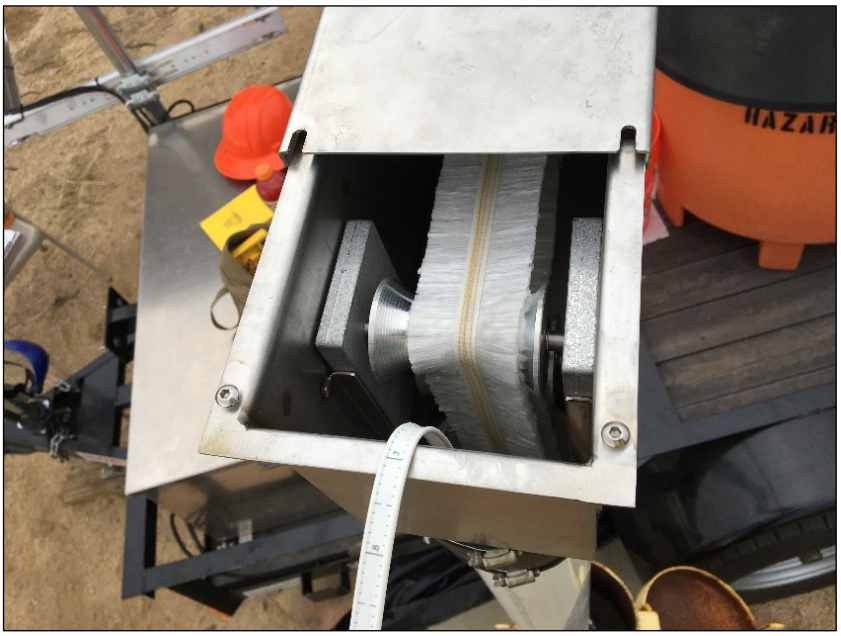


Photo 11.1 showing the NET™ fabric. The net fabric is similar to a brush. Oil and petroleum products sorb to the bristles. The process is effective for LNAPL and dense non-aqueous phase liquid (DNAPL).

Photo 11.2 showing field technicians gauging LNAPL and water level while the NET system removes product from the well. Note the system is mounted on a small utility trailer and can me moved around the site.

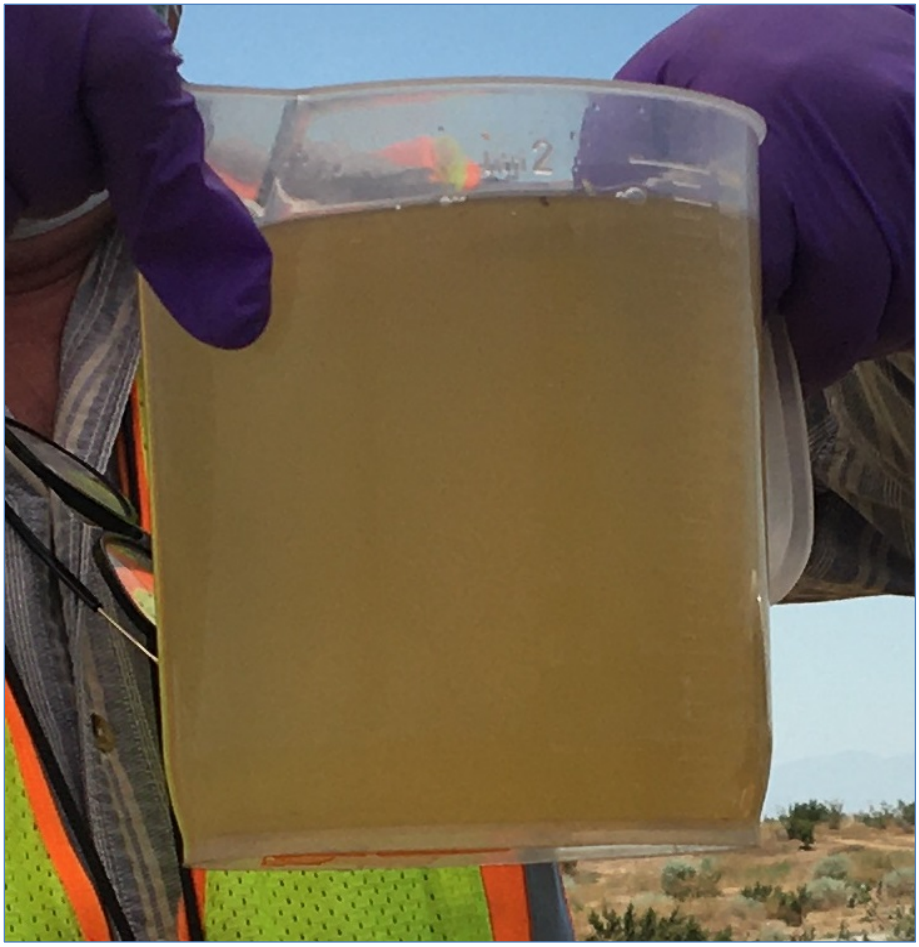


Photo 11.3 showing recovered LNAPL from a monitoring well at Site 31. Photo also illustrates the efficiency of the NET system. Traditional product recovery methods yield both groundwater and LNAPL. The measuring cup pictured above shows no detectable water during the recovery.

12. **Mojave Water Agency Technical Advisory Committee Meeting** – *Anna Garcia*

Water Board staff attended a virtual meeting of the Mojave Water Agency Technical Advisory Committee (MWA TAC) on June 4, 2020. The MWA TAC is an independent, voluntary group of water purveyors, pumpers, and other interested parties located within MWA's boundaries. The MWA TAC meets in a public forum to discuss common concerns and acts to assist the MWA in pursuit of its legal objectives.

During this meeting, Christy Huiner, of MWA, presented an update on projects identified during the 2014 Integrated Regional Water Management Planning (IRWMP) process for the Mojave Region and during subsequent IRWMP work. Ms. Huiner reported that as of 1st Quarter 2020, of the 93 projects currently listed, 17 projects are complete,

39 projects are in progress, five projects are identified as implementable, 14 projects are conceptual, and 18 are inactive. MWA TAC Chairperson, Marina West, noted that projects can be added to the list by contacting Lance Eckhart at MWA. Additional information regarding the IRWMP program and projects is available online at: https://www.mywaterplan.com/.

Mr. Eckhart provided information regarding a Request for Proposals (RFP) issued by MWA to prepare a Regional Wholesale Urban Water Management Plan (UWMP). The

RFP was issued on May 14, 2020, and proposals are due to MWA on June 22, 2020. The completed UWMP is due to the California Department of Water Resources (DWR) on July 1, 2021.

Additionally, Chuck Steinbergs of the California Rural Water Association (CRWA) provided a presentation regarding the Household Well Drought Assistance Program implemented by CRWA in association with the MWA Small Water Systems and Disadvantaged Communities Program. Mr. Steinbergs reported on this project to assist residents in disadvantaged communities (DACs) with the replacement of domestic wells that have gone dry or are experiencing significant water level declines due to drought conditions. The project was initiated in 2016 with the assistance of a $451,356 grant provided by the State Water Resources Control Board (State Water Board). Field work was completed in 2018-2019 and final reports were submitted in 2019. The project provided assistance for a total of 12 wells, with seven wells in Newberry Springs, three wells in the foothills of Hesperia, one well in Hinkley, and one well in Riverside County. Eight of these wells also had water quality issues, primarily arsenic and total dissolved solids that were addressed by the addition of under-sink reverse osmosis units for drinking water. CRWA in association with MWA has applied to the State Water Board for another grant to implement a second phase of this project with 20 potential candidates currently in line for evaluation.

Mr. Eckhart also reported on the status of Proposition 1 grant funding for the Mojave Region and noted that the group was awarded $4,000,000 in the Lahontan Funding Region but was unsuccessful in the Colorado River Funding Region.

Other business was also discussed. The next TAC meeting is scheduled for August 6, 2020.

13. Standing Item – Quarterly Violation Report – 1st Quarter 2020 – *Rob Tucker*

The Quarterly Violation Report for January 1, 2020 to March 31, 2020 includes (1) a summary of violations that occurred during the reporting period, and (2) an update on pending enforcement actions.

Synopsis of 1st Quarter 2020 Violations

Forty (40) violations were recorded for the 1st quarter 2020 reporting period (Attachment A), much less than the 212 violations recorded for the same quarter a year ago. There were several clear reasons for the difference in the number of violations between the two quarters. First, Crestline CSD had 75 flow-related violations due to extreme wet-weather conditions over an approximately two-month period during the 1st quarter 2019. The second reason was the 74 monitoring program-related violations (e.g., deficient monitoring, deficient reporting, and late reporting) for the 1st quarter 2019, compared to 10 for the 1st quarter 2020. Additionally, there were 18 groundwater quality violations and 18 effluent quality violations in 2019, compared to one (1) groundwater quality violation and eight (8) effluent quality violations in 2020.

The violations during the 1st quarter 2020 were also down from the 56 violations recorded during the previous quarter. The 1st quarter violations were distributed over several counties with wastewater treatment facilities being the dominant facility type experiencing violations. There were 12 wastewater treatment facilities with a total of 18 violations involving effluent quality (7 violations), monitoring program requirements (7 violations), and permit conditions (4 violations).

Attachments: Attachment A - 1st Quarter 2020 Violations Table
Attachment B - Pending Enforcement Cases

Attachment A
1st Quarter 2020 Violations Table

Violation Category	Priority	County	Responsible Party	Facility	Violation Description	Corrective Action	Enforcement Action
Highlighted Violations - Wastewater Treatment Facilities	B	Multiple	Multiple (11) representing small private to large municipal wastewater treatment facility owners/operators.	Multiple (11) facilities located throughout the region.	Effluent Quality (7 violations) Monitoring Program (6 violations) Order Conditions (4 violations)	Three (3) Dischargers identified corrective actions. One (1) Discharger (China Lake Naval Weapons Station) will investigate further once COVID shelter in place restrictions are lifted. Seven (7) Dischargers did not identify any corrective actions.	Five (5) of the 17 violations were addressed with informal enforcement (Oral Communications and Staff Enforcement Letters). Dischargers addressed another seven (7) of the 17 violations violations without any enforcement action.
***Monitoring & Reporting**	B	Inyo Riverside - (Region 7)	Shade Grown Farms LLC NPS Death Valley Glorious Gardens	Shade Grown Farms LLC (Cannabis) Furnace Creek Class III Landfill Glorious Gardens (Cannabis)	Late Reporting Late Reporting Deficient Monitoring	No corrective actions proposed by Dischargers.	Staff Enforcement Letter None Staff Enforcement Letter
***Water Quality Effluent Violations**	B	Mono San Bernardino	California Dept. of Fish and Wildlife Searles Valley Minerals	Hot Creek Fish Hatchery Trona Plant	Nitrate (4 violations) and Settleable Solids (1 violation) Total Kerosene	None Under investigation	Permit Renewal Staff Enforcement Letter
Water Quality Receiving Water (Groundwater) Violations	A	San Bernardino	Van Dam, Eldert	B & E Dairy	Nitrate and Total Dissolved Solids	No corrective actions proposed by Dischargers.	None
Stormwater Violations	B	Nevada San Bernardino	Multiple (6)	Construction Projects (6 project sites)	Deficient BMP implementation and mainteance (5 violations) Insufficient/Incomplete SWPPP (1 violation)	No corrective actions proposed by Dischargers.	Two (2) of the six (6) violations addressed with informal enforcement (Oral Communication and Staff Enforcement Letter).
***Order Conditions**	B	Inyo Riverside - (Region 7)	Grow 4 Gold LLC La Fruity Café LLC Nug Labs P&S Ventures	Cannabis Cultivation (4 cultivation sites)	Did not submit Site and Management Plan w/i two weeks of NOA being issued. Unauthorized discharge of waste and cultivation wastewater. Improper storage of spent growth media and unauthorize discharge of wastewater to land. (Nug Labs and P&S Ventures).	None None Spent growth media hauled from site and waste/wastewater discharge practices appropriately addressed (Nug Labs and P&S Ventures).	Staff Enforcement Letter Staff Enforcement Letter Oral Communications Oral Communications

*** Excludes those assoc. with wastewater treatment facilities.**

Attachment B
Pending Enforcement Cases
June 19, 2020

Facility	County	Enforcement Action	Current Status	Next Step
Executive Officer				
Desert View Dairy	San Bernardino	**Amended Cleanup and Abatement Order (CAO)**	Issued Water Code Section 13267 Order requiring specified groundwater sampling.	Water Code Section 13267 Order issued June 2, 2020. Section 13267 Order. Proposed CAO not approved.
Tahoe Donner Association Equestrian Center	Placer	**Recission Order for CAO**	Public comments and compliance with all CAO requirements have been reevaluated.	Advisory Team preparing final recommendation for the CAO. **[June/July 2020]**
Ramiro Villa Avila/ APN 3060-020-043 Pearblossom	Los Angeles	**CAO**	Released Proposed CAO for public comment period in response to waste discharges associated with unpermitted cannabis cultivation site.	Advisory Team to review Proposed CAO and public comments, and make final recommedation. **[3rd Quarter 2020]**
William Goldberg APN 3334-004-011 Hi Vista	Los Angeles	**CAO**	Released Proposed CAO for public comment period in response to waste discharges associated with unpermitted cannabis cultivation site.	Advisory Team to review Proposed CAO and public comments, and make final recommedation. **[3rd Quarter 2020]**

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Pending Enforcement Cases
June 19, 2020

Facility	County	Enforcement Action	Current Status	Next Step
Prosecution Team				
Ramiro Villa Avila APN 3060-020-043 Pearblossom	Los Angeles	**ACL Complaint**	Preparing to issue ACL Complaint in response to waste discharges associated with unpermitted cannabis cultivation site.	Issue ACL Complaint. **[3rd Quarter 2020]**
VVWRA	San Bernardino	**ACL - Settlement** (Mandatory Minimum Penalties)	Staff issued Notice of Violation/Record of Violations to VVWRA. Staff currently engaged in settlement negotiations.	Complete settlement negotiations and release Proposed Settlement for public comment. **[3rd Quarter 2020]**
Susanville CSD	Lassen	**ACL - Settlement** (Mandatory Minimum Penalties)	Staff issued Notice of Violation/Record of Violations to Susanville CSD. Staff currently engaged in settlement negotiations.	Complete settlement negotiations and release Proposed Settlement for public comment. **[3rd Quarter 2020]**

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Prosecution Team				
Tahoe Keys Marina	El Dorado	**Expedited Payment Letter -** Mandatory Minimum Penalty re-issued on October 27,2016.	Preparing Notice of Violation/Record of Violation with updated violations.	Issue Notice of Violation/Record of Violation. **[3rd Quarter 2020]**
Bijou Marketplace	El Dorado	**ACL-Settlement**	Preparing to re-establish settlement negotiations.	Complete settlement negotiations and release Proposed Settlement for public comment. **[3rd Quarter/4th Quarter 2020]**
West Walker River near Coleville	Mono	**ACL Complaint**	Preparing to issue ACL Complaint in response to unauthorized discharge of fill to West Walker River.	Issue ACL Complaint. **[3rd Quarter/4th Quarter 2020]**

EXECUTIVE OFFICER ACTION ITEMS

JULY 2020 EO REPORT - MAY 16, 2020 to JUNE 15, 2020

Lahontan Regional Water Quality Control Board

	DOCUMENT	DATE SIGNED
NO FURTHER ACTION REQUIRED *		
	No Further Action Required For Tahoe Keys Marina, 2435 Venice Drive East, South Lake Tahoe, El Dorado County, Ust Case No. 6t0267a,	05/18/20
	No Further Action Required for Beach Bear Cafe, 3300 Lake Tahoe Blvd., South Lake Tahoe, El Dorado County, UST Case No. 6T0418A	05/18/20
	No Further Action Required for Searles Valley Minerals Site 1 Serpentine Channel, Trona, San Bernardino County, Site Cleanup Program Case T10000002367	05/22/20
	No Further Action Required for Searles Valley Minerals Site 23 Bernhardi Road (North of Mexican Central), Trona, San Bernardino County, Site Cleanup Program Case T10000002389	05/22/20
	No Further Action Required for Searles Valley Minerals Site 24 Mexican Central East, Trona, San Bernardino County, Site Cleanup Program Case T10000002390	05/20/20
401 WATER QUALITY CERTIFICATION		
	Board Order R6T-2020-0033, Granting Clean Water Act Section 401 Water Quality Certification, Goldhaber Pier Repair Project, Placer County	6/1/2020
WASTE DISCHARGE REQUIREMENTS		
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements, Rhea's Garden, CA, Inc., San Bernardino County — APN 3129-251-38-0000	5/26/2020
	Pending Action for Notice of Applicability and Exemption to Waste Discharge Prohibition for the Hope Valley Restoration and Aquatic Habitat Enhancement Project, Alpine County	6/012020
EXEMPTIONS		
	Squaw Valley Resort Notice of Expemption	5/20/2020
	Notice of Applicability of General Water Quality Certification Order for Small Habitat Restoration Project and Basin Plan Prohibition Exemption, Hope Valley Restoration and Aquatic Habitat Enhancement Project, Alpine County	6/152020
EXTENSIONS		
	Approval of Extension Request for Well Destruction Work Plan and Well Destruction Report, Swiss Mart Gas Station, 913 Emerald Bay Road, South Lake Tahoe, Case No. 6T0346A	5/29/2020
AB52 FEDERAL NPS PERMIT TRIBAL LETTERS		
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (BIG PINE)	5/18/2020
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (COLORADO RIVER)	5/18/2020

	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (GABRIELENO BAND OF MISSION INDIANS)	5/18/2020
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (GABRIELENO/TONGVA)	5/18/2020
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (PIT RIVER TRIBE)	5/18/2020
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (SAN MANUEL)	5/18/2020
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (UNITED AUBURN)	5/18/2020
	Tribal Cultural Resources under the California Environmental Quality Act AB 52 (Gatto, 2014). Notification of Consultation Opportunity Pursuant to Public Resources Code § 21080.3.1 (WILTON RANCHERIA)	5/18/2020
MISCELLANEOUS DOCUMENTS		
	Indian Wells Groundwater Sustainability Plan (GSP) Schedule	5/20/2020
	Notification of Consultation Opportunity (59 letters)	5/22/2020
	Request to Delay the Review and Comment Period for the Tahoe Keys Lagoons Aquatic Weed Control Methods Draft Environmental Impact Report/Draft Environmental Impact Statement	05/26/20

* 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.

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

UNAUTHORIZED DISCHARGE REPORT
5/16/2020 - 6/15/2020

Attachment B

Discharger/ Facility	Location	Basin	Regulated Facility	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
COUNTY: ALPINE								
None								
COUNTY: EL DORADO								
None								
COUNTY: INYO								
None								
COUNTY: KERN								
None								
COUNTY: LASSEN								
None								
COUNTY: LOS ANGELES								
None								
COUNTY: MODOC								
None								
COUNTY: MONO								
None								
COUNTY: NEVADA								
None								
COUNTY: PLACER								
None								
COUNTY: PLUMAS								
None								
COUNTY: SAN BERNARDINO								
None								
COUNTY: SIERRA								
None								

Attachment C
1st Quarter 2020 Violations Table

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Attachment D
Pending Enforcement Cases
June 19, 2020

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ENCLOSURE 2

EXECUTIVE OFFICER'S REPORT • August 2020
Covers June 16, 2020 – July 15, 2020

Contents

State and Regional

1. Personnel Report – *Eric Shay*

New Hires – None

Vacancies:

- Senior Environmental Scientist (Specialist), Compliance & Planning Division, South Lake Tahoe. The position will provide the lead responsibility for making policy recommendations, providing technical expertise orally and in written documents, evaluating and drafting environmental documents, and performing analysis on technically complex and politically sensitive assignments related to water quality monitoring and Water Board response to climate change in the Lahontan Region.
- Engineering Geologist, Department of Defense / Site Cleanup Program Unit, Victorville. This position analyzes threat of pollutants to groundwater and surface waters, reviews technical reports for cleanup strategies, reviews site investigation

results, reviews proposed cleanup alternatives to ensure compliance with water quality objectives, prepares enforcement orders, investigates spills, and conducts inspections of cleanup sites and facilities.

- Water Resource Control Engineer, Wastewater & Agricultural Operations Unit, Victorville. This position provides regulatory oversight of projects involving discharges to ground or surface waters and projects intended to restore and/or enhance water quality.
- Scientific Aid, Cleanup/Site Investigation & Enforcement Unit, South Lake Tahoe. This position assists staff with administering the site cleanup, underground storage tank, land disposal, and enforcement programs; reviewing reports, and maintaining databases; reviews self-monitoring reports for cases, permits and enforcement actions; reviews project files and water quality data to prepare for field inspections and permit updates; assists with field inspections; and reviews California Environmental Quality Act documents.
- Environmental Scientist, Non-Point Source Unit, South Lake Tahoe. This position provides scientific and regulatory agency review and comment focusing on compliance with California Environmental Quality Act (CEQA) requirements of projects for potential impacts to water resources from non-point sources of pollution, especially those associated with grazing and agricultural activities. Position drafts waste discharge requirements or waivers; conducts project reviews; and performs inspections of project areas to ensure activities do not result in increased sediment, nutrient, and/or pathogen loading to surface waters.
- Scientific Aid, Planning & Assessment Unit, South Lake Tahoe. This position helps the SWAMP program collect and process water quality samples and ensure data quality. The position supports the TMDL and Basin Planning programs through mapping and data analysis, outreach, and reporting.
- Scientific Aid, Wastewater & Agricultural Operations Unit, Victorville. This position supports the unit in evaluating submitted self-monitoring reports for compliance with waste discharge requirements. Other duties include supporting staff in conducting project-specific data analysis.

Departures

- Bruce Warden, Environmental Scientist, Non-Point Source Unit, South Lake Tahoe.
- Sarah Newcomb, Scientific Aid, Planning & Assessment Unit, South Lake Tahoe.
- Caren Patterson, Scientific Aid, Wastewater & Agricultural Operations Unit, Victorville.

North Lahontan Region

2. SCAP Funding Used to Close Lukins Brother Water Company Municipal Supply Well – *Abby Cazier*

Lukins Brothers Water Company Municipal Supply Well No. 4 (LBWC No. 4), located in the South Y area of South Lake Tahoe, was taken off-line in 1994 when tetrachloroethene (PCE) was first detected at concentrations exceeding the maximum contaminant level of 5 micrograms per liter (ug/L). LBWC #4 was properly destroyed over a recent five-day

period (June 22-26, 2020). The well destruction process was paid for using funds from a $4.6 million grant the Lahontan Water Board received from the State Water Board's Cleanup Subaccount Program (SCAP). The primary purpose of the grant is to investigate the lateral and vertical extent of the regional tetrachloroethene (PCE) groundwater plume in the South "Y" area of South Lake Tahoe, but also includes funding to destroy priority wells that are acting as vertical conduits for PCE contamination, contaminant source identification, and for soil gas investigation activities that will be used to conduct a human health risk assessment

The PCE contamination in the South "Y" area has impacted the municipal and domestic supply beneficial use of groundwater in South Lake Tahoe for over 30 years. During the regional plume characterization activities initiated in 2019, a boring was advanced with a sonic drill rig adjacent to LBWC No. 4 to evaluate the vertical profile of groundwater contamination and subsurface lithology. The groundwater investigation revealed that the construction of LBWC No. 4 penetrated a silty clay aquitard observed between approximately 152 and 160 feet below ground surface (bgs). PCE was detected above and below the silty clay aquitard at concentrations of 40 ug/L and 18 ug/L, respectively. The PCE contamination observed below the aquitard indicates that LBWC No. 4 was serving as a vertical conduit for the contamination. Proper well destruction of LBWC No. 4 was identified as a priority task towards eliminating the vertical migration of PCE mass and improving groundwater quality in downgradient receptors.

LBWC No. 4 was constructed in 1966 using a cable tool drill rig and consisted of a 12-inch steel casing to 118 feet bgs and 22-inch steel conductor casing installed to an unknown depth. No sanitary seal was installed, and the well was screened over most of its depth. In 1970, the well was deepened to approximately 174 feet bgs and 10-inch steel louvered sleeve was installed to 118 feet bgs. When the well was deepened, the lower portion of the well (between 118 to approximately 174 feet bgs) was an open borehole that penetrated the silty clay aquitard and the bottom 30 feet of the well was backfilled with gravel to stop sand from entering the well (Photograph 2.1).

Photograph 2.1 – Gravel removed from the bottom of well using Mud Rotary Rig before destruction. Photograph taken on June 24, 2020.

The Water Board's SCAP contractor, AECOM, selected to leave the well in-place during destruction and perforate the casings using down-hole explosives. This destruction method was selected because a mill-knife perforator is not capable of penetrating both the 12-inch and 10-inch casings, and due to budgetary constraints over-drilling, the well casings was infeasible. McMillian's Well Service, LLC (McMillian's), a licensed well blaster in California, was contracted to design a blast perforation plan for LBWC No. 4 based on the well construction details. The well destruction and blasting work plan prepared by AECOM and McMillian's, respectively, was approved by the El Dorado County Environmental Management Department who issued the well destruction permit.

LBWC No. 4 destruction activities began on June 22, 2020. Gregg Drilling LLC (Gregg) utilized a mud rotary drill rig to remove the gravel from the bottom of the well (Photograph 2.2). The borehole was over-drilled to approximately 195 feet bgs, until gravel was no longer observed in the drill cuttings. In total, approximately three cubic yards of fine gravel and sand from the formation were removed from the well (Photograph 2). On June 25, 2020, Gregg installed tremie pipe to 187 feet bgs and McMillian's placed a detonator cord with shaped explosive charges set between 40 to 118 feet bgs. A total of 1.12 pounds of explosives were lowered into the well. The well was filled with approximately 6 cubic yards of neat cement grout (grout), tremie pipe was removed, and McMillian's detonated the explosives to blast perforate the 12-inch and 10-inch well casings. Seismic monitoring was conducted to measure the relative ground movement during blasting. The peak particle velocity measured during detonation was 0.43 inches per second (in/s), which is below the threshold criteria of 2 in/s (i.e. peak particle velocity that may result in property damage). On June 26, 2020, Gregg excavated the area around the well's 22-inch conductor casing to remove the top five feet of the steel conductor and the well casings. The exposed casing was filled with grout to create a mushroom cap and the hole was backfilled with native soil. The work effectively eliminates LBWC No. 4 as a vertical conduit for PCE contamination and is expected to result in improved groundwater water quality in downgradient receptors

3. **Standing Item: Status of Triennial Review Projects –** *Daniel Sussman*

The Water Board adopted the current Triennial Review Priorities on November 15, 2018. State and federal laws require periodic review and revision of Basin Plans (Resolution No. R6T-2018-0050). The federal process is called "Triennial Review." The 2018 Triennial Review priority list includes ten projects identified with available resources and nine projects in need of additional resources.

Basin Planning is primarily the responsibility of the Planning and Assessment Unit. The unit is also responsible for the impaired waters (TMDL, Integrated Report) and surface water monitoring efforts (SWAMP). The unit currently consists of four Environmental Scientists and one Water Resource Control Engineer under the supervision of a Senior Environmental Scientist.

The Table lists the prioritized 2018 Triennial Review projects and notes any progress. The 9 projects in need of additional resources (priority 11 through 19) are not represented in the Table.

Priority	Project	Progress
1	Evaluate Bacteria Water Quality Objectives	COVID-19 delayed the outreach strategy for this project. Working with the Office of Public Participation, and after additional outreach to gauge stakeholder engagement, staff prepared and distributed a recorded presentation in July. The presentation discusses project need, bacterial science, and several project options. In August, staff will hold a live question and answer session as a follow-up to the presentation. Staff will seek Board input in November, likely followed by the beginning of the basin planning process.
2	Climate Change Adaptation and Mitigation Strategy	The Strategy was adopted by the Water Board in November 2019. Staff is developing an Implementation Plan, the presentation of the Plan to the Board is on hold until early 2021. The Implementation Plan is integrated with annual planning and reporting for Water Board programs.
3	Source Water Protection	No progress, awaiting adoption of Climate Change Adaptation and Mitigation Strategy and subsequent creation of Implementation Plan.
4	Riparian Protection Policy	No progress, awaiting adoption of Climate Change Adaptation and Mitigation Strategy and subsequent creation of Implementation Plan.
5	Mojave River Surface Water Beneficial Use Revisions	OAL approved the Administrative Record March 3, 2019. Staff subsequently noticed some errors and we are strategizing how to correct the minor errors.
6	Site-Specific Water Quality Objectives for Mojave Ground Water	The project is currently on hold due to staff resources. Anna Garcia was hired into a vacant geologist specialist position and is assigned the non-Basin Planning aspect of the project. Anna previously worked at the Mojave Water Agency as a senior hydrogeologist.
7	Remove Lake Tahoe Prohibition on New Pier Construction	OAL approved the action October 29, 2019. The NOD was submitted to the Secretary of the Resources Agency on January 8, 2020.
8	Tribal and Subsistence Beneficial Uses	Staff will present a Basin Plan amendment to the Water Board in September to add the BU definitions to the Basin Plan. A public notice will be distributed by July 31. After State Board approval, staff will pursue beneficial use designations.

9	Truckee River Embedded/Deposited Sediment Objective	Staff has completed a draft technical review of the TMDL as part of the scheduled ten-year review of the Truckee sediment TMDL. Next steps include review of TMDL data and assessment of habitat and beneficial uses, with the goal of a recommendation to management in the fall. Next steps are likely to be delayed, as the project staff member will be assigned COVID-19 contact tracing duties.
10	Editorial Revisions, Corrections, and Incorporation of Adopted State Water Board Policies	Some edits and revisions were included in the Mojave Surface Water Beneficial Uses Basin Plan amendment adopted in June 2019. These include updates to the discussion of federally designated Wild and Scenic Rivers in the Lahontan Region. Staff will seek to incorporate minor revisions into future Basin Plan amendments and may consider assigning resources for an amendment specifically to incorporate editorial revisions should a substantial number be identified.

4. Regional Partnerships Continue to Enhance Regional HAB Response and Awareness - *Mary Fiore-Wagner*

Since outdoor and water related recreation is an important element of the Lahontan Region's allure and economy, it is critical to ensure surface waters and their corresponding beneficial uses remain safe and protected. To enhance the efficacy of our regional HAB program, Water Board staff (staff) work to secure additional funding through the State Board's Surface Water Ambient Monitoring Program (SWAMP) to analyze waters with reported new blooms or reoccurring blooms in popular recreational and scenic areas throughout the Lahontan Region. Additionally, staff continue to foster partnerships with local agencies working to develop and refine their own HAB surveillance programs.

Regional HAB Proposal

Early this year, after determining that the Water Board's project proposal aligned closely with the statewide freshwater harmful algal bloom (FHAB) program, the State Water Board awarded the Water Board over $40,000 to support HAB monitoring and research studies for fiscal year 2020-2021.

The funding award will support regional partners as they implement recently developed HAB monitoring plans and those who seek to develop new programs. Additionally, the award will support a regional special study to evaluate the effectiveness of a non-chemical control measure for nuisance blooms of algae and cyanobacteria.

The work being covered under the proposal includes a continuation of HAB research and monitoring efforts that started in 2019, which were made possible, in part with FY19-20 funds allocated from the SWAMP FHAB Program. Regional SWAMP funds, which were dedicated to this project in 2019, will continue to fund nutrient analysis associated with these monitoring efforts.

To optimize limited resources, the Water Board realizes the value in collaborating with partner agencies to build an effective and efficient regionwide HAB response program to ensure protection of human and animal health at recreational waters. A portion of the funding will be dedicated to supplement volunteer HAB monitoring already being implemented by regional partners including Alpine Watershed Group; Eagle Lake Guardians; United States Forest Service; South Tahoe Public Utility District; Tahoe Keys Property Owners Association (TKPOA); and Mono, Inyo, and San Bernardino County Environmental Health Departments.

The Water Board proposal that received funding was consistent with regional and statewide priorities identified in the State Water Board's 2020- 2025 Nonpoint Source Program Implementation Plan (approval anticipated by Fall 2020), which identifies general and specific goals for the HABs and Eutrophication Program Area including:

> "Goal 3: Conduct and support field assessment and ambient monitoring to evaluate harmful algal bloom extent, status and trends at state, regional, watershed and site-specific waterbody scales.
>
> Goal 4: Conduct applied research and develop tools for decision support, including mitigation and management strategies."

Additionally, the proposal supports the State's FHAB Monitoring and Research Strategy in that it involves (1) studying select lakes (Red Lake), which may help fill data and knowledge gaps about the drivers of HABs, and (2) contributing to improved management, response, and mitigation of HABs statewide (TKPOA – Laminar Flow Aeration Project and Investigation of HABs in High Recreational Use Surface Waters).

Informative HAB Signage. This past spring, Water Board staff coordinated with State Board to ensure regional waterbody operators or health officials responsible for communicating health advisories throughout the Lahontan Region were included in an opportunity to receive free HAB signage. The signs are intended to increase the public's general awareness of HABs and to communicate recreational risks posed by HABs in water bodies.

With funding from a one-time grant, the State Water Board's FHAB program fabricated over 525 durable HAB general awareness signs and 1180 HAB advisory signs that were distributed throughout California. Within the Lahontan Region, Placer and Mono County Environmental Health Departments, California Department of Fish and Wildlife (CDFW), San Bernardino County Parks Department, Tahoe Keys Property Owners Association, South Tahoe Public Utility District, and California State Parks were among the recipients of the free signs. Since 2017 when HABs started increasing in frequency and severity throughout the Lahontan Region, Water Board staff have partnered with field staff and public health officials associated with the above-listed entities to coordinate water sample collection and analysis, and to see that waterbodies impacted by HABs were posted with advisories to alert lake users to potential health risks.

Figure 4.1: Photos of signage about Harmful Algal Blooms (HABs). Left Photo: General Awareness Sign about HABs. Top Right Photo: English Language Version of Caution Level Advisory Sign for HABs. Bottom Right: Spanish Language Version of Danger Level Advisory Sign for HABs.

Signs were provided at no charge to entities that serve economically disadvantaged communities, or waterbody managers where members of these communities visit to recreate. The goal is to replace flimsy paper signs and provide entities with durable signage that can be deployed for longer periods of time to withstand multiple postings and weathering. Entities may be asked to provide feedback on the signs (utility, durability, etc.) following the end of the first summer season of use to help the Water Boards assess the effectiveness of this project and the value of distributing more signs in the future.

Spotlight on Regional Partnerships.

San Bernardino County. State and Regional Board staff are pleased that San Bernardino County (County) is playing an active role in monitoring harmful algal blooms at recreational waterbodies throughout its regional parks. State and Regional Board staff recently met with staff from the County Regional Parks Department to refine the County's surveillance of HABs. County staff shared its plans to include visual monitoring of HABs as part of its daily workflow when visiting Lake Gregory and Mojave Narrows Regional Parks. If field crews observe site indicators of algal blooms (discolored water, floating algae, surface scums) the County will follow up with water sample collection and analysis. Staff also worked with the County to identify ways to optimize limited funding for analysis of water samples for cyanobacteria and their associated toxins. To assist the County with its HAB monitoring effort, a portion of funding dedicated to investigate HABs in the Lahontan

Region will fund analysis of samples collected from Lake Gregory, Horseshoe Lake, and Pelican Lake during the high use summer months and before the Labor Day holiday weekend.

California Department of Fish and Wildlife.

Multi-agency collaboration helped create a message that was posted on the CDFW's website in June 2020 urging anglers and other lake users to be vigilant about HABs while recreating in lakes and rivers throughout California. Staff from the State and Regional Water Board, Office of Environmental Health Hazard and Assessment, and CDFW pitched in to draft a narrative discussing the potential risks that HABs pose to the health and safety of people and pets drinking the water and recreating in water bodies that experiencing blooms.

The advisory message included information about how toxins associated with the algal bloom can accumulate in the guts of fish and shellfish to levels that pose threats to people and wildlife. Additional information was provided about proper cleaning and consumption of fish from waterbodies affected by HABs.

Additionally, the Water Board also supported HAB sampling at the beginning of the season to inform the CDFW's fish stocking decisions at Red Lake. Staff continues to work closely with CDFW to inform the agency about the results of monthly HAB sampling at Red Lake and recommendations to post health advisories.

South Tahoe Public Utility District

For another summer season, District and Water Board staff continue to work closely on HAB sampling and analysis of Alpine County's Indian Creek Reservoir, which has experienced HABs at levels that prompted posting of Warning Level Health Advisories.

After HABs impacted Harvey Place (2017) and Indian Creek (2019 - 2020) Reservoirs, both owned and operated by the District, lab staff from the District were quick to incorporate HAB sampling and analysis into their routine water monitoring. Routine surveillance and water quality monitoring is conducted at Indian Creek Reservoir, which supports water contact recreation and fishing. Recent sample results from May and June of 2020 indicate that the presence of the cyanotoxin Microcystin continues to exceed the 0.8 ug/L caution action trigger and as such Caution Level Health Advisories remain in place at the reservoir.

District staff plan to conduct field visits and photo-document water quality conditions throughout the summer and water collection and analysis for HABs is planned for later in the Summer.

South Lahontan Region

5. Lake Arrowhead CSD Outfall Capacity Improvement Project – *Sergio Alonso*

During a meeting with the Lake Arrowhead Community Services District (District) on August 14, 2019, Water Board staff asked the District to prepare a plan to address the flow capacity restrictions on the outfall pipeline that conveys treated wastewater from the District's wastewater treatment plant to disposal percolation ponds adjacent to the Mojave River south of the City of Hesperia. The request was in response to the District's controlled discharges to Grass Valley Creek during storm events that occurred during winter 2018-2019 to relieve the overflowing pipeline. Effluent discharges to Grass Valley Creek are not authorized. Historically, the District has discharged effluent in excess of the outfall pipeline capacity to Grass Valley Creek. These discharges resulted in the Water Board

issuing Cease and Desist Order (CDO) No. R6V-2013-0022 requiring the District to take actions to reduce Infiltration and Inflow (I/I) in the sanitary sewer collection system. The District's assessment of its actions to reduce I/I within the collection system identified an outfall pipeline flow constriction. As of June 2020, the District has a plan in progress to improve the outfall pipeline capacity.

According to the District's waste discharge requirements, the rated maximum capacity of the outfall line is 4.0 million gallons per day (MGD). The District had reported that the current capacity of the outfall was 3.74 MGD. This reduction in outfall capacity has contributed to overflows during storm events. To address the outfall pipeline capacity constriction and help alleviate or prevent overflow to Grass Valley Creek that may occur from the wastewater treatment plant during storm events, the District has proposed an outfall upgrade project that consists of three parts.

Phase 1

The first part consists of upsizing 6-inch diameter pipes and appurtenances at the Hesperia meter building to 12-inches. Computer modeling indicates this modification would result in rating the outfall pipeline capacity at 3.86 MGD. This phase was completed in January 2020.

Phase 2

The District's preliminary investigation determined that possibly 1,200 linear feet of the outfall pipeline beneath the Mojave River Forks Dam upgradient of the percolation ponds and within the Mojave River bed may be 8-inch dimeter pipes, making it incompatible with the rest of the 12-inch diameter outfall pipeline (Figure 5.1). Further investigation by the District determined that the extent of the 8-inch pipeline is substantially less than 1,200 linear feet. Upgrades to increase the pipeline size for this segment could potentially increase the outfall pipeline flow capacity to 4.03 MGD. The District is now planning on upsizing that portion of the pipeline to 12-inch diameter and is expected to begin construction during fiscal year 2021/2022.

Phase 3

The District is planning to increase emergency storage at the Grass Valley Wastewater Treatment Plant (Plant). An option currently being explored is the design and construction of a 1-million-gallon tank at the Plant for emergency effluent storage to prevent future overflow conditions. An obstacle to this phase is the limited space on the Plant site. The District may need to acquire additional land from the United States Forest Service. Provided additional land is obtained, design and construction are expected to occur during fiscal year 2021/2022.

The steps being taken or proposed by the District will increase the flow capacity of the outfall pipeline and provide emergency storage at the Plant site. These actions will allow the outfall pipeline to operate within its design capacity and increase the District's ability to operate within its waste discharge requirements. Increasing emergency storage at the Plant site will help the District reduce or prevent overflows to Grass Valley Creek during storm events and allow more controlled discharges into the outfall pipeline. These actions are not requirements of the CDO but will address the fundamental CDO objective of reducing unauthorized storm event discharges to Grass Valley Creek.

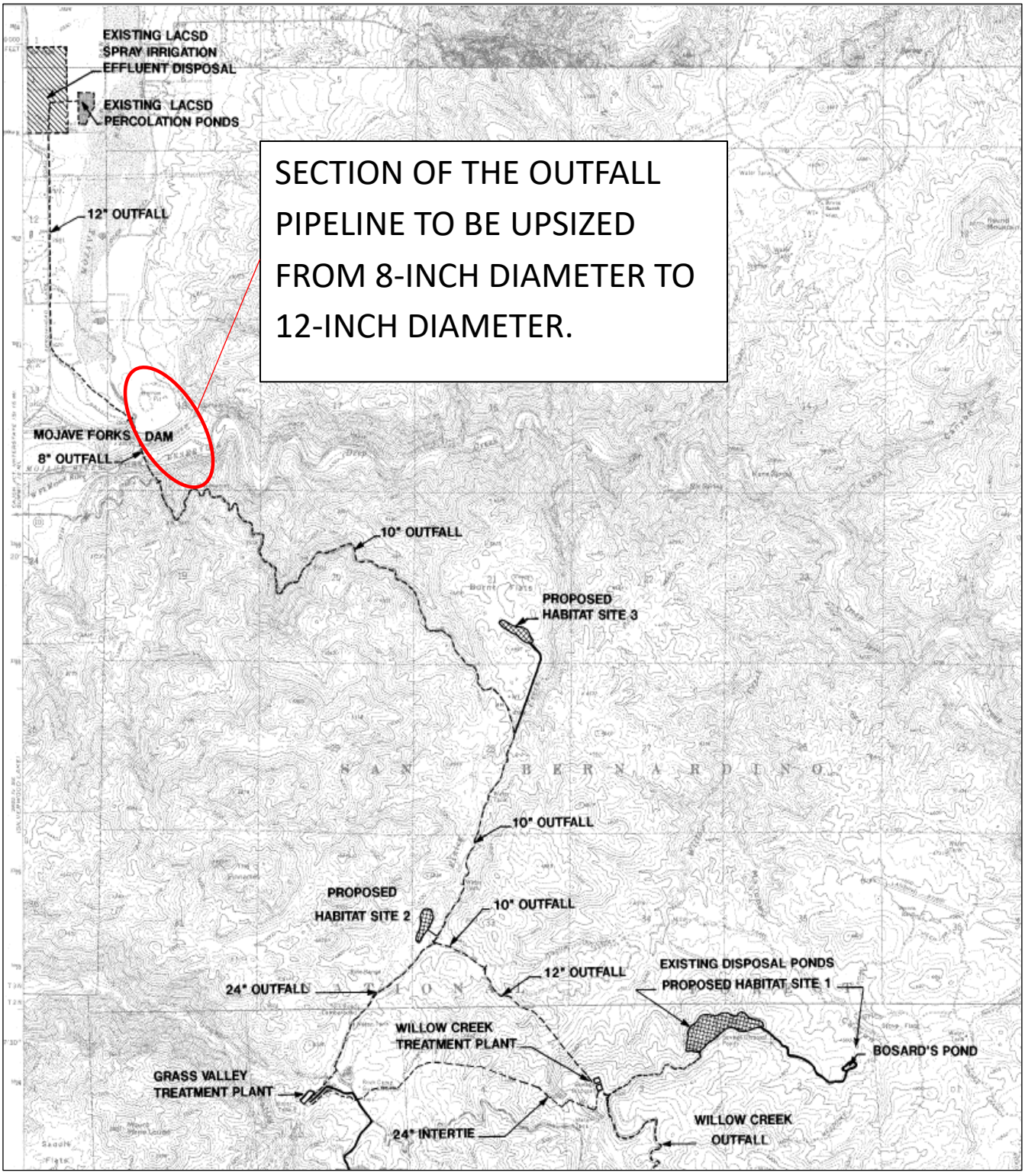

Figure 5.1 – This map shows the District's outfall pipeline from the Grass Valley Wastewater Treatment Plant heading down the north slope of the San Bernardino Mountains to the percolation ponds near Hesperia. It also shows the outfall pipeline constriction beneath the Mojave Forks Dam that will be addressed in 2021/2022. The Grass Valley Creek canyon, northwest of the Grass Valley Wastewater Treatment Plant, is where the District has conducted unauthorized discharges during excessive flow events.

6. **Contention at the Indian Wells Valley Groundwater Authority Meetings, Kern County – *Tom Browne***

The IWV-GA held a virtual meeting on June 18, 2020 and discussed on how to equitably share the cost of the GSP continued to be a point of contention. Water Board staff, Tom Browne, attended the meeting. The IWV-GA announced that it has budgeted $500,000 for the next fiscal year (20/21) anticipating litigation with the pistachio farmers who use about 60 percent of the basin's water versus the IWV-GA, who endeavor to obtain agreement between all parties. The attorney for the pistachio farmers has filed a request with the court for a "tolling agreement," which is an agreement between two parties that preserves the right of one party to litigate beyond a statute of limitations date.

One bone of contention is that the anticipated cost of developing the GSP was underestimated. The gap between what was expected to be spent and what has been spent over the past two years is **$2.19 million**. The question of how to share the GSP cost is deep rooted. IWV-GA must consider several factors: the current cost to pump an acre-foot of water is not the same for all pumpers. A water purveyor has tanks, pipelines, disinfection systems, water testing, regulatory costs, staff salaries, and an office building for its workers, so the purveyor has to charge each metered user accordingly, and those metered users are going to have to pay a share for the GSP (the latest estimate was about $3 per month per household). A farmer has much less infrastructure to build and maintain, less overhead, and hence less cost. But pistachio trees do not make money until they mature, which takes five to seven years, and some farmers are still waiting for their trees to mature. Farmers with immature pistachio trees may be put out of business if they must pay $225 per unit of pumped water.

Another complicating factor in the "who-pays-how much" controversy was introduced by the Department of the Navy (Navy) operating the China Lake Naval Air Weapons Station (NAWS). The Navy contends they cannot be billed for GSP development or implementation because of their federal status. They currently use about 6% of the annual water pumped in the IWV, but that number represents only on-base use. More than half of the China Lake NAWS workforce lives in Ridgecrest, Inyokern, or on rural property.

The Navy submitted a formal statement to the IWV-GA saying that even though they have moved all non-military personnel off base since about 1980 and have been vigorous conservers of water since then, they have the right to expand their water demand at any time should the Secretary of the Navy deem it necessary to increase the size of its workforce. The Navy considers the thousands of civilian employees who are water users off-base as part of their long-term entitlement, whether they are served by a water district or their own private wells. This statement regarding "future, unlimited federal entitlement" offended both Searles Valley Minerals (10% of total IWV annual pumping) and the pistachio farmers.

The next IWV-GA meeting is scheduled for July 16, 2020. Those interested in viewing previous meetings can visit the IWV-GA web site at https://iwvga.org/iwvga-meetings.

7. **Inyo-Mono Integrated Regional Water Management Group Grant Update – *Jeff Fitzsimmons***

Through the Inyo-Mono Integrated Regional Water Management (IRWM) group under the Proposition 1 Round 1 IRWM Implementation grant, the Eastern California Water Association was awarded $366,417 towards three projects within the Inyo-Mono IRWM region, separately discussed below.

Crowley Lake Emergency Backup Generator

Crowley Lake Mutual Water Company provides water to the residential community of Lake Crowley. The distribution system consists of three electrically powered booster pumps that supply water to the residences and to fire hydrants within the community. In the event of a power failure during winter months, the water supply system may be susceptible to freeze damage. During both power failure and preemptive power outages, residents may be left without drinking water and the community left without water for fire suppression. The addition of an emergency backup generator will ensure the water supply system will remain powered during winter months to preventing freeze damage to the system, ensure the residences they will always be supplied with water even during preemptive power outages, and provide reassurance to the community that water will be available anytime for fire suppression in the unfortunate event it is needed.

Big Pine Community Services District (CSD) Sewer Plant Expansion

High precipitation and associated runoff have caused groundwater fluctuations underlying Big Pine Community Service District's (CSD's) Wastewater Treatment Plant (WWTP) disposal percolation ponds. In Spring of 2017, groundwater was reported to be within three feet of the ground surface at the WWTP. This high groundwater condition reduced the percolation ability of the existing WWTP ponds, causing the ponds to fill to capacity with treated water. The proposed Big Pine CSD's Sewer Plant Expansion consists of constructing a new percolation pond immediately north of the existing ponds. The new pond will cover an area of approximately 2.18 acres, have a capacity of 4.28-acre feet, and provide the WWTP with an additional 17 to 80 days of treated water storage, dependent solely upon evaporation, thereby reducing the likelihood of an overflow spill event.

Death Valley Junction Historic District Wastewater Retrofit

The Amargosa Opera House (Opera House) is registered as National Historic Place and is in Death Valley Junction, Eastern Inyo County, near Death Valley National Park. The Opera House was originally constructed by Pacific Coast Borax as part of a mining company town in the 1920s. The Opera House has a sewer collection system, a concrete macerator used to grind solids and debris, and a pump to transfer sewage for disposal into unlined percolation/evaporation ponds. In 2017, the aging sewage disposal system experienced a break in the above ground sewer outfall line that caused sewage to spill onto the ground surface. Water Board staff, working collaboratively with the Discharger and Inyo County, initiated discussions for the installation of a new subsurface conventional onsite wastewater treatment system or septic system with a leach field for effluent disposal. Upon certification that the new system is installed and operating correctly, Water Board staff may recommend that the Water Board consider rescinding the current waste discharge requirements, as they would no longer be required for the septic tank and leach field disposal system. The new disposal system will ensure adequate sewage treatment and rescission of the current requirements would save the Discharger annual fees and monitoring costs.

Summary of the Three Projects

When completed, these three projects will serve to guarantee water distribution to residents, ensure water for fire suppression, prevent pollution of surface water and groundwater, and potentially allow for an annual cost savings to be recognized by the disadvantaged communities in which the projects are located, as appropriate. The Inyo-Mono IRWM continues to serve as an effective program coordinating regional efforts in identifying, planning, and implementing essential water management projects.

8. **Wastewater Treatment Plants Receive Investigation Orders for Per- and Polyfluoroalkyl Substances –** *Jehiel Cass*

On June 9, 2020, the State Water Board Executive Director issued Water Code Section 13267 Investigative Orders to 259 (statewide) publicly owned wastewater treatment works (POTWs) requiring they sample for per- and polyfluoroalkyl substances (PFAS).The Lahontan Water Board Executive Officer sent this order to 19 facilities in the Lahontan Region: 3 facilities in the North Lahontan Basin and 16 facilities in the South Lahontan Basin. The following figures present some summary points taken from an informational presentation by State Water Board staff.

Figure 8.1 – The Order has three sampling and reporting components: treatment systems, groundwater, and a separate questionnaire regarding industry types in the service area.

PFAS POTW Order Sampling Summary

	# of POTWs	TREATMENT SYSTEM SAMPLING		REVERSE OSMOSIS CONCENTRATE (ROC)	BIOSOLIDS	GROUNDWATER MONITORING (POTWS with GW MRP)	
Average Dry Weather Design Flow Rate		**Locations**	**Frequency**	**Frequency**	**Frequency**	**Criteria**	**Frequency**
1 to 5 MGD	140	Influent, Effluent	Quarterly for 1 year	Quarterly for 1 year	Once	Provide a min. of 3 well locations on a map and data for Regional Board approval	Once
> 5 MGD	119				Quarterly for 1 year		

Figure 8.2 – The Order only applies to POTWs with design flows of greater than 1 million gallons per day (MGD). Additional sampling is required for facilities with design flows of greater than 5 MGD. Four different media types must be sampled: influent and effluent, reverse osmosis concentrate (not applicable for Region 6 facilities), biosolids, and groundwater.

PFAS POTW Order Reporting Summary

	TREATMENT SYSTEM SAMPLING (influent, effluent, ROC, biosolids)		GROUNDWATER MONITORING (POTWS with GW MRP)	
Average Dry Weather Design Flow Rate	**Sampling Starts**	**Milestones**	**Sampling Starts**	**Milestones**
1 to 5 MGD	4th Q 2020	Data uploaded into GeoTracker within **30 days** of receiving analytical report	No sooner than 4th Q 2020	Data uploaded into GeoTracker within **30 days** of receiving analytical report
> 5 MGD				
Report	One monitoring report for the treatment system and groundwater monitoring shall be submitted into GeoTracker's ESI portal no later than **60 days** following the receipt of the last analytical laboratory report.			

Figure 8.3 – Sampling must begin in the 4th Quarter 2020 and all data and reports must be submitted to the State Water Board's GeoTracker database.

Facilities with groundwater monitoring and reporting requirements in their existing waste discharge requirement orders must propose a groundwater sampling and analysis plan at least 60 days prior to sampling. The groundwater sampling program must be reviewed and approved by Water Board staff.

9. Edwards AFB Site 25 Technical Work Group - Lessons Learned – *Alonzo Poach*

Edwards Air Force Base (AFB) and the regulatory agencies established a Technical Working Group (TWG) for Installation Restoration Program (IRP) Site 25 in January 2017. Site 25 is located north of the main base cantonment area, adjacent to Rogers Dry Lakebed. Site 25 is a storage area for many types of exotic fuels used to support the Edwards AFB research and testing mission. Historically, fuels leaked from storage containers and polluted underlying groundwater.

The TWG was formed because the regulatory agencies and the Air Force had reached a stalemate regarding understanding site conditions and developing site cleanup actions. The TWG is a platform for scientific/engineering professionals to exchange data and ideas and to develop a collective understanding of site conditions, the hydrogeological conceptual site model (CSM), contaminant fate and transport, potential risk and receptors, and to make recommendations on next steps. As of July 2020, the Site 25 TWG had generally accomplished its mission. The Air Force prepared a memorandum documenting the Site 25 TWG "lessons learned" and intends to apply this process of improved communication and efficiency for the overall Edwards AFB site restoration program.

The TWG included the Restoration Program Managers (RPMs) and associated project managers and technical experts from the US Air Force Civil Engineer Center (AFCEC) and their contractors. The RPMs from Edwards AFB, the US Environmental Protection Agency (USEPA), the Department of Toxic Substances Control (DTSC), the Lahontan Regional Water Quality Control Board (LRWQCB), associated project support contractors, a technical facilitator, and several subject matter experts from the Air Force's consulting firm are the key members of this team. The TWG Team worked together, meeting formally every 6 to 8 weeks to communicate issues, identify critical data gaps, reach consensus on CSM elements, reach resolution of site issues, and develop and execute a strategy to complete the remedial investigation and feasibility study phase and to move forward the remedial action phase.

In April 2020, the TWG acknowledged that many of the critical objectives for Site 25 were forthcoming or had been achieved and that a regular meeting frequency was no longer warranted. The Air Force and regulatory agency stakeholders considered the TWG process valuable in facilitating the identification and prioritization of data gaps, exchange of ideas, acceleration of field efforts, recognizing other stakeholder's points of view, and developing a consensus on path forward to achieve site objectives.

10. Site 29 Explanation of Significant Differences, South Base Operable Unit 2, Edwards AFB – *Alonzo Poach*

Site 29 is a historical waste disposal area (landfill) where the types and locations of buried wastes were poorly documented. The Site 29 landfill accepted waste at Edwards AFB from the early 1930s until the early 1970s. In June 2009, the Operable Unit 2 Record of Decision (ROD) was signed by the Air Force and regulatory agencies. The 2009 ROD selected a "close in place" remedy for Site 29. At the time of the ROD, much of the land surface of the site was buried beneath concrete and construction rubble. The volume of buried waste beneath the rubble was estimated to be 490,000 cubic yards. After removal of the concrete rubble from the land surface, subsequent geophysical investigations and trench studies indicated that the quantity of buried wastes at Site 29 was only 21,711 cubic yards. Based on this significantly reduced volume of waste estimated during the post-2009 ROD design work, the Air Force prepared a ROD amendment to clean-close the site. In July 2012, the OU2 Site 29 ROD amendment was finalized and signed, documenting clean closure as the selected remedy for Site 29 due to the revised waste volume

estimates. Many of the waste cells were burned (a common practice for landfills of the era) and did not show up in the geophysical methods used to delineate the landfill extent prior to the July 2012 ROD amendment. After the 2012 ROD amendment, additional pre-remedial design investigations were implemented; as a result of these investigations, the volume of waste was revised, and the new estimate of waste is approximately 106,000 cubic yards. The map below shows the current estimated aerial extent of waste at Site 29. The Site 29 Explanation of Significant Differences (ESD) proposes reverting back to a "close in place" remedy, as originally proposed in the 2009 ROD.

Staff have evaluated the Site 29 ESD and provided comments on the document to the Air Force. All outstanding comments regarding the document have been addressed and staff recommend that the Lahontan Water Board concur on the document and approve it for Executive Officer signature. Finalization of the ESD and a request for signatures were expected first quarter of calendar year 2020; however, some concerns were raised about the proposed cover by the California Department of Fish and Wildlife regarding the protectiveness of the cover to borrowing animals. After negotiation, the issues regarding protectiveness to borrowing animals will be addressed in the upcoming remedial design document. The Air Force plans to finalize the Site 29 ESD, and a request for signatures are expected by the end of July 2020.

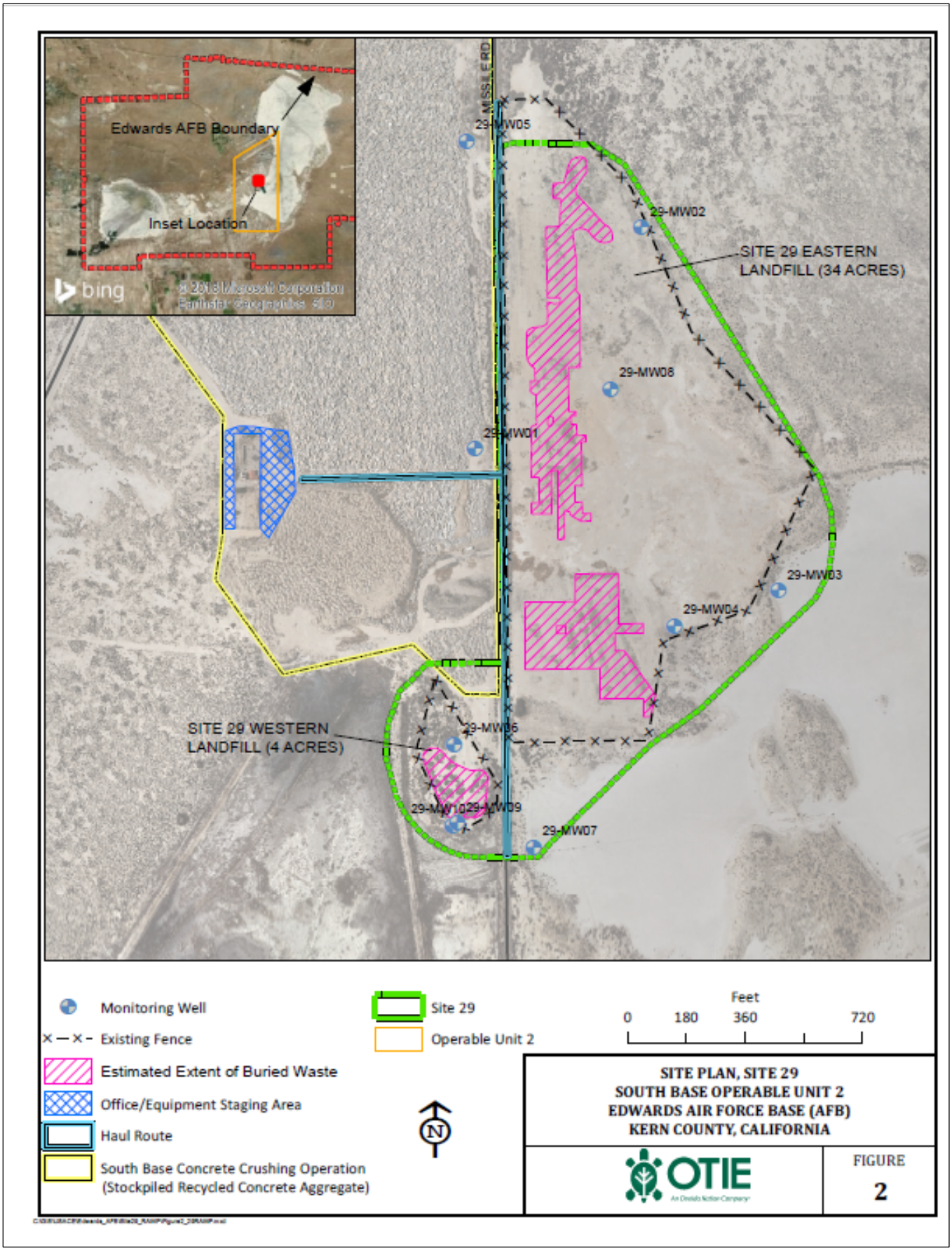

Figure 10.1 – Map of Site 29 showing the aerial extent of the waste cells.

EXECUTIVE OFFICER ACTION ITEMS
AUGUST 2020 EO REPORT - JUNE 16, 2020 to JULY 15, 2020
Lahontan Regional Water Quality Control Board

	DOCUMENT	DATE SIGNED
NO FURTHER ACTION REQUIRED *		
	NONE	
401 WATER QUALITY CERTIFICATION		
	Pending Action for Board Order No. R6T-2020-XXXX, Clean Water Act Section 401 Water Quality Certification and Exemption to Waste Discharge Prohibitions for the Mountain County Bridge Rails Project, Alpine County	6/16/2020
	Board Order No. R6V-2020-0036, Granting Clean Water Act Section 401 Water Quality Certification, North Round Valley Road Bridge Replacement Project, Inyo County	7/2/2020
	Board Order R6T-2020-0037, Clean Water Act Section 401 Water Quality Certification and Basin Plan Prohibition Exemption for Tahoe Donner Association Nature Loop Trail Improvements Project, Nevada County	7/13/2020
WASTE DISCHARGE REQUIREMENTS		
	Notice of Termination –Waste Discharge Requirements, Emerging Aquaponics, Kern County — APN 216-180-03	6/16/2020
	Notice of Applicability, State Water Resources Control Board Order WQ 2014-0153-DWQ, General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems, Holcomb Valley Camp, Fawnskin, San Bernardino County	6/24/2020
	Pending Action for Board Order R6T-2020-XXXX, Clean Water Act Section 401 Water Quality Certification and Exemption to Waste Discharge Prohibitions for the Tahoe Donner Association Nature Loop Trail Improvement Project, Nevada County	6/30/2020
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements for “APN 216-120-04 Yerba, APN 216-120-13 Da Vinci” Kern County	7/3/2020
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements For “216-113-08, -09, -10”, Kern County — APNS 216-113-08, 216-113-09, 216-113-10 (420739)	7/3/2020
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements For “APN 299-261-08, -09, -10 Mendiburu Rd.,” Kern County — APNS 299-261-08, 299-261-09, 299-261-10 (427657)	7/3/2020
	Notice of Applicability for General Waste Discharge Requirements for Small Construction, Including Utility, Public Works, and Minor Streambed/Lakebed Alteration Projects, Board Order R6T-2003-0004, SBD 40 Weigh In Motion System Repair (1G550), San Bernardino County	7/13/2020
EXEMPTIONS		
	Board Order No. R6T-2020-0034, Granting Clean Water Act Section 401 Water Quality Certification and Basin Plan Prohibition Exemption, Mountain County Bridge Rails Project, Alpine County	6/26/2020
	Pending Action for Board Order No. R6T-2020-XXXX, Clean Water Act Section 401 Water Quality Certification and Exemption to Waste Discharge Prohibitions for the Coldstream Sediment Reduction and Wetland Rehabilitation Project, Placer County	7/7/2020

	Board Order No R6T-2020-XXXX, Granting Clean Water Act Section 401 Water Quality Cert and Basin Plan Prohibition Exemption, TKPOA East Channel Bulkhead Repair Project, El Dorado County	7/13/2020
EXTENSIONS		
	NONE	
MISCELLANEOUS DOCUMENTS		
	Temporary COVID-19 Capacity Increase – Processing Permit Capacity of Biosolids and Bulking Agent, State Water Resources Control Board Order WQ 2015-0121-DWQ, Nursery Products Hawes Composting Facility, San Bernardino County	6/18/2020
	Acceptance of Annual Report, Independent Review Panel Manager Budget and Scope of Work, Pacific Gas and Electric (PG&E) Hinkley Compressor Station, Cleanup and Abatement Order R6V-2015-0068	6/19/2020
	Cleanup and Abatement Order for William Goldberg LA County Assessor Parcel 3334-004-011	6/24/2020
	Corrective Action Order for Additional Site Investigation Pursuant to Health and Safety Code Section 25296.10 and Rescission of Recommendation for No Further Action Site: 38206 Sierra Highway North (Global ID: T0603700266), Palmdale, Los Angeles County	7/10/2020
	Confirmation of Receipt of AB 52 Notification Request and Initiation of Consultation for Development of a Nonpoint Source Permit for Federal Lands (Wilton Rancheria)	07/10/20
	Correspondence to acknowledge the McClelland submission of your 2020 annual update of McClelland Ranch Water Quality Management Plan (RWQMP).	07/15/20

* 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.

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

UNAUTHORIZED DISCHARGE REPORT

June 16, 2020 to July 15, 2020

Responsible Party	Location of Occurance	Regulated Facility	Basin N/S?	Date of Occurance	Volume of Occurance	Violation Description	Comments	Status
COUNTY: EL DORADO								
Resident Tahoe Keys Property Owners Association	Tahoe Keys Marina, South Lake Tahoe	Yes	N	7/13/2020	3 gallons	A resident of the Tahoe Keys Property Owners Association was illegally fueling his boat with a small gas can. A spark from the dock (i.e. from static) ignited the fuel, catching the dock and an adhacent boat on fire releasing the 3 gallons of gas to the surface water.	Resident was able to extingguish the fire with two small household fire extinguishers.	Tahoe Keys Property Owners Association deployed booms and absorbent pads to contain the spill. No visible sheen and no impacted soils along the shoreline were observed. It appears that a small amount of fuel either dissipated and became unrecoverable or the absorbent pads were sufficient to cover the spill. No further action is required .

*All discharges to surface waters are to be included in this report.

**Discharges of less than 100 gallons to land are not to be included in this report.

UNAUTHORIZED DISCHARGE REPORT
June 16, 2020 to July 15, 2020

COUNTY: KERN								
Unknown	26835 Butte Avenue, Randsburg	No	S	6/26/2020	3,000 gallons	Caller complaint; adjacent to complaintant's home is an old gold mine with encapsulated arsenic ladened tailings. The property is in escrow and the owner is aware of the contamination.	The property owner allowed the new buyer to sample the property before closing escrow. The buyer brought in heavy equipment including a water storage tank, a wash plant, a rock crusher and a backhoe. The buyer dug a sedimnent pond with the backhow which may result in domestic well water contamination.	There arer several mines that are located within 1,000 feet of the complaintant's property. A voicemail and follow-up email to the complaitant was sent asking for additional information. Kern County Code Enforcement was contacted as well as Kern County Air Pollution upon further information received from caller.
COUNTY: MONO								
Unknown	13425 Twin Lakes Road, Bridegport	No	N	7/8/2020	Unknown	A single vehicle car accident occurred causing a vehicle to enter the Upper Twin Lakes.	Upper Twin Lakes surface water was affected.	California Highway Patrol called in the spill and stated that booms were set out to collect the released liquids from the vehicle. Dive teams were assigned to remove the vehicle.

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

ENCLOSURE 3

EXECUTIVE OFFICER'S REPORT • September 2020
Covers July 16, 2020 – August 15, 2020

Contents

1. **Personnel Report –** *Eric Shay*

New Hires – None

Vacancies:

- Senior Environmental Scientist (Specialist), Compliance & Planning Division, South Lake Tahoe. This position serves as the Regional Monitoring Coordinator; lead for coordinating implementation of the Region's Climate Change Adaptation and Mitigation Strategy; and regional specialist for monitoring related special studies, investigations, and projects. The position will provide the lead responsibility for making policy recommendations, providing technical expertise orally and in written documents, evaluating and drafting environmental documents, and performing analysis on technically complex and politically sensitive assignments related to water quality monitoring and Water Board response to climate change in the Lahontan Region.
- Engineering Geologist, Department of Defense / Site Cleanup Program Unit, Victorville. This position analyzes threat of pollutants to groundwater and surface waters, reviews technical reports for cleanup strategies, reviews site investigation results, reviews proposed cleanup alternatives to ensure compliance with water quality objectives, prepares enforcement orders, investigates spills, and conducts inspections of cleanup sites and facilities.
- Water Resource Control Engineer, Wastewater & Agricultural Operations Unit, Victorville. This position provides regulatory oversight of projects involving discharges to ground or surface waters and projects intended to restore and/or enhance water quality.
- Scientific Aid, Cleanup/Site Investigation & Enforcement Unit, South Lake Tahoe. This position assists staff with administering the site cleanup, underground storage tank, land disposal, and enforcement programs; reviewing reports, and maintaining databases; reviews self-monitoring reports for cases, permits and enforcement actions; reviews project files and water quality data to prepare for field inspections and permit updates; assists with field inspections; and reviews California Environmental Quality Act documents.
- Environmental Scientist, Non-Point Source Unit, South Lake Tahoe. This position provides scientific and regulatory agency review and comment focusing on compliance with California Environmental Quality Act (CEQA) requirements of projects for potential impacts to water resources from non-point sources of pollution, especially those associated with grazing and agricultural activities. Position drafts waste discharge requirements or waivers; conducts project reviews; and performs inspections of project areas to ensure activities do not result in increased sediment, nutrient, and/or pathogen loading to surface waters.
- Scientific Aid, Planning & Assessment Unit, South Lake Tahoe. This position helps the SWAMP program collect and process water quality samples and ensure data quality. The position supports the TMDL and Basin Planning programs through mapping and data analysis, outreach, and reporting.
- Scientific Aid, Wastewater & Agricultural Operations Unit, Victorville. This position supports the unit in evaluating submitted self-monitoring reports for compliance with

waste discharge requirements. Other duties include supporting staff in conducting project-specific data analysis.

Departures – None

North Lahontan Region

2. PFAS Transport, Fate, and Remediation in Groundwater – *Kerri O'Keefe*

On June 24 and 25, 2020, Water Board staff attended a Per- and Polyfluoroalkyl Substances (PFAS) Transport, Fate and Remediation in Soil and Groundwater training course through the Water Board's Training Academy and UC Davis Extension. The course explained what PFAS compounds are, the complexity of the compounds, how PFAS moves through the environment, and techniques that can be used to remediate PFAS-affected soil and groundwater. The PFAS compounds are emerging contaminants of concern that include more than 3,000 manmade chemicals used in thousands of processes and products since the 1940s. PFAS compounds became popular because they repel oil and water, are resistant to high temperatures, and reduce friction. The compounds have entered the environment through firefighting activities, landfilling, biosolids applications, refining, metal plating, municipal sewer systems, and manufacturing of products including textiles/carpets, cosmetics, sunscreen, bug spray, electronics, waterproof clothing, and paper products.

Soil and groundwater contamination from PFAS compounds are present world-wide. One issue with PFAS compounds is that there are thousands of PFAS precursors, hundreds of intermediate transformation products, and the compounds occur in various ionic states. Each fluorinated compound has very different physical and chemical properties; and therefore, behaves differently in soil and groundwater.

Potential health effects of PFAS in humans include possible changes in growth and learning behavior, decreased fertility, liver effects including increased production of cholesterol, and immune effects including decreased vaccination response and asthma, and cancers of the kidney, reproductive organs, and prostate. PFAS occur widely in plants, invertebrates, fish, and humans through bioaccumulation processes. PFAS typically bio-transforms into other fluorinated compounds and bioaccumulate in the environment, but do not biodegrade. Attenuation is primarily based on biotransformation, diffusion, and sorption.

PFAS remediation technologies now in use include sorption with activated carbon, ion exchange, membrane filtration including reverse osmosis and nanofiltration, foam and ozone fractionation. Bioremediation and chemical oxidation/reduction technologies are available but are less utilized. A pilot study began in June 2020 to evaluate remedial technologies using electrochemical oxidation, plasma treatment, and sonochemical synthesis, but these technologies are expensive and/or not readily available.

Currently, the only practical treatment for PFAS-contaminated groundwater is pump and treat with activated carbon and ion exchange. Powdered or granular activated carbon can remove the PFAS molecules from water; however, regeneration, disposal, and replacement of exhausted sorbents must be considered because adsorption is a non-destructive process. No chemical degradation or transformation occurs, and risks associated with disposal of the exhausted sorbents must be considered. Ion exchange has key advantages over granular activated carbon including faster reaction rates, higher operating capacity, and less media replacement. A case study of PFAS contamination at Pease Air Force Base in New Hampshire indicates ion exchange requires less treatment

vessels, less overall contact time, can sustain a higher pump rate, treats a larger volume of water, and exchange resin can be regenerated in the field.

Completion of the PFAS training course is expected to help Water Board staff be more effective with work such as evaluating work plans for PFAS investigation and remediation, interpreting PFAS analytical data, and evaluating the fate and transport of the compounds.

Image 2.1: Fire-fighting activities (i.e. use of fire-fighting foam) are a major source of PFAS contamination in soils and groundwater in the region.

3. **Bacteria Water Quality Objectives Evaluation Project: August 5, 2020 Public Information Meeting –** *Ed Hancock*

At 6 p.m. on Wednesday, August 5, 2020, staff led a public meeting for the Bacteria Water Quality Objectives Evaluation Project (Bacteria Evaluation Project). To observe social distancing protocols resulting from the COVID-19 public health emergency, all meeting attendees and staff participated remotely via the Zoom online platform or watched the meeting through the CalEPA's meeting webcast service. The purpose of the meeting was to discuss elements of the Bacteria Evaluation Project, to provide a public forum for interested parties to ask questions of staff, and to provide staff with their observations regarding bacteria water quality objectives in the Lahontan Region. The meeting was recorded and is available on the Bacteria Evaluation Project webpage.

On July 16, 2020, Lahontan Water Board staff circulated an Information Video Presentation about the Bacteria Evaluation Project. The video presentation provided background regarding bacteria water quality, water quality objectives, Lahontan Region bacteria regulations, and some of the potential policy options for the Bacteria Evaluation Project. The intent of the video presentation was to provide a Bacteria Evaluation Project update to interested parties and promote discussion at the August 5 live online meeting. The forty-minute video and was viewed 114 times prior to the August 5 meeting.

The 90-minute meeting was attended by thirty-nine individuals, nineteen of whom actively participated through the Zoom online platform and twenty who watched the meeting via

webcast. Attendee affiliations ranged from private citizens with interests in bacteria water quality, Water Board staff with interests in the Bacteria Evaluation Project, and staff from external organizations such as the California Cattlemen's Association, Los Angeles Department of Water and Power, county government representatives, legal representatives from ranching interests, and private consultancy firms. Two Native American Tribes, the Bishop Paiute Tribe and the Big Pine Paiute Tribe, were also represented at the meeting.

Attendees to the meeting who submitted questions and comments included private citizens, consultancy firms, a lawyer for Centennial Livestock of Bridgeport Valley in Mono County, and the Inyo/Mono Agricultural Commissioner. Question topics included technical aspects of potential project options, antidegradation concerns, clarifications on bacteria water quality and fecal indicator bacteria, and a likely timeline for the Bacteria Evaluation Project. Comments from the public highlighted the outstanding quality of some of the Region's surface waters, the value of water contact recreation in the Lahontan Region, and a desire to ensure continued bacteria protections for such waters. One commenter also offered a potential project strategy for staff to consider.

Lahontan Water Board staff appreciated those who took the time to join the online meeting and provided feedback about the Bacteria Evaluation Project, and would like to thanks staff members from a range of Water Board offices and programs who provided their assistance and ensured a successful meeting. A total of twelve Water Board staff were actively involved in planning and executing the event, including Region 6 Planning and Assessment Unit, Cannabis Unit, and Enforcement Unit staff, staff from the State Water Board's Office of Information Management and Analysis, Office of Public Participation, and Office of Chief Counsel, and staff from CalRecycle's Audio/Visual Services office who facilitated the meeting webcast.

The November 2020 Lahontan Water Board meeting will include a workshop on the Bacteria Evaluation Project. Staff will provide an update to the Board about the Bacteria Evaluation Project, including more information gathered during the August 2020 public meeting, and will seek Board input and direction on potential project strategies.

4. Surface Water Ambient Monitoring Program (SWAMP) Implementation Plan – *Kelly Huck*

In response to the SWAMP Core Programmatic Review presented at the July 2019 board meeting, SWAMP staff have developed an Implementation Plan that includes four recommendations to improve and modernize the current SWAMP program. The Implementation Plan is a spreadsheet-based document that describes tasks staff have identified to address the recommendations, as well as task timeframe, funding mechanism, and priority. As new opportunities and needs arise, additional tasks can be added to the Implementation Plan, as it is meant to be an "living" document that can accommodate emerging issues. The document will also track completed tasks and therefore be a reference for SWAMP efforts.

Outline of Implementation Plan Recommendations and Tasks

1) Re-evaluate monitoring to improve the program and address new challenges, including the following tasks:
    a) Evaluate the health of the Region's waters and watersheds, including special studies
    b) Adjust Monitoring to adapt to climate change
    c) Analyze and report on trends of water quality changes in the Region including 20 years of SWAMP data

2) Identify opportunities to improve program efficiency
    a) Improved internal coordination and support between the Water Board's SWAMP and Regulatory, Enforcement, and Planning programs
    b) Increase stakeholder partnerships to improve monitoring efforts
3) Maximize data access and uses of analytical tools using new technology and report out on trends and other observations
4) Integrate Water Board Priorities in SWAMP more effectively

Criteria Used for Prioritizing Tasks

Nineteen tasks have been identified to address the above recommendations. In order to determine which tasks to prioritize a scoring tool was developed. Implementation Plan tasks are scored using the following criteria, equally weighted:

- Protect Human Health and Aquatic Life
- Protect/Improve Aquatic Resources & Surface Water Quality
- Supports Disadvantaged Communities
- Responds to Climate Change
- Project Already Implemented/Resources Secure
- Collaboration with External or Internal Resources

The first four task prioritization criterion are Region 6 Water Board priorities (2019 Key Efforts from 2019 Priorities and Accomplishments Report). Inclusion of Water Board priorities as prioritization criteria ensures that Recommendation 4 (Integrate Water Board Priorities into SWAMP more effectively) is addressed by the SWAMP Implementation Plan. As Water Board and SWAMP priorities evolve criteria may change, as well. The sections below describe a selection of Implementation Plan tasks that address the Core Programmatic Review recommendations.

Implementation Plan, Recommendations, and Tasks in more Detail

<u>1a. Evaluate the Health of the Region's waters and watersheds, including special studies</u>

For close to 20 years SWAMP has performed ***water quality monitoring*** to determine if site specific objectives in the Basin Plan are being met. Routine sampling consists of chemistry monitoring at a network of sampling locations. Staff reviews and adjusts monitoring sites in response to new issues and when new information becomes available. For example, after the Integrated Report is finalized sites are either adjusted to investigate new areas of concern or discontinued if it is determined all beneficial uses are being met. The implementation plan highlights the importance of this large baseline dataset and has included this task to support evaluation of the health of the Region's waters and watersheds.

Special studies have always been an important aspect of SWAMP that allows for intense monitoring in specific locations. Currently, SWAMP is involved in two special studies. ***Eagle Lake Bacteria and Nutrients study*** is a joint effort between SWAMP, the Nonpoint Source unit, and the Guardians of Eagle Lake. The purpose of the project is to evaluate the existing water quality at Eagle Lake and to identify if current land uses along the shoreline (e.g. grazing) may be contributing pollutants (bacteria and nutrients) to the surface water. ***Tahoe Keys Laminar Flow Aeration study*** is a collaborative project with SWAMP and the Nonpoint Source unit and the Tahoe Keys Property Owners Association. The study is evaluating the effectiveness of laminar flow aeration technology (non-chemical control measure) to control harmful algal blooms.

Another task staff determined to be essential for the evaluation of watershed health is to continue regular ***bioassessment monitoring***. Biological assessment (bioassessment) is

an evaluation of the condition of a waterbody based on the organisms living within it. Scientists and managers around the world use this approach to directly and quantitatively measure the ecological health of a waterbody and to monitor the cumulative impacts of environmental stressors on surface waters. Staff is currently working with California Department of Fish and Wildlife to complete a region wide ***bioassessment data review*** of all available bioassessment data, present findings, and determine new bioassessment monitoring goals.

To support protection of human health, SWAMP prioritizes collecting fish tissue chemistry data to aid the Office of Environmental Health Hazard Assessment (OEHHA) in the development of ***fish consumption advisories***. Fish tissue collection will sometimes be conducted in collaboration with Integrated Report/TMDL staff, who have identified waters where data shows impairments that threaten human health.

1b. Adjust Monitoring to adapt to climate change

Many of the tasks support more than one recommendation. For example, ***long-term water quality monitoring*** supports assessing waterbody health and adapting to climate change by maintaining the Region's long-term permanent sampling locations. The resulting baseline data sets can be used to identify significant trends that may be influenced by climate change. A new task specific to climate change is to install ***continuous monitoring*** loggers at SWAMP's long-term permanent sites and reference sites.

Another example, of addressing multiple recommendations, is to continue a regular ***bioassessment monitoring*** program. SWAMP staff plans to collect bioassessment data every 3-5 years at the Region's long-term permanent sampling locations and revisit specified reference sites to monitor changes in the biological integrity of the rivers. Funding additional bioassessment sites for the statewide ***Reference Condition Management Program (RCMP)*** would help to track changes over time at reference sites throughout the State. Reference sites define the biological conditions expected in healthy streams when human activity in the environment is absent or minimal. Therefore, long term sampling at sites with the no anthropogenic impacts can help reflect possible indicators of climate change.

1c. Analyze and report on trends of water quality changes in the Region including the prior 20 years of SWAMP data

SWAMP is partnering with the San Francisco Estuary Institute – Aquatic Science Center to ***analyze and report on water quality trends***. The report, expected in late 2021, will include: status and trends of ~20 years of SWAMP data, prioritizing the program's existing nine, long-term, permanent sites; incorporate findings from the ***bioassessment data review***; identify data or information gaps; and recommend potential changes to SWAMP monitoring design.

2. Identify opportunities to improve program efficiency

SWAMP will strive to improve general coordination with internal and external partners. SWAMP will continue to meet with the Regulatory, Enforcement, and Planning programs to familiarize SWAMP with their program challenges and for SWAMP to familiarize program managers with SWAMP tools and resources. SWAMP will also prioritize opportunities with external partners to leverage resources. The Eagle Lake and Laminar Flow Aeration study are two examples of these efforts already implemented.

3. Maximize data access and uses of analytical tools using new technology and report out on trends and other observations

Staff has been working to create and improve upon ***data visualization tools***. The goal is for SWAMP data and statistical analyses to be accessible to staff and the public through automated graphical representation that is automatically updated through a connection to the CEDEN database. Lahontan Water Board SWAMP staff has been working closely with the Office of Information Management and Analysis (OIMA) staff to display and interpret water quality data.

Staff presented this tool to the Water Board at the September 2019 Board meeting during the Executive Officer's reports agenda item. A statewide online data dashboard prototype was released July 2020. SWAMP staff will work closely with State Board to expand the Lahontan data visualization interface to include additional sites and statistical analyses.

4. Integrate Water Board Priorities in SWAMP more effectively

SWAMP staff will use the Implementation Plan to guide and track work completed by the program. Developing the Implementation Plan has also been useful for staff to demonstrate that discrete tasks can respond to the Core Programmatic Review recommendations. It is also a tool for SWAMP to communicate its core functions and efforts to continually improve the program to Water Board colleagues.

5. Draft Environmental Impact Report/Environmental Impact Statement Notice of Availability and Tahoe Regional Planning Agency Hearings for the Tahoe Keys Aquatic Weed Control Methods Test Project – *Russell Norman*

The Tahoe Keys Property Owners Association (TKPOA) submitted an application for an individual National Pollutant Discharge Elimination System (NPDES) permit and exemption to a pesticide discharge prohibition prescribed by the Water Quality Control Plan for the Lahontan Region (Basin Plan) for the Tahoe Keys Aquatic Weed Control Methods Test project (Project) in July 2017. The Project is designed to test the efficacy of several aquatic weed control methods, including one-time use of aquatic herbicides to achieve initial knock-down of aquatic weed infestations followed by use of non-chemical aquatic weed control methods for long-term control. Project testing results are intended to support the development of an integrated methods approach to bring aquatic weed infestations under control within the Tahoe Keys Lagoons.

A California Environmental Quality Act (CEQA) Initial Study was performed in 2017 and it was determined that the Project requires a CEQA Environmental Impact Report (EIR) analysis. The Tahoe Regional Planning Agency (TRPA) has also determined an Environmental Impact Statement (EIS), as required by the National Environmental Policy Act (NEPA), is necessary for TRPA permitting actions. TRPA, as lead NEPA agency, and the Water Board, as lead CEQA agency, have agreed to prepare a joint EIR/EIS document for the Project. Currently, both agencies are planning to bring the EIR/EIS environmental analysis and necessary permitting actions before their respective boards by spring of 2021. This schedule is subject to change.

A Notice of Availability with the Draft EIR/EIS was released on July 6, 2020, starting a 60-day public comment period that is scheduled to end on September 3, 2020. The Notice also included a Notice for Tahoe Regional Planning Agency (TRPA) Hearings with an opportunity for public comment at the on-line hearings. The TRPA hearings were held on July 22, 2020 at the TRPA Governing Board Meeting and on August 12, 2020 at the TRPA Advisory Planning Commission Meeting. A webinar presentation on the Draft EIR/EIS was also made to the Stakeholder Consultation Circle (SCC) empaneled for the Project.

Comments on the Draft EIR/EIS were solicited at the TRPA on-line hearings and SCC webinar. David Blau with the League to Save Lake Tahoe (League) commented that the

League feels strongly that all tools need to be tested; the League is skeptical the non-chemical alternative can achieve the project goals and would risk losing three years in getting control of the infestations; and the League was happy to see full analysis of the No Action Alternative and noted that the analysis makes a compelling case for action and minimal delay. Numerous commenters stressed the importance of reviewing the anti-degradation analysis for the proposed project with the Draft EIR/EIS and asked questions regarding the analysis. Commenters also raised concern regarding harmful algal bloom occurrence in the Tahoe Keys Lagoons and questioned whether TKPOA had exhausted all non-chemical methods of controlling the weeds and demonstrated non-chemical methods are infeasible. TKPOA noted that while the Draft EIR/EIS and anti-degradation analyses assume full label application rates for aquatic herbicide use, TKPOA is proposing reduced application rates based on their field studies in the Tahoe Keys Lagoons. TKPOA also commented that since Lake Tahoe is an Outstanding National Resource Water, use of proven tools for control of aquatic weeds should be supported by regulatory agencies.

All Draft EIR/EIS comments received during the public comment period and responses to those comments will be made available following the Draft EIR/EIS comment period.

6. **Eastern California Regional Cannabis Program Update –** *Kathleen Bindl, Carly Nilson, and TJ Middlemis-Clark*

Since its inception in 2016, the Eastern California Regional Cannabis Unit, representing the Lahontan and Colorado River Basin Regional Water Boards has issued 320 Notices of Applicability: 149 in Region 6 and 171 in Region 7. Staff have conducted 101 inspections, sent 29 staff enforcement letters, issued 14 notices of violation, initiated 3 ACL complaints at regulated sites in the Colorado River Basin Region, initiated 2 CAOs and an ACL complaint for illicit sites in the Lahontan Region, and reviewed cleanup documentation in relation to an NOV for an illicit site.

Due to the COVID-19 lockdown in the spring, staff cancelled 31 planned inspections in March and early April. Staff then focused on large-scale programmatic efforts, including ongoing enforcement actions. During that time, the 3 ACL complaints in the Colorado River Basin Region were developed. All 3 ACL complaints were posted for public comment in June and have since moved to settlement negotiations. The total proposed administrative liability amount for the 3 ACL complaints is $621,908.72.

Staff also developed Standard Operating Procedures and Sampling Instructions for collecting water quality data at regulated indoor cultivation sites. These procedures were developed to support a cannabis wastewater characterization study using total maximum daily load (TMDL) discretionary contract funds. The original intent of the study was to have Water Board staff collect system water samples during routine site inspections at indoor cannabis cultivation facilities and use the samples to determine typical cannabis wastewater constituents. However, staff are redirecting efforts to assist permittees in sample collection because of travel restrictions due to COVID-19 health and safety concerns.

In addition to the near-term changes to cope with COVID-19, there have recently been major programmatic changes. After 26 years with the Water Board, Eric Taxer, the cannabis unit supervisor, has retired. Eric Taxer was hired as the cannabis unit supervisor in October 2017 and developed this proficient program. Mr. Taxer served as a mentor to numerous Water Board employees. His contribution to the Water Board is immeasurable and he will be missed.

In addition to Eric Taxer's retirement, the cannabis unit was reduced from six positions, including a supervisor, to two staff-level positions due to significant budget shortfalls. Of

the two remaining positions, one staff person is currently reassigned to contact tracing until at least March 2021. This has resulted in dissolution of the unit and integration of remaining program staff into an existing, different unit.

As part of the reduction in program resources, staff were directed to pivot efforts from regulated site compliance to addressing unregulated cannabis cultivation sites. This involves identifying unregulated sites, prioritizing the abundance of unregulated sites for inspection, coordinating with law enforcement and other state agencies, collecting site data, and pursuing enforcement actions.

Staff have been working on identifying unregulated sites through investigation and outreach. Staff began assisting the State Board Department of Water Rights in the CannaVision project to identify unregulated sites. This effort will provide valuable mapping imagery to identify potential illegal cannabis cultivation sites for further inquiry and enforcement. Staff have also fielded complaints from the public and continue efforts to work with local law enforcement entities to identify if sites are enrolled in the Cannabis permit.

Staff have been working on prioritizing unregulated cultivation site response by implementing the Illegal Cannabis Cultivation Enforcement Strategy Framework. The first step is coordinating with the California Department of Fish and Wildlife (CDFW). This coordination includes determining prioritization criteria for Water Boards staff attending enforcement inspections with local law enforcement to better manage limited resources. The goal includes development of a mapping application to determine when to include Water Board and/or CDFW on enforcement inspections to ensure natural resources are protected.

South Lahontan Region

7. Bishop Area Wastewater Authority (BAWA) – *Jehiel Cass*

The Bishop Area Wastewater Authority (BAWA) is a new Joint Powers Authority formed on June 30, 2020, by the City of Bishop (City) and Eastern Sierra Community Services District (District). This milestone means that for the first time, the City and District will begin managing its wastewater collection, treatment, and disposal services through a single entity: BAWA. Walt Pachuki, president of the District's board was elected as BAWA's first chair. Deston Dishon, the City's Public Works Director, will begin managing day-to-day operations leading to integrating services for both entities as BAWA's Administrator. After self-organizing (establishing governing rules and procedures), BAWA will focus its efforts on effluent disposal management and optimizing the shared capacity of the two wastewater treatment plants. Integrating the sewer collection systems is a future task.

With the combined systems, BAWA manages nearly 50 miles of collection system, the City's 1.6 million gallons per day (mgd) wastewater treatment plant, District's 0.85 mgd wastewater treatment plant, and disposal percolation ponds and recycled water irrigation areas. The current combined flow from both entities is about 1.5 mgd. The effluent has an estimated 25 milligrams per liter of total nitrogen, primarily ammonia.

BAWA is planning projects to alleviate conditions of nitrate groundwater pollution beneath its disposal facilities. Currently, much of the effluent is discharged to land owned by the City of Los Angeles Department of Water and Power (Department). As shown on Figure 7.1, BAWA and the Department anticipate completing transfer of 434 acres of land to BAWA for future recycled water irrigation. BAWA expects to acquire operational control of the Phase 1 property by the end of 2020, although full title acquisition may take some years longer. BAWA is working with the Department to obtain a "Right to Enter and

Construct" agreement, allowing BAWA to build the initial phase of a fixed, in-ground sprinkler irrigation system on the approximately 165 acres of land that both the City's and the District's current discharge permit covers. This first phase would increase irrigated land area by about 200 percent (%).

New pumping and pipeline infrastructure are needed to transport effluent to additional improved irrigated pastureland as shown on Figure 7.1. BAWA's consultant considered alternatives of different vegetation types to evaluate nitrogen uptake rates for proposed improved irrigated grazed pasture. Irrigated areas seeded with 'Garrison' creeping meadow foxtail (Garrison) or a similar mix, could provide forage with the high nutrient nitrogen uptake needed for irrigation using 100% treated effluent. An irrigation period of 8 months (March through October) is operationally feasible for spray irrigation. The goal of this project is for BAWA to achieve a net reduction in nitrogen load to groundwater through increasing irrigation and reducing infiltration of effluent, and thereby reduce nitrates.

The Water Board would require BAWA to manage disposal of treated effluent to protect groundwater quality. Staff will be coordinating the following next steps with BAWA.

- Submittal of a Title 22 Engineering Report to the State Water Resources Control Board (State Water Board), Division of Drinking Water and the Lahontan Water Board for recycled water use on the existing and planned irrigation areas. The existing Tatum Reclamation Site water reclamation requirements (Board Order No. 6-85-69) must be revised by April 8, 2022, as required by the Recycled Water Policy (*Water Quality Policy for Recycled Water*). Subsequent water reclamation requirements may be required separately or combined with new waste discharge requirements.
- Submittal of a revised Report of Waste Discharge and adoption of single waste discharge requirements for BAWA. This would be accompanied by rescission of existing Board Orders for the City (Board Order No.6-94-25) and the District (Board Order No. 94-24).
- Submittal of a single Notice of Intent for covering the BAWA collection system under State Water Board Order No. 2006-0003-DWQ (Statewide General Waste Discharge Requirements for Sanitary Sewer Systems), with rescission of coverage for the existing City and District collection systems.
- Development of milestones for submitting the above items, constructing irrigation infrastructure, implementing a Farm Management Plan, managing winter effluent flows (November – February), integrating monitoring requirements, and metrics for evaluating groundwater nitrate pollution cleanup.

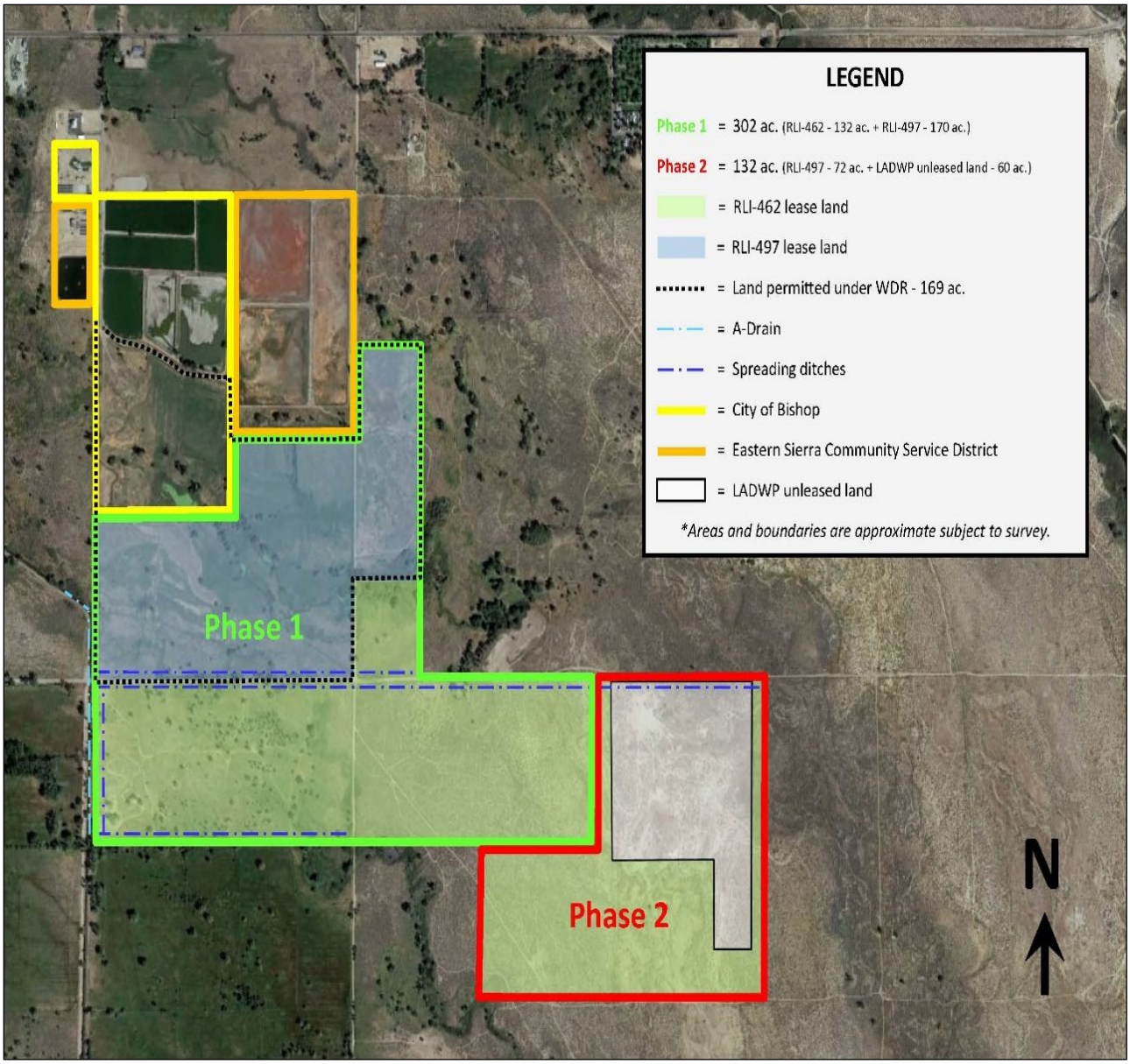

Figure 7.1 – Current BAWA infrastructure is shown with the City's facilities in yellow and the District's facilities in tan. Area within the dotted black line is currently authorized for recycled water use under waste discharge and water reclamation requirements. BAWA's acquisition of 434 acres of Department land would occur in two phases

(Phase 1 outlined in green and Phase 2 outlined in red).

Figure 7.2- BAWA is considering installing on its Department-acquired land a fixed in-ground sprinkler irrigation system to irrigate improved pastureland. This photograph is of a property adjacent to the BAWA wastewater treatment plants showing a similar irrigation system planned for BAWA land.

8. **Laurel Pond Monitoring Wells Geophysical Subsurface Investigation, Mammoth Community Water District, Town of Mammoth Lakes, Mono County -** *Mark Lemus*

The Mammoth Community Water District (District) recently completed a subsurface geophysical investigation to help them site better locations for replacing the District's groundwater monitoring well network around Laurel Pond at the request of Water Board staff. Laurel Pond is located approximately 4 miles southeast of the Town of Mammoth Lakes (Figure 8.1). Laurel pond is a terminal waterbody of several nearby ephemeral streams and is the effluent disposal site for the District's Wastewater Treatment Plant (WTP). Historically, Laurel Pond had been identified as a wetland on historical topographic maps dating back to the early 1900's. Laurel Pond is a water of the state, but not a water of the United States. Wastewater discharges to the pond are only regulated under the CA Water Code, but not the federal Clean Water Act.

The District currently has a network of four monitoring wells located around Laurel Pond to monitor groundwater; however, some of these wells are seasonally inaccessible or have gone dry (Figure 8.2). As such, the District is working to replace or install new wells. The area near Laurel Pond, like many areas in the Long Valley, is subject to faulting as a result of the historic Long Valley Caldera eruption. An unnamed fault has been mapped approximately 100 yards to the southeast of Laurel Pond and approximately one mile to the northwest. This unnamed fault is assumed to run directly under Laurel Pond and connect on either side in a northwest-to-southeast direction. After reviewing the District's Work Plan to replace the monitoring wells, Water Board staff requested the District

complete a geophysical subsurface investigation (Investigation) of proposed new well locations to better define the extent of faulting and refine the subsurface stratigraphy below and adjacent to Laurel Pond with a goal of ensuring proper placement of new wells.

The Investigation was completed in June 2020, using an electric resistivity imaging survey along two profile lines to the north and east of Laurel Pond (Figure 8.2). The Investigation resulted in the relocation of two of the proposed monitoring well locations to avoid an interpreted unnamed fault (Figure 8.2) and to ensure future drilled boreholes will encounter weathered and fractured basalt (Figure 8.3). The District is moving forward with groundwater monitoring well construction, and completion is expected during Fall 2020.

The new groundwater monitoring well network will help the District and Water Board staff analyze the impact that the District's WTP effluent has on surrounding groundwater. Water Board staff intend to revise the District's waste discharge requirements this fiscal year. Water Board staff has expressed concern regarding the fate and transport of nitrogen species to nearby groundwater from discharges to Laurel Pond, as effluent from the District's WTP disposed into Laurel Pond is currently un-nitrified. This means that most of the nitrogen is discharged as ammonia, which can be toxic to aquatic organisms. Under aerobic conditions, ammonia oxidizes to nitrate (primary drinking water standard is 10 milligrams per Liter). Analytical results from several current groundwater monitoring wells indicate elevated ammonia levels within the groundwater surrounding Laurel Pond, which means that oxidation is occurring further downgradient and in groundwater. Monitoring of the new network of groundwater wells is expected to produce more consistent and representative groundwater sampling results. Water Board staff recommends that the District should pursue upgrades to its existing WTP to reduce overall total nitrogen levels, eliminate ammonia toxicity, and improve water quality in the surface water at Laurel Pond and in the surrounding groundwater.

Figure 8.1. Image of Laurel Pond facing South, taken from site inspection July 10, 2020 (photo taken by Mark Lemus).

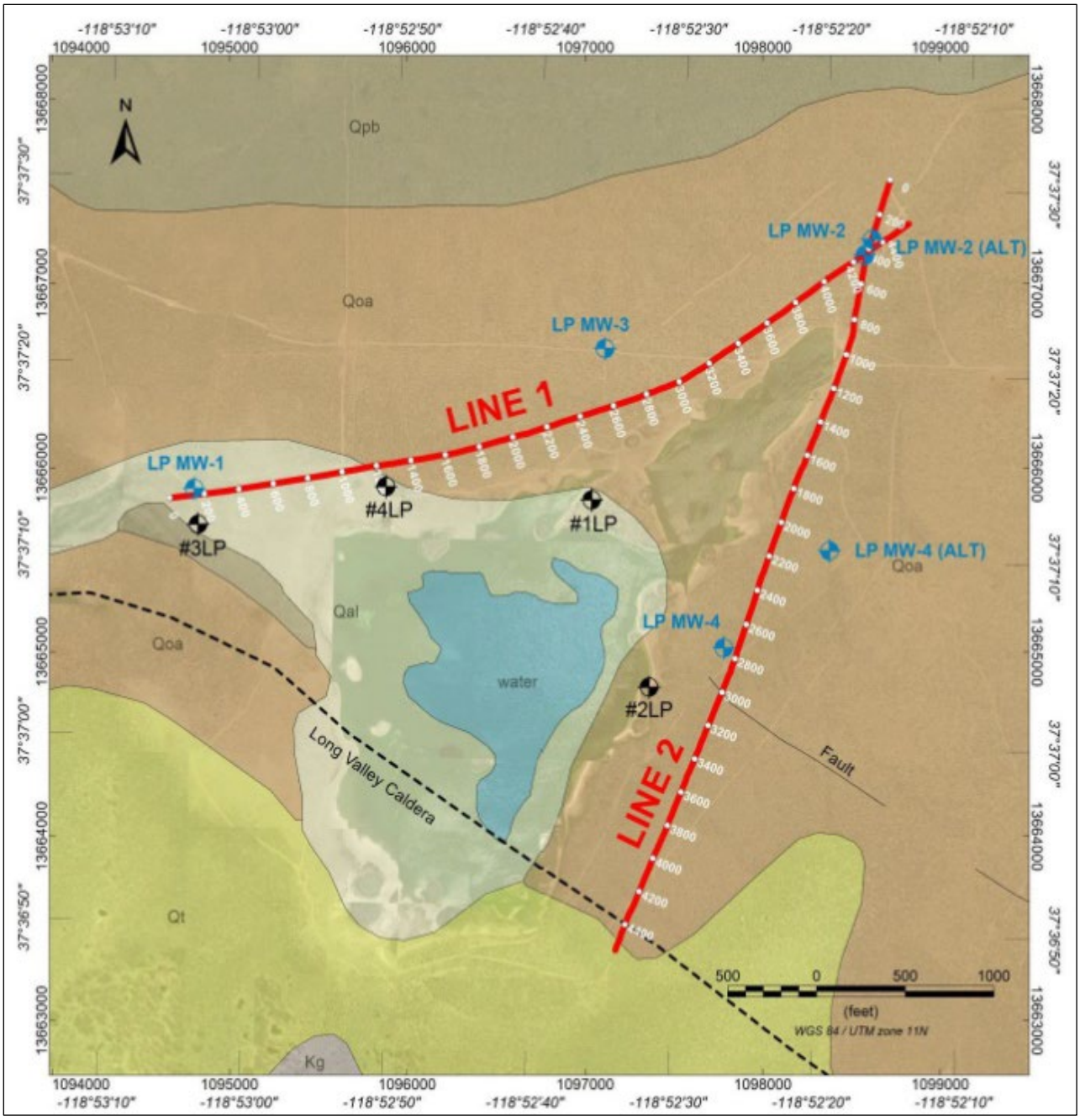

Figure 8.2. Laurel Pond overview map with existing monitoring wells shown in black and proposed new monitoring wells in blue. The two profile lines are the geophysical electrical resistivity imaging survey lines (figure from the District's Geophysical Report).

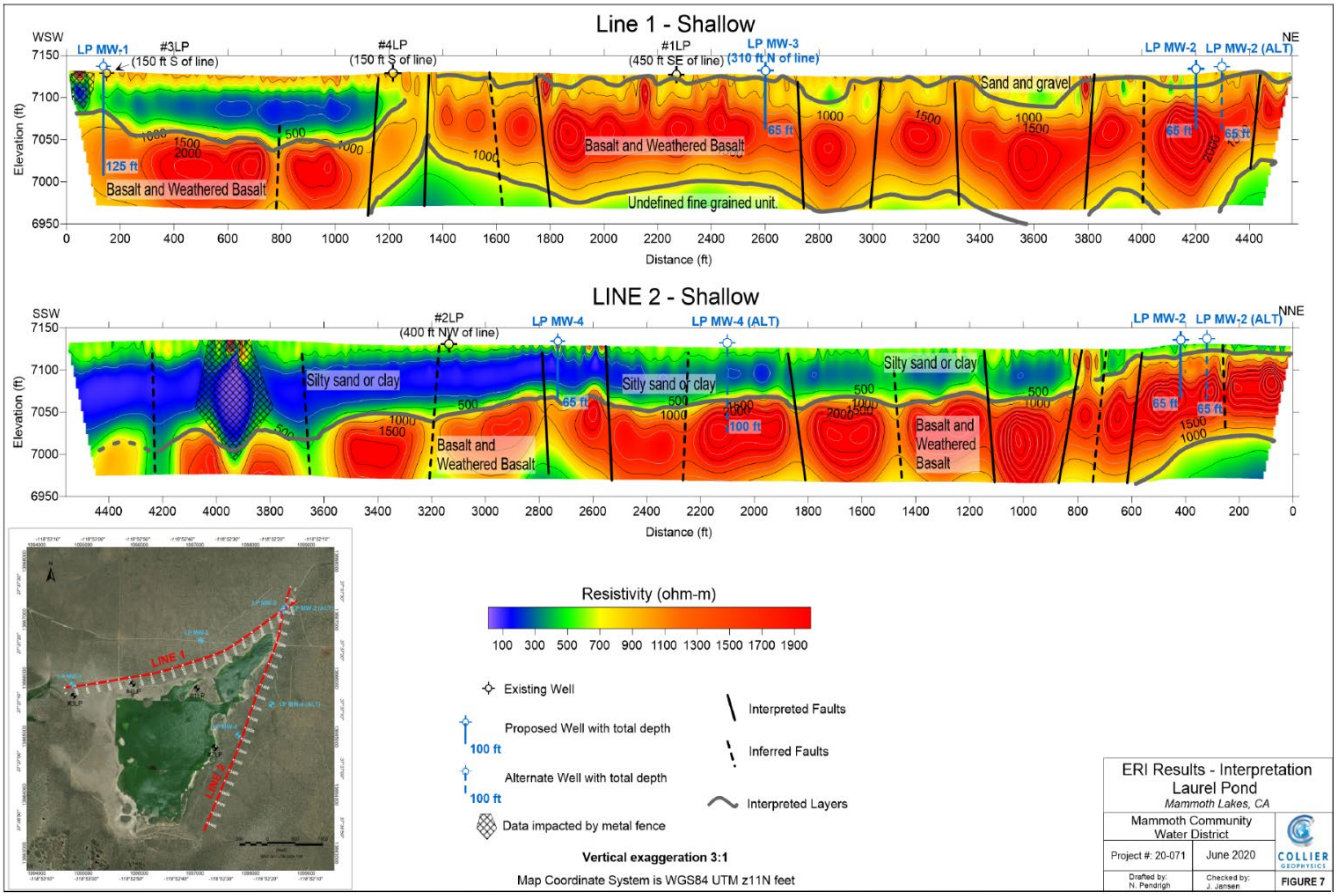

Figure 8.3. Results of the electrical resistivity imaging geophysical survey for Laurel Pond, taken from the District's Geophysical Report. This figure shows the subsurface geological profiles from the two lines taken along Laurel Pond. Red coloration indicates higher electrical resistivity and a denser geologic material such as rock, while blue coloration indicates lower electrical resistivity correlating to a low-density geologic material such as silt or clay. Offsets associated in changes of resistivity are interpreted to be the result of faulting. Locations for proposed monitoring wells LP MW-2 and LP MW-3 were repositioned based on the survey results.

9. **Crestline Sanitation District - Flow Exceedance Violations, Collection System Infiltration and Inflow, Annual Reporting Update –** *Mark Lemus*

The Crestline Sanitation District (District) has submitted the first of five annual reports describing the District's actions to address wastewater collection system infiltration and inflow (I/I). Water Board staff requested the District begin providing these annual reports in a July 2019 Notice of Violation (NOV). The annual reports must describe the District's actions for the previous year and planned actions for the upcoming year to address wastewater collection system I/I. Infiltration occurs when groundwater enters the sewer system through defective pipe connections and broken manholes. Inflow is the result of illicit connections such as a house storm drains connected to sewer laterals.

In July 2019, Water Board staff issued an NOV to the District regarding 89 flow exceedance violations from the Huston Creek and Seeley Creek Wastewater Treatment Plants. These violations occurred during abnormally high precipitation events between December 2018 and March 2019. Crestline received a total of 58.2 inches of rain fall during this period that resulted in an approximate total of 2.2-billion gallons of water into the Huston Creek Watershed in a span of five months. The NOV requested that the District evaluate the wastewater treatment plant's facilities flow and treatment capacities,

considering the increasing number of flow-related violations. The District maintained that the flow violations were the result of long standing I/I- related issues within the sewer collection system, and not related to wastewater treatment plant capacities. The District has, and continues to make, sewer collection system improvements. The intent of the annual reports requested by the NOV is to provide Water Board staff with an assessment of I/I reduction activities. Staff intends to monitor the District's progress.

Wet weather continued through May 2019, increasing groundwater levels in the District's service area. This hindered the District's ability to continue smoke testing to identify illicit connections and failures within the collection systems lines as they were submerged in groundwater. The District was able to inspect 39,545 feet in 2019, through closed circuit television (CCTV) cameras and found a failure in the collection system that resulted in root intrusion (Figure 9.1). These types of failures in the collection system allow for groundwater to enter the system and, eventually, the wastewater treatment plants. This section of pipe was repaired using Cured In-Place Pipe (CIPP) methods (Figure 9.2). The District repaired a total of if 3,505 ft of pipe in 2019 using the CIPP method (Figure 9.3). COVID-19 has created an impact on companies providing services for the District and has slowed the process of cleaning, repairing, and televising the collection system.

For the Fiscal Year 20/21 the District intends to focus its manhole repair/ replacement to coincide with the County of San Bernardino's street repaving plan in Crestline. The District has budgeted to purchase four weather stations to monitor microclimates within the District's sewer collection system service area and intends to enter into a 5-year contract with the Hach company to conduct flow monitoring at six problematic areas within the service area. The District will allocate 41% of its maintenance operating budget to address I/I, up from 20% in FY19/20. Water Board staff have observed that the District continues to make addressing I/I a top priority.

Figure 9.1. Broken Collection System Pipe found during 2019 CCTV Inspection showing roots penetrating the sewer (top) and a pipe offset (bottom).

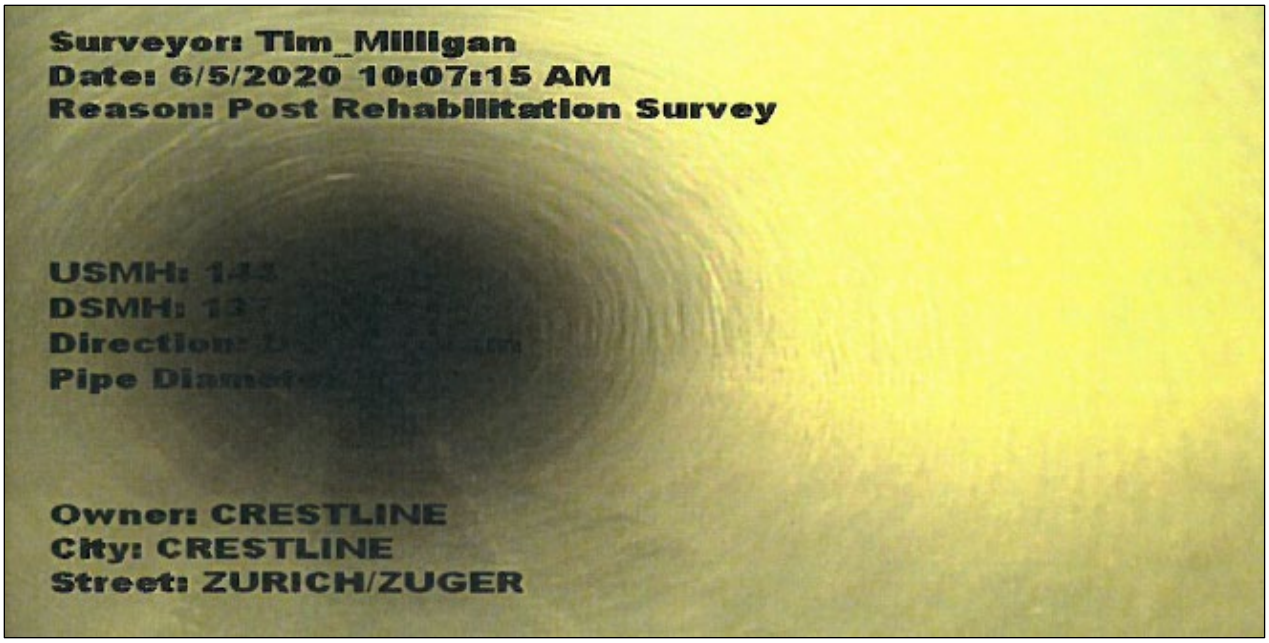

Figure 9.2. Repaired Collection System Pipe after slip-lining completed. Photograph taken at the same location as the broken pipe shown in Figure 9.1.

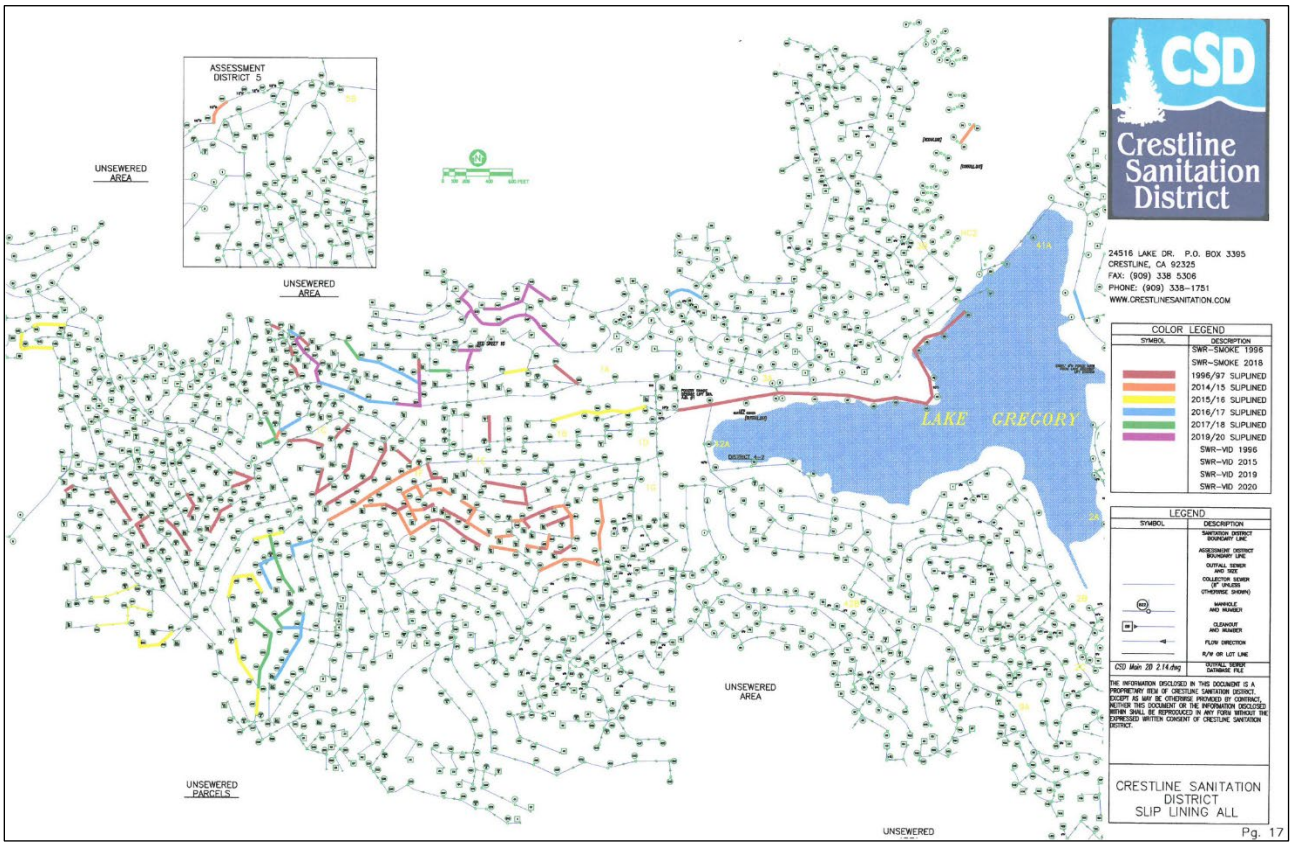

Figure 9.3. Crestline Sanitation Districts Service Area and Collection System Repairs to Date (FY19/20 in Pink)

10. Investigation of Potential Water Quality Impacts on Lower Aquifer in the Vicinity of Upper Aquifer Contamination, Former George Air Force Base, Victorville, San Bernardino County – *Linda Stone*

There are three areas of groundwater contamination in the central portion of the former George Air Force Base, located in Victorville. These groundwater plumes have been characterized in the Upper Aquifer (perched aquifer) to varying degrees. The northern plume, Site SS030, is the result of several releases from jet fuel supply lines and underground storage tanks located on and near the flight line. This jet fuel plume is well characterized in the Upper Aquifer. The much larger southern jet fuel plume, Site ST067b, is less well characterized but its boundary is generally defined in the Upper Aquifer. The plume in the center of this area, Site OT069e, consists of trichloroethene (TCE). This plume is migrating and is not adequately characterized or delineated in the Upper Aquifer.

Very few groundwater monitoring wells are installed in the Lower Aquifer (regional aquifer), and none of the Lower Aquifer groundwater monitoring wells are in locations that can adequately evaluate impacts from the Upper Aquifer plumes. The Air Force maintains that the presence of a clay aquitard in this area protects the Lower Aquifer from any downward migration of contaminants. Water Board staff's experience is that, in most cases, aquitards allow some migration to underlying zones and there is site-specific evidence that downward migration is likely occurring here.

Over the past eight years, Water Board staff has repeatedly insisted that the Air Force investigate this portion of the Lower Aquifer and install additional Upper Aquifer monitoring wells at the poorly characterized TCE plume, Site OT069e. The Air Force recently agreed to install four monitoring wells in the Lower Aquifer and one additional well in the Upper Aquifer at Site OT069e. The installation of these wells began in July of this year and the expected completion date is late August. The installation of the Lower Aquifer monitoring wells is especially challenging because of the depth of the wells (approximately 300 feet below ground surface) and because special drilling and well construction practices are necessary to ensure that no Upper Aquifer contamination is introduced to the Lower Aquifer or allowed to migrate into that aquifer.

The drilling effort will provide important information regarding the subsurface geology (e.g., lithologies and thicknesses of the various units). The four Lower Aquifer wells will help determine if contamination has migrated to the Lower Aquifer and provide data for a better understanding of this portion of the Lower Aquifer (e.g., groundwater flow direction and gradient). Based on the evaluation of these data, Water Board staff and the Air Force will be able to determine if additional actions are necessary and what those actions should be.

11. Mono County Collaborative Planning Team Meeting – *Ed Hancock and Jeff Fitzsimmons*

Lahontan Water Board staff attended the Mono County Collaborative Planning Team (CPT) quarterly meeting on July 30, 2020. The CPT serves as an opportunity for representatives from Mono County, federal, state, and local agencies, along with tribal representatives and private citizens to share information, voice concerns, and provides a forum for discussion, coordination, and collaboration of resources and efforts to meet the challenges faced within the County. The meeting focused on the participating agencies' responses to contend with COVID-19.

Most agencies indicated their respective visitor centers and offices remain closed to the public. However, some locations are minimally staffed with most of their staff teleworking in response to COVID-19. Mono County reported the communities within the county continue to be impacted and the number of COVID-19 cases reported within the county have

continued to increase. The Town of Mammoth Lakes has received a COVID-19 assistance grant to support local businesses and provide personal protection equipment supplies.

Caltrans, District 9, informed the CPT that traffic through the region has been, and continues to be, very heavy and is approaching pre-COVID-19 levels. The United States Forest Service (USFS) reported their Inyo and Humboldt-Toiyabe National Forest group campgrounds and remote campgrounds remain closed, while their open campgrounds are full and are experiencing near-record attendance. Insufficient parking, illegal camping, and unpermitted campfires, wildfires, and maintenance of facilities are the challenges Inyo and Humboldt-Toiyabe National Forests continue to experience during this period of high recreational use.

Attendees were informed that the Lahontan Regional Water Quality Control Board Offices in both South Lake Tahoe and Victorville remain open. However, the offices are lightly staffed, with most staff teleworking. Water Board staff assured the participants that staff will continue to follow-up on spills or complaints and respond as soon as possible to emails and voicemails.

The California Department of Fish and Wildlife briefed the CPT on bacterial infections of fish at the Fish Springs, Blackrock, and Mojave hatcheries. Treatment with antibiotics has been ineffective and will subject the fish of all three hatcheries to euthanization. The hatcheries do not anticipate being able to return to normal operations until sometime in 2022. Hot Creek Hatchery remains unaffected.

The Town of Mammoth Lakes announced that the Town had been awarded an Infill Infrastructure Grant for the development of affordable housing and Mammoth Mountain Ski Resort will be moving forward with the “Ski Lodge Project.”

The Bureau of Land Management (BLM), Bishop Field Office, informed the CPT that environmental documents for the Alabama Hills National Scenic Area had been submitted for public comment in early July 2020. Additionally, the BLM anticipates receiving Great Outdoor Act Funding and having appropriated funding for the next fiscal year.

The Mono County CPT serves as an example of successful partnership towards better serving the needs of the county and communities within the county. The next meeting is anticipated to occur in late October 2020.

12. Mojave Water Agency Technical Advisory Committee Meeting – *Patrice Copeland*

Water Board staff attended a meeting of the Mojave Water Agency Technical Advisory Committee (MWA TAC) on August 6, 2020. The MWA TAC is an independent, voluntary group of water purveyors, pumpers, and other interested parties located within MWA’s boundaries. The MWA TAC meets in a public forum to discuss common concerns and acts to assist the MWA in pursuit of its legal objectives.

During this meeting, Richard Selby of California Rural Water Association gave a brief update on small water systems’ business continuity plans and a planned hydrogeologic investigation that is starting to acquire data in the mountain communities. This was followed by Nick Schneider of MWA with an update to the region’s Urban Water Management Plan (UWMP), which must be updated every five years. The UWMP is a tool used to ensure that long-term water supply needs are available to meet existing and future demands. MWA ensures that the UWMP is a regional plan that will include data from all urban suppliers in their service area. This 25-year plan will also estimate projected water supplies until 2065. Mr. Schneider reported that the area has conserved water and exceeded a goal of 20 percent (%) by 2020 by exceeding that goal and conserving approximately 39 to 39%. A recycled water use projection is also included in the UWMP,

as is climate change as it may affect water supply. MWA has chosen Tully and Young, Incorporated, to assist with drafting the updated UWMP that is due to be submitted to the Department of Water Resources by July 1, 2021.

A presentation was made by Nick Schneider to update the TAC members regarding Proposition 1 grants for the Integrated Regional Water Management (IRWM) group's activities in both the Lahontan and Colorado funding regions. The Lahontan funding region is non-competitive, and the IRWM group received $4.1 million for five Round 1 projects; recipients include the City of Victorville (R3 turnout No. 5), Helendale Community Services District (potable groundwater water well No. 10), City of Hesperia (Walnut St. debris basin), and MWA (R3 Adelanto extension, large-scale cash for grass). Within the Colorado funding region, the process is competitive. Although the IRWM group had applied for $4.45 million, they were only awarded $500,000 to fund a replacement well for the Big Horn Desert View Water District. More funds for both regions will be available during Round 2 and the IRWM group members, with the assistance of MWA staff, plan to apply for more project funding. Mr. Schneider emphasized that projects that are "shovel-ready" are more likely to be approved.

MWA's Nicholas Schneider, gave an update on pending legislation, including SB 414 (Small Water System Authority Act of 2019, which shortens the pathway for smaller water agencies to join together or consolidate under a larger district), AB 1720 (promotion of long-duration energy storage – enacts a pump storage program to be used statewide, but has widespread opposition by many water and environmental groups), AB 3030 (Resource Conservation: land and ocean conservation goals that will authorize setting aside 30% of California's land), HB 7073 (Special District's Coronavirus Relief – Federal bill that provides financial relief to special districts for costs related to COVID-19), AB 401 (Low Income Rate Assistance Program for qualifying customers of water agencies), and an update on proposed legislation from the California Department of Fish and Wildlife to list the Western Joshua Tree as an endangered or threatened species. This proposed legislation is opposed by building trade organizations. In addition, MWA has sent correspondence to the Fish and Wildlife Commission, that meets on August 20, 2020, opposing this proposed legislation as it may impact well citing locations, and pipeline and other construction projects in the region.

A vote was taken of the TAC members that approved pursuing SB 200 funding. This Senate Bill, approved by the Governor during July 2019, establishes a "Safe and Affordable Drinking Water Fund" and secures a long-term funding source that addresses the lack of safe drinking water in disadvantaged communities across the state. The State Water Board adopted a funding expenditure plan on July 7, 2020, that provides for a "Safe and Affordable Funding for Equity and Resilience (SAFER) Funding Program." The SAFER Fund provides a set of tools, funding sources, and regulatory authorities designed to ensure that one million Californians who currently lack safe drinking water receive safe and affordable drinking water as quickly as possible. The SAFER Fund will provide $130 million per year that will be used to develop and implement sustainable solutions for small systems with violations of drinking water standards. The money may be spent on operations and maintenance costs, cost of consolidating with a larger system, provision of replacement water, and funding for administrators to run the small systems. MWA was added to the State Water Board's advisory committee for this program. Within the Lahontan Region, there are $15.2 million available. Four local water systems are out of compliance due to high levels of fluoride, arsenic or uranium, including the Apple Valley View Mutual Water Company, Bar-Len Mutual Water Company, Daggett Community Services District, and Juniper-Riviera County Water District. California Rural Water Association is working with these water systems for SAFER funding opportunities. In

addition, “at risk districts” in the MWA service area were also listed. TAC members were urged to contact Mr. Schneider if they believe they should be added to this list.

Lastly, Mr. Schneider walked TAC members through new websites for the California Grants portal and the Federal Grants portal. These portals contain search functions that may help member agencies more easily locate appropriate grant funding opportunities and apply for the funds. Mr. Schneider recommended that all member organizations in need of such funds set themselves a monthly reminder to visit these websites and reminded TAC members that MWA is willing to assist them regarding such opportunities. The California grant portal is located at https://www.grants.ca.gov and the Federal grant portal can be accessed at https://www.grants.gov.

The next TAC meeting is scheduled for October 1, 2020.

13. **Soil Excavation Activities to Achieve Remedial Action Objectives at Marine Corps Logistics Base (MCLB) Barstow, Comprehensive Environmental Response, Compensation, and Liability Act Areas of Concern (CAOCs) CAOC 10 and CAOC N-2 Area 1, Operable Unit (OU) 7 –** *Christopher Avalos*

CAOC 10 is located at MCLB Barstow, Nebo Main Base and is wholly contained within the base boundary (Figures 13.1 and 13.2). CAOC 10 was used as a source of borrow material (an area of clean, uncontaminated soil that was mined for use at different locations on base) until approximately 2000, when the Navy discovered sodium-filled valves, metal debris, and an unidentified canister within the former borrow area. The Navy determined that material found at CAOC 10 was consistent with a previous MCLB employee’s account of a site at Nebo Main Base where sodium valves were disposed in the late 1950s. As a result of past activities at CAOC 10, elevated concentrations of lead have been identified in soil at concentrations above industrial cleanup-levels (levels designated as unsafe for industrial/construction workers, as well as potential residential inhabitants).

CAOC N-2 Area 1 is a 17-acre site, also located at MCLB Barstow, Nebo Main Base, and wholly contained within the base boundary (Figures 13.1 and 13.2). Historically, military equipment was stored at the site from the early 1950s until 1966. The area was repurposed as a skeet and trap shooting range that operated from 1982 to 1999. As a result of these past activities, soil at CAOC N-2 Area 1 is contaminated with lead, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) at concentrations above industrial cleanup levels.

On December 12, 2014, a Record of Decision (ROD) was signed by the Department of the Navy (Navy) and regulatory agencies, outlining remedies for all sites within OU 7, including CAOCs 10 and N-2 Area 1. During the remedial design, the Navy and its contractor determined that the remedy outlined in the ROD would not meet remedial action objectives (RAOs) at CAOC N-2 Area 1; RAOs were achievable as outlined in the ROD for CAOC 10. An Explanation of Significant Differences (ESD) document was developed and approved by the regulatory agencies that modified the remedial approach at CAOC N-2 Area 1. In summary, it was determined that lead and PAHs would be cleaned up to industrial levels at CAOC 10. At CAOC N-2 Area 1, lead and PCBs would be cleaned up to residential levels (safe levels for potential residential inhabitants) and PAHs would be cleaned up to industrial levels.

Remedial action field activities were conducted from April through June 2019 and included: pre-excavation soil and gravel sampling, excavation, sieving (of larger cobbles) and off-site waste transportation and disposal, post-excavation sampling and surveying, and site restoration. Through pre-excavation soil, gravel, and cobble sampling, the Navy

demonstrated that site contaminants were not present in the larger gravel and cobble size fractions; therefore, the larger-sized materials did not require transportation and disposal, and could be reused for site restoration. Post-excavation sampling demonstrated that RAOs were achieved for all constituents at both sites. Approximately 759 truckloads of contaminated soil, weighing nearly 20,000 tons, were transported offsite for disposal at a properly licensed facility. The CAOCs were restored to previous topographic grades, as needed, and creosote bushes were planted to restore sensitive habitat.

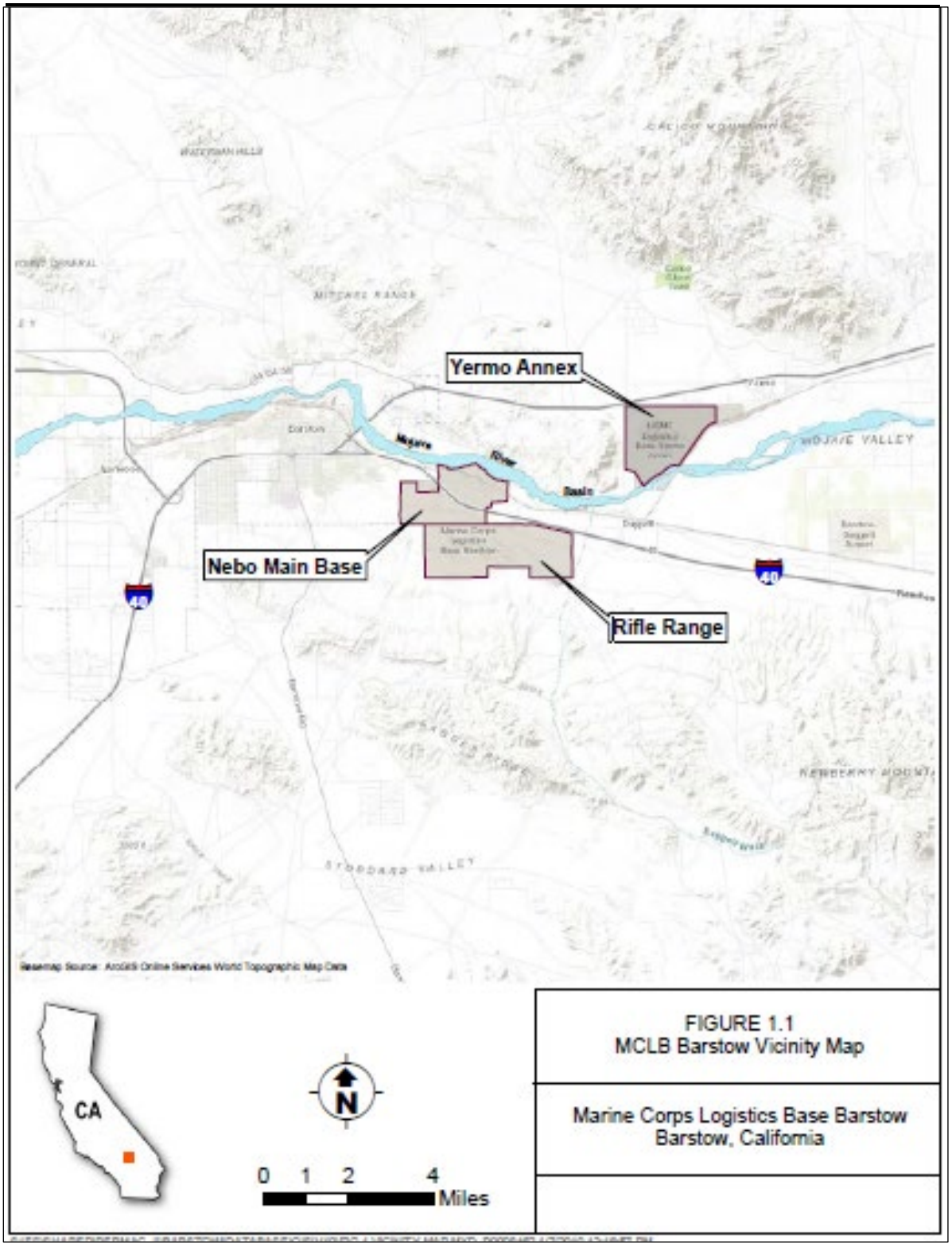

Figure 13.1 – Regional Location Map of MCLB Barstow

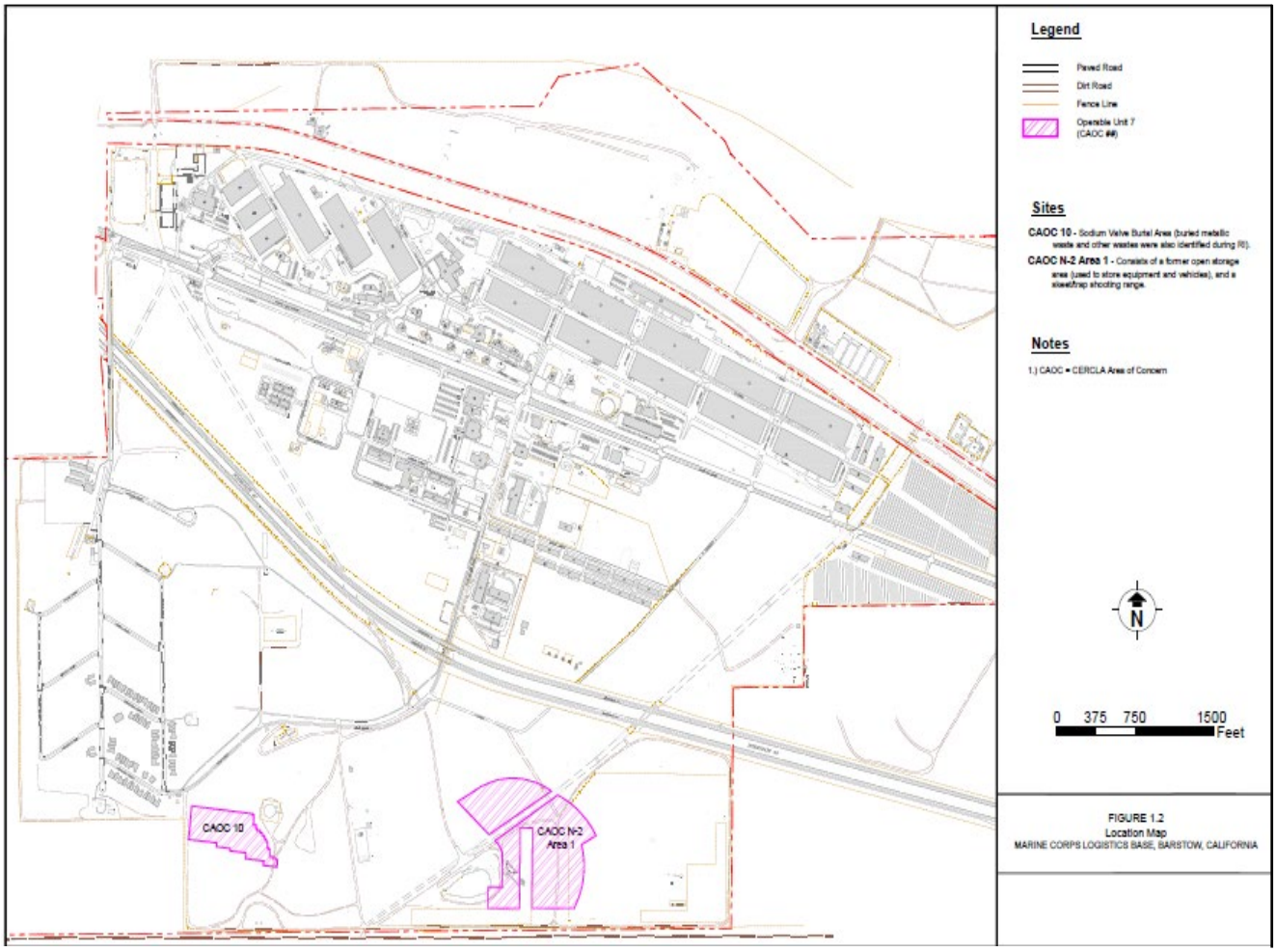

Figure 13.2 – Nebo Main Base - CAOCs 10 and N-2 Area 1 Site Map

14. Standing Item – Sanitation Districts of Los Angeles County, District No. 20 Palmdale, Groundwater Nitrate Site Clean Up Project – *Mark Lemus*

This standing item describes the Sanitation Districts of Los Angeles County, District No. 20 Palmdale's (District's) continued efforts to cleanup nitrate polluted groundwater resulting from historical effluent discharges. Historically, the Water Board authorized the District to dispose its effluent by land disposal through spreading on a 320-acre site. The Water Board required the district to install groundwater monitoring wells to evaluate the effect of land spreading practices on receiving groundwater. In 2003, Cleanup and Abatement Order (CAO) No. R6V-2003-0056 was issued requiring the District to delineate and remediate nitrate polluted groundwater.

In 2004, Cease and Desist Order (CDO) No. R6V-2004-0009 was issued requiring the District to take actions to reduce the source of nitrate loading to groundwater. The District upgraded the wastewater treatment plant to produce higher quality effluent; lined storage reservoirs were constructed to contain excess effluent produced during the winter; and the agricultural operation was expanded to irrigate crops at agronomic rates so that nitrogen is removed by the crops. In acknowledgement of these improvements in the wastewater treatment and disposal operations, the Water Board issued revised Waste Discharge Requirements in Board Order No. R6V-2011-0012. The CDO and one amendment were rescinded with Board Order No. R6V-2011-0046 on June 9, 2011.

The CAO remains in effect and requires the District, as the discharger, and the City of Los Angeles World Airports (LAWA), as the landowner, to address groundwater nitrate pollution near the District's Palmdale Water Reclamation Plant (Facility). The groundwater nitrate pollution is the result of the Facility's previous use of unlined oxidation ponds and land application of wastewater effluent. This Order requires delineation, containment, and remediation of the groundwater nitrate plume and to reduce the amount of nitrate from reaching groundwater.

Previous Actions to Date

Following the issuance of the CAO, the District implemented its interim Containment and Remediation Plan (Plan) approved by the Water Board in 2005. The District's Plan includes source control, delineation of the nitrate plume, extraction of polluted groundwater, and operation of a 2,680-acre Agricultural Site with nitrogen removed by harvested fodder crops. The Agricultural Site is leased from LAWA and has soil moisture probes, lysimeters, and monitoring wells installed for evaluating agronomic irrigation rates and nitrogen concentrations in the soil, groundwater, and uptake of the crops.

In 2006, the District installed six groundwater extraction wells in the center of the nitrate plume. Water produced from this extraction system was initially mixed with treated wastewater effluent and used to irrigate the Agricultural Site crops. The District's monitoring and reporting program indicated that application of effluent and extracted polluted groundwater to crops was performed within agronomic irrigation rates.

In 2009, the District installed two geomembrane-lined reservoirs located about nine miles northeast of the wastewater treatment plant (not shown on the figures). These reservoirs store the entirety of the District's effluent produced during the winter season when crop demand is low. The reservoirs provide seasonal storage of treated effluent water that is used during the summer growing season for crop irrigation. This allows the District's farming operation to match the available volume of water on an annual basis with the agronomic crop demand. During the winter, when evaporation and crop evapotranspiration are low, water is stored and used during the summer growing season when evapotranspiration rates are high.

In March 2011, the Board Adopted revised Waste Discharge and Water Recycling Requirements (Board Order No. R6V-2011-0012) for the Facility that included treatment process upgrades for the Facility. The facility upgrades were placed online in July 2011, and now provide tertiary, denitrified, recycled water for irrigation.

In 2015, the Board allowed the groundwater from the extraction wells to be used on the fields of a neighboring sod farmer, a tenet of LAWA. To date, the District has installed numerous monitoring wells to further delineate the groundwater nitrate plume and provides monitoring well data to Water Board staff along with Annual Cropping Plans and an Annual Report of the Agricultural Site's Operations. In addition, LAWA has voluntarily agreed to provide the Water Board with an Annual Cropping Plan describing how the farming operations of its lessees use pumped groundwater at agronomic rates.

Nitrate Plume Delineation

The source of nitrate pollution in groundwater was a former 320-acre agricultural land disposal area, shown in purple on Figure 1. Data collected to date from the District's groundwater monitoring well network indicates that the nitrate-polluted groundwater is delineated to a thin strip centered north, south, and west of the former land disposal area. Currently, the highest detected nitrate concentration is detected at 15.8 milligrams per Liter (mg/L) in monitoring well MW-59. This concentration is slightly above the nitrate drinking water maximum contaminant level (MCL) of 10 mg/L.

Declining groundwater levels have caused several monitoring wells to go dry, prompting the District to replace and install new monitoring wells to better define existing upstream and downstream concentrations of nitrate in the groundwater, in compliance with the CAO. While the average depth to groundwater in the vicinity of the Agricultural Site varies from 330- to 498-feet below ground surface (bgs), the average rate of groundwater elevation decline varies from 2- to 6-feet per year across the site due to regional groundwater pumping for municipal and agricultural demands. Declining groundwater levels have also decreased extraction well rates, leading the District to convert two of its extraction wells into monitoring wells. The District has also installed new monitoring wells with directed efforts to define the extent of the nitrate plume in areas that were previously not monitored. The newest of these monitoring wells

(MW-63, MW-64, MW-65, and MW-67) were installed north of Avenue M during February 2018 (Figure 14.1).

Locations of Concern

Data collected to date from the District's groundwater monitoring well network have indicated that groundwater flows northwest, west and southwest from the former land disposal area (Figure 14.2). The groundwater flow directions have resulted in three areas of concern:

- Area A - Domestic supply wells to the north of Avenue M,
- Area B - Air Force Plant 42's drinking water supply well owned by Northrup-Grumman (a major aerospace manufacturer) to the west, and
- Area C - Palmdale Water District's supply well field to the southwest.

Monitoring well samples continue to indicate that nitrate concentrations remain less than the nitrate drinking water MCL of 10 mg/L. Board staff has requested that the District continue to keep a close watch on these areas for changes in groundwater flow direction or increases in nitrate concentration trends.

Future Actions

In the summer 2020, the District intends to submit work plans for installing at least two new monitoring wells. These wells will be in the downgradient direction of the nitrate plume, near areas of concern B and C discussed above.

With recent high precipitation years, and to continue maximizing the supply of recycled water, the District has forecasted a need to increase treated effluent storage capacity during seasonal times of low evapotranspiration at the agricultural site. The District is investigating options for additional storage of recycled water to address these capacity concerns.

In 2019, the District removed 2,200 tons of nitrate as nitrogen from the groundwater through their extraction wells; however, there is no current estimate of the mass of nitrate above the drinking water MCL remaining in the groundwater. It does appear that the nitrate plume concentrations greater than the drinking water MCL are generally stable, as shown by years of monitoring well data collected by District over time.

The most effective action to date to control the nitrate pollution has been the District's upgrades at the Facility for source control that now produces effluent with total nitrogen concentrations of less than 10 mg/L. In addition, the storage reservoirs to contain excess winter flow have allowed the District's farming operation to apply effluent at agronomic rates for nitrogen removal by crops.

Regional Board Staff and the District continue to work cooperatively with the interim remedial strategy with the goal of presenting a final remedial strategy to the Board for consideration in the future

This figure shows the delineated area of groundwater polluted with nitrate concentrations greater than 10 mg/L in the center of the figure with an elongated (north to south) shaped contour. Decreasing groundwater nitrate concentration contours are to the east and west of the nitrate plume. The nitrate source is the former 320-acre land disposal area shown in purple on the figure above.

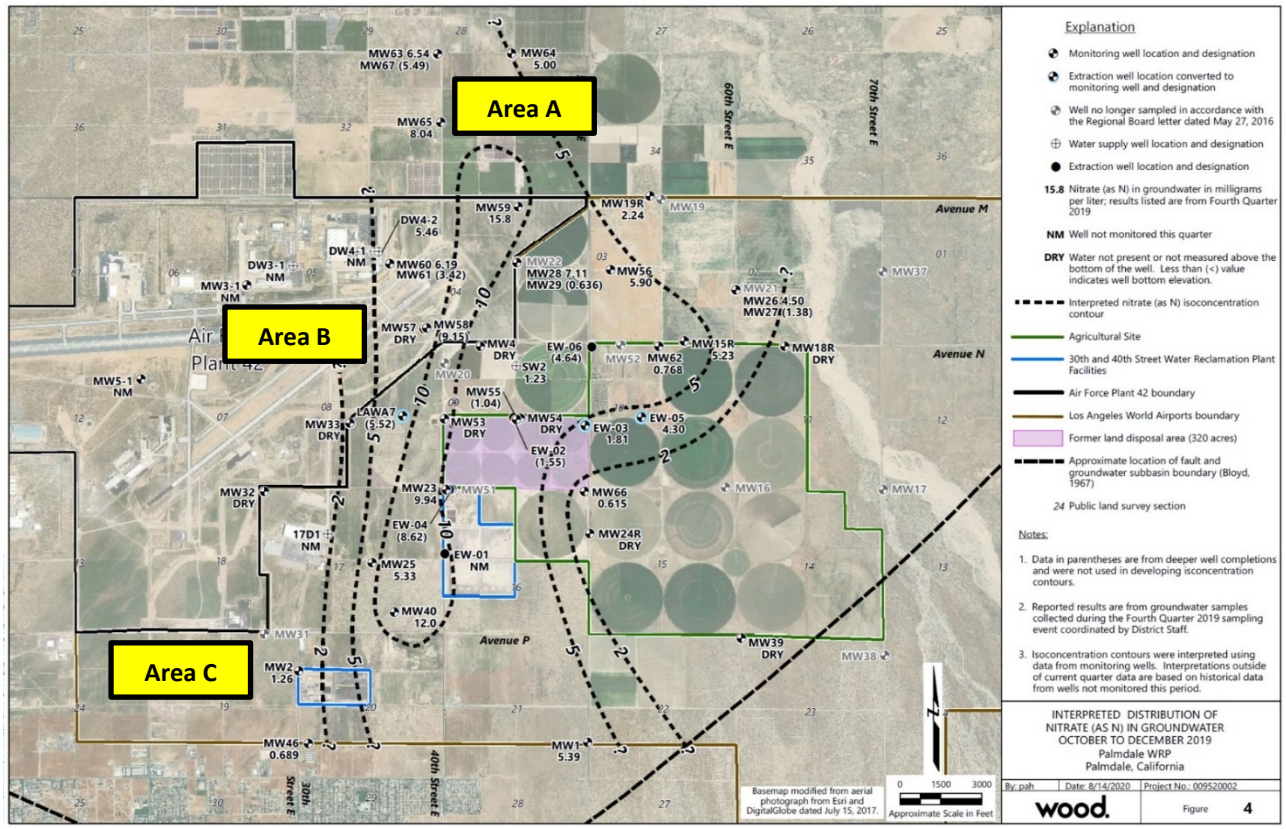

Figure 14.1. Interpreted Distribution of Nitrate as Nitrogen in Groundwater October to December 2019, Palmdale Water Reclamation Plant Annual Report

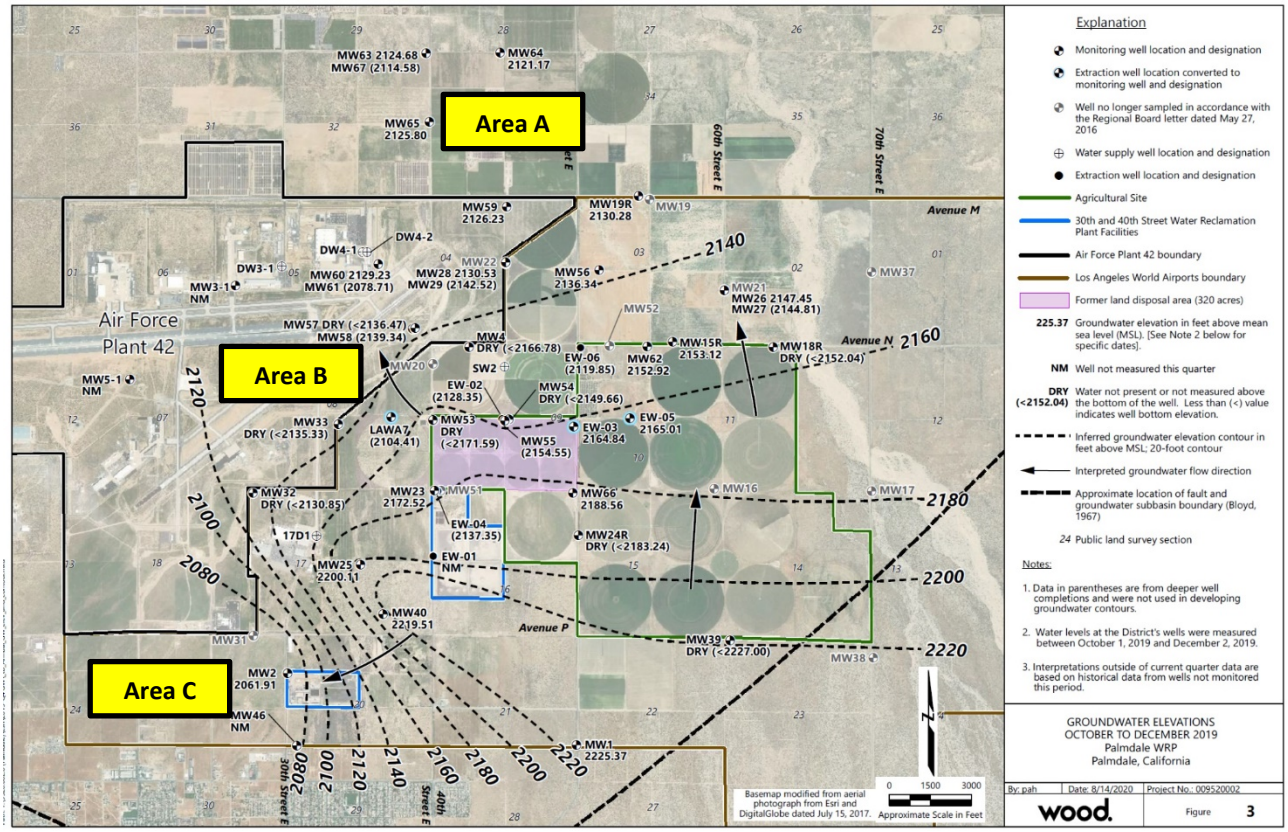

Figure 14.2. Groundwater Elevations October to December 2019, Palmdale Water Reclamation Plant Annual Report.

The Figure shows the iso-contour elevations of groundwater in feet above mean sea level. In general, groundwater flows from the southeast portion of the Figure where Littlerock Creek is a recharge zone, towards the west and northwest. Groundwater elevation contours indicating flow towards the southwest are the result of municipal pumping by the Palmdale Water District's production wells. The nitrate source is the former 320-acre land disposal area shown in purple on the figure above.

EXECUTIVE OFFICER ACTION ITEMS

SEPTEMBER 2020 EO REPORT - JULY 16, 2020 TO AUGUST 15, 2020

Lahontan Regional Water Quality Control Board

	DOCUMENT	DATE SIGNED
NO FURTHER ACTION REQUIRED *		
	No Further Action Required for Former Meyers Beacon, 3208 Highway 50, Meyers, El Dorado County, UST Case No. 6T0419A	8/03/2020
	Rescission of Cleanup and Abatement Order No. RB6S-2003-030, No Further Action Required, Lakeside NAPA Automotive Store, 1935 Lake Tahoe Boulevard, South Lake Tahoe, El Dorado County, Site Cleanup	8/11/2020
401 WATER QUALITY CERTIFICATION		
	Amending the Lahontan Water Quality Control Plan (Basin Plan) To Add Tribal Cultural And Subsistence Fishing Beneficial Uses	7/30/2020
	Water Quality Certification, McKenzie Meadow Restoration Project, Lassen County	8/04/2020
	Granting Clean Water Act Section 401 Water Quality Certification, Dolan/Martucci Pier/Boathouse Repair Project, Placer County	8/05/2020
	Granting Clean Water Act Section 401 Water Quality Certification, Delaney Jordan Pier Modification Project, El Dorado County	8/05/2020
	Amended Board Order R6T-2020-0023-A1 Granting Clean Water Act Section 401 Water Quality Certification, Laurentinum Multi-Parcel Pier Construction Project, El Dorado County	8/05/2020
	Board Order No. R6V-2020-0046, Granting Clean Water Act Section 401 Water Quality Certification, Olancha-Cartago 4-Lane Project, Inyo County	8/13/2020
WASTE DISCHARGE REQUIREMENTS		
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements, 16917 Koala Road, San Bernardino County — APNS 0459-681-09-0000, WDID No. 6V36CC428035	7/20/2020
	Notice of Applicability for General Waste Discharge Requirements for Small Construction, Including Utility, Public Works, and Minor Streambed/Lakebed Alteration Projects, Board Order No. R6T-2003-0004, Mendiburu Road Improvement Project, Kern County	7/20/2020
	Acceptance of Pond 8 Design Plan: Pond 8 Relining Project (100% Design Plan) and Addendum 1 Final Report of Waste Discharge for Pond 8 Relining Project, Pacific Gas and Electric Company, Hinkley Compressor Station,	7/22/2020
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements, Los Angeles County — APN 3126-017-030	7/24/2020
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements, 44211 Yucca Avenue, Los Angeles County — APN 3132-	7/29/2020
	Notice of Applicability – Conditional Waiver of Waste Discharge Requirements, American Scientific Consultants, LLC, San Bernardino County	8/11/2020

EXEMPTIONS		
	Pending Action for Board Order No. R6T-2020-XXXX, Clean Water Act Section 401 Water Quality Certification and Exemption to Waste Discharge Prohibitions for the Dolan/Martucci Pier/Boathouse Repair Project, Placer County	7/16/2020
	Pending Action for Board Order No. R6T-2020-XXXX, Clean Water Act Section 401 Water Quality Certification and Exemption to Waste Discharge Prohibition for the Delaney Jordan Pier Modification Project, El Dorado County	7/16/2020
	Pending Action for Board Order No. R6T-20XX-XXXX, Clean Water Act Section 401 Water Quality Certification and Exemption to Waste Discharge Prohibitions for the Bear Creek Lower Meadow Restoration Project, Placer County	7/20/2020
	Board Order No. R6T-2020-0038, Granting Clean Water Act Section 401 Water Quality Certification and Basin Plan Prohibition Exemption, Coldstream Canyon Sediment Reduction and Wetland Rehabilitation Project, Placer County	7/22/2020
	Board Order R6T-2020-0040, Granting Clean Water Act Section 401 Water Quality Certification and Basin Plan Prohibition Exemption, TKPOA East Channel Bulkhead Repair Project, El Dorado County	7/30/2020
	Transmittal of Amendment to Clean Water Act Section 401 Water Quality Certification and Basin Plan Prohibition Exemption for Squaw Creek North Meadow Enhancement Project, Placer County	8/03/2020
	Board Order No. R6T-2020-0042, Granting Clean Water Act Section 401 Water Quality Certification and Basin Plan Prohibition Exemption, Bear Creek Lower Meadow Restoration Project, Placer County	8/03/2020
	COVID – 19 Approval of Extension Request for Groundwater Monitoring Well Installation, Mountain High West Wastewater Treatment Plant, Wrightwood, San Bernardino County	8/03/2020
EXTENSIONS		
	Extension Approval of Deadline for Submitting Site-Specific Landfill Work Plan to Determine the Presence of Per- and Polyfluoroalkyl Substances (PFAS) Subject to the March 20, 2019, State Water Resources Control Board Order WQ 2019-0006-DWQ, Furnace Creek Class III Landfill, Inyo County	7/24/2020
MISCELLANEOUS DOCUMENTS		
	Corrective Action Order for Additional Groundwater Investigation Pursuant to Health and Safety Code Section 25296.10 Corrective Action Requirements and Rescission of the Recommendation of No Further Action, Monte Vista Alta Dena Dairy (Global ID: T0603700388), Los Angeles County	7/20/2020
	Levi Water Monitoring Equipment (CONTRACT)	7/22/2020
	Budget Approval Justification (CONTRACT)	7/29/2020
	Receipt of 2020 Allotment Management Plans for Grazing Operations along the Shoreline of Eagle Lake, Lassen County, California	7/20/2020

	Department of The Air Force Air Force Civil Engineer Center Installation Support Section Edwards Air Force Base, California Memorandum For Distribution	7/24/2020
	Receipt of 2020 Allotment Management Plans for Grazing Operations along the Shoreline of Eagle Lake, Lassen County, California (BLM)	8/07/2020
	Nomination for the Emergency, Abandoned, and Recalcitrant (EAR) Account Fiscal Year 2020-2021	8/11/2020
	Lahontan Regional Water Quality Control Board Senior Executive Committee Member, Arroyos Record of Decision Dispute, Operable Units 4 and 9, Edwards Air Force Base	8/11/2020
	Confirmation of Receipt of AB 52 Notification Request and Initiation of Consultation for Development of a Nonpoint Source Permit for Federal Lands	8/13/2020
	Information Request: Cleanup and Abatement Order (CAO) No. R6V-2020-(Proposed) for Ramiro Villa Avila, Los Angeles County, Assessor Parcel No. 3036-020-043	8/13/2020

* 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.

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_

ENCLOSURE 4

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

EXECUTIVE OFFICER'S REPORT
JULY, AUGUST & SEPTEMBER 2020 STANDING ITEMS

The Water Board has requested regular reports on several programs and projects. The following table lists these standing reports, the reporting frequency and the dates the items are due.

ISSUE	FREQUENCY	DUE DATE
Cannabis Update	Annual	September – **Article # 6**
Climate Change Adaptation Strategy Update	Annual	May
County Sanitation Districts of Los Angeles – District No. 20, Palmdale	Annual	September – **Article # 14**
Grazing Update	Annual	July – **Article #4**
Onsite Septic Systems	Annual	April
Salt & Nutrient Management Plans	Annual	May
Status of Triennial Review Projects	Annual	August – **Article # 3**
Status of Dairies	Annual	February
Status of Grants	Annual	June
City of Barstow Nitrate	Annual	March
City of Barstow Orphan Perchlorate	Semi-Annual	March September
Lake Tahoe Water Quality	Annual	December
Leviathan Mine	Semi-Annual	January July – **Article #8**
Harmful Algal Blooms	Annual	November
Pacific Gas & Electric Company	Semi-Annual	June December
Quarterly Violations Report	Quarterly	January (3rd quarter) April (4th quarter) July (1st quarter) – **Article #12** October (2nd quarter)

*Water Board staff presentation

ENCLOSURE 5

2021
LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD
PROPOSED MEETING SCHEDULE

DATE	DAYS	LOCATION
January 6-7	Wednesday/Thursday	Video/Teleconference
February	*No Meeting Scheduled*	*No Meeting Scheduled*
March 10-11	Wednesday/Thursday	Video/Teleconference
April	*No Meeting Scheduled*	*No Meeting Scheduled*
May 12-13	Wednesday/Thursday	Video/Teleconference only
June	*No Meeting Scheduled*	*No Meeting Scheduled*
July 14-15	Wednesday/Thursday	Video/Teleconference
August	*No Meeting Scheduled*	*No Meeting Scheduled*
September 8-9	Wednesday/Thursday	Video/Teleconference
October	*No Meeting Scheduled*	*No Meeting Scheduled*
November 10-11	Wednesday/Thursday	Video/Teleconference
December	*No Meeting Scheduled*	*No Meeting Scheduled*

NOTE:
The Water Board may convert the 2020 two-day Board Meetings to one day, if needed.