



EXECUTIVE OFFICER’S REPORT • March 2021
Covers January 16, 2021 – February 15, 2021

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State and Regional

1. Personnel Report – *Eric Shay*

New Hires

- Meghan Walsh, 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.

Vacancies

- C.E.A. (Career Executive Assignment) to serve as the Region’s Assistant Executive Officer.
- Environmental Scientist, Forestry / Dredge & Fill Unit, South Lake Tahoe. This position will engage in permit development and/or enrollments under the Lahontan Timber Waiver, Clean Water Act section 401 Water Certification for activities in Waters of the U.S., dredge and fill permits for Waters of the State, environmental document preparation or compliance for projects where the LRWQCB is a lead or responsible agency under CEQA, and regulatory actions as needed.

- Environmental Scientist, Regulatory and Enforcement Unit, South Lake Tahoe. The position is being considered for reclassification to Water Resource Control Engineer to provide support for Wastewater and NPDES permitting work.
- Environmental Scientist, Non-Point Source Unit, South Lake Tahoe. This position will assist with the implementation of the Freshwater and Estuarine Harmful Algal Bloom Program to satisfy a legislative mandate related to harmful algal blooms (HABs). The incumbent will work closely with waterbody operators/owners, county environmental health department staff and public health officers, tribes, non-governmental groups, and the public to respond to HABs; develop ongoing monitoring programs; post health advisories at recreational waterbodies; and increase community awareness of HABs.
- Water Resource Control Engineer, Wastewater & Agricultural Operations Unit, Victorville. This position provides regulatory compliance oversight to dairies and wastewater treatment plants located in the South Lahontan Basin.
- Engineering Geologist, Wastewater & Agricultural Operations Unit, Victorville. This is a new position authorized under SB 1215 (Hertzberg) legislation passed in 2018. The incumbent will work with economically disadvantaged communities that have onsite wastewater treatment systems (OWTS, or septic systems) that could be connected to a sewer system if they are within three miles of a system. The incumbent will also work with other small rural communities in need of upgrading their wastewater treatment systems.

Departures

- Mark Lemus, Water Resource Control Engineer, Wastewater & Agricultural Operations Unit, Victorville.

North Lahontan Region

2. An Overview of the Bridgeport Grazing Waiver and a Path toward the 2022 Renewal – *Carly Nilson*

In 2007 the Lahontan Water Board adopted the Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region (Bridgeport Grazing Waiver). This waiver has been adopted every five years, including 2012 and 2017, and currently regulates 7 different permittees. The current Waiver will be expiring in July 2022 and Water Board staff have begun the process of evaluating effectiveness of requirements and evaluating potential changes for the 2022 renewal. The information provided below refamiliarizes the Board with the current monitoring and reporting requirements, the water quality data, the elements of a Range Water Quality Management Plan (RWQMP), and grazing management practices that have been implemented in the Bridgeport Valley. The report also presents a path toward developing a reasonable and effective approach to update the Waiver, which involves engaging with the Bridgeport Ranchers Organization (BRO) and providing the Water Board with opportunities to give staff input and direction.

Water Quality Monitoring. The Bridgeport Grazing Waiver requires water quality sampling weekly in 2017, and monthly from 2018-2021 for July and August, at three sampling locations: (1) Buckeye Creek at confluence with Bridgeport Reservoir; (2) Robinson Creek at confluence with Bridgeport Reservoir; and (3) East Walker River

immediately above the town of Bridgeport. The sampling locations are at the end of the Valley before entering Bridgeport Reservoir, and sample collection is conducted during the critical mid-summer months to evaluate compliance with the interim bacteria targets. The BRO sampled on 12 occasions in 2017 in July and August, twice in 2018 in July and August, and nine sampling events from June-August in 2019 for fecal coliform and E. coli.

The interim target for fecal coliform is 200 coliform forming units (cfu) per 100mL. By 2028 the BRO is to comply with the statewide or Basin Plan indicator bacteria water quality objectives in effect at that time.

Water Quality Data. The data for the three sampling locations shows that water quality often exceeds the interim target of 200 cfu fecal coliform per 100mL and the statewide criteria of 100 cfu E. coli per 100mL for protection of the REC-1 (water contact recreation) beneficial use. Water Board staff, in coordination with the regional Surface Water Ambient Monitoring Program, monitored upstream of Bridgeport Valley in 2011 (August-October) and 2012 (May-October). Sites were chosen at Buckeye and Eagle Creeks, both above the U.S. Forest Service campground where there are known federal grazing allotments and below a popular hot spring, to capture any additional anthropogenic sources. Most sites were sampled five times or more during a 30-day period to calculate a geomean. The fecal coliform data ranged from non-detect to 54 cfu per 100mL. The samples were also analyzed for E. coli with the largest concentration in one sample being 50 cfu per 100mL. These data are available to the public through the California Environmental Data Exchange Network.

Elements of Range Water Quality Management Plans (RWQMP). The BRO is responsible for submitting RWQMPs and annual reports. Generally, the information received in the RWQMPs includes a property map, livestock and water management, and existing and planned improvements. The RWQMPs have historically been amended on an as-needed-basis. The BRO completes a one-page template for annual reporting which includes information as to grazing operations, access to surface water, and irrigation practices related to grazing activities. It also includes implemented and planned management activities. Some examples include rotation, exclusion, salt placement, restoration, fencing, filter strips, irrigation infrastructure and land leveling, herding, stream crossings, off-stream watering, wetland enhancement irrigation tailwater recovery, and contour bordering. The BRO reports on when these activities are planned and associated costs. Some ranchers have collaborated with the Natural Resource Conservation Service (NRCS) for some of the planned and executed rangeland management improvements.

Grazing Management Practices Implemented in the Bridgeport Valley. To provide some context as to the efforts of the management practices implemented in Bridgeport Valley over the last 15 years, Lahontan Water Board staff would like to highlight the efforts of one ranch to date.

The Sceirine Point Ranch developed a Conservation Plan in coordination with NRCS to address resource concerns such as water quality and quantity, plant production, health and vigor, and wildlife habitat. They have applied for NRCS Program applications to financially assist in the implementation of the Conservation Plan. They acquired an Environmental Quality Incentives Program contract to install concrete irrigation structures and culvert stream crossings according to NRCS standards and specifications. Fencing has also been constructed to create riparian pastures and to enclose irrigation tailwater-sediment collection areas. The Sceirine Point Ranch has also voluntarily entered into a conservation easement, safeguarding 2,375 acres from

future development. You can read more about the Sceirine Ranch as it was highlighted on USDA's *Fridays on the Farm*:

<https://nracs.maps.arcgis.com/apps/Cascade/index.html?appid=cbf13fb785d847248f29ab7dab9c2673>.

Beyond the example above of Sceirine Point Ranch, the Bridgeport Valley ranchers have a long history of land management and investment in their properties for conservation. The well-irrigated valley provides a unique habitat in the Eastern Sierra. The community is active in the conservation of the bi-state sage grouse and ranchers have been known to remove coniferous trees to provide more suitable habitat on their properties. The Valley also provides an important wildlife corridor for mule deer and ranchers have implemented lower fences or temporary electric fencing to allow for wildlife mobility. Many ranches have also entered permanent conservation easements to ensure the land is only used for agricultural purposes in the future and is never subdivided into other land uses to help protect this unique habitat.

Path toward the 2022 Waiver Update. Water Board staff is continuing the evaluation of rangeland management and water quality improvements in the Bridgeport Valley to determine updates to the Bridgeport Grazing Waiver in 2022, or if other regulatory tools are more appropriate. If the Bridgeport Grazing Waiver is updated, it must include a relevant sub-set of the East San Joaquin Review Order's precedential requirements (e.g. sediment and erosion control plan, outreach, and training).

Water Board staff plans to begin more formal outreach with the BRO and interested parties in the Bridgeport Valley in the coming months to solicit input on potential options to pursue for updating the Bridgeport Grazing Waiver. After providing the BRO an opportunity to provide input on potential options, staff plans to synthesize the feedback received and bring an informational item to the Board in late 2021/early 2022 to inform the update to the 2017 Grazing Waiver. Additionally, staff encourages the Board to request additional information on the Bridgeport Grazing Waiver or the expansion of the topics in this article to be included in future EO Reports.

3. Status Update: Development of Nonpoint Source Permits for Discharges from Certain Land Management Activities on Federal Land – Adam Henriques

Staff from the Lahontan and Central Valley Water Boards (Water Boards) continue to work collaboratively in the development of two Non-Point Source (NPS) permits, applicable to certain activities conducted by the United States Forest Service (USFS) and Bureau of Land Management (BLM) on federal lands (Federal NPS Permits). The Water Boards intend to adopt unique Waste Discharge Requirements respective to each Water Board's regional authority. The Federal NPS Permits propose to regulate NPS discharges from five categories of land management activities, including vegetation management, transportation management, recreation facilities management, wildfire management and recovery, and restoration projects. Since the last status update, the Water Boards removed grazing as an activity proposed for coverage under the permit. The coordinated approach between the Water Boards is intended to support regulatory consistency across Water Board regional boundaries. The Water Boards maintain a shared project website (www.waterboards.ca.gov/federalnpspermit), lyrics list, and project email to provide the public, and interested parties, information about the Federal NPS Permit.

The Water Boards maintain engagement with representatives from the USFS and BLM in development of the Federal NPS Permits. An interagency Permit Development Group, comprised of federal and state staff representatives, fosters collaboration in the

development of permit concepts and goals. In addition to these meetings, the Water Boards continue to hold semi-annual meetings with executive leadership from the USFS Regional Office and BLM State Office. The most recent executive leadership meeting occurred on February 9, 2021.

Pursuant to the California Environmental Quality Act (CEQA), each Water Board will be the Lead Agency for the Federal NPS Permit it adopts. The Water Boards will analyze probable environmental impacts associated with the proposed Federal NPS Permits through the preparation of Environmental Impact Reports (EIRs). The Water Boards notified California Native American Tribes of the opportunity to consult in Spring 2020. Several tribes in each region expressed interest in receiving notifications regarding permit development and will be included in all future notifications.

Upon determination to prepare an EIR, CEQA requires the Lead Agency to distribute a Notice of Preparation (NOP) to stakeholders and agencies to solicit comments on the content and scope of environmental analysis to be included in the EIR. In early March 2021, the Water Boards plan to publish the NOPs to the State Clearinghouse and distribute the documents to the public via lyris lists and webpage posting. Water Board staff plan to conduct one public scoping meeting per region, with meeting access details provided in the NOP. Lahontan Water Board staff will conduct our virtual public scoping meeting on April 7, 2021, from 2:00 pm to 3:30 pm.

In effort to improve public outreach and communication, the Water Boards are engaging with the Office of Public Participation (OPP) for guidance and support with the CEQA process. Services offered by OPP for this scoping meeting include NOP translation, outreach facilitation, virtual meeting facilitation, and scoping meeting planning.

The Water Boards will consider all comments received during scoping as the Draft EIRs are prepared. The Draft EIRs are scheduled to be published in Spring 2022. After a public comment period and completion of Final EIRs, the Water Boards expect to present the Federal NPS Permits and EIRs to their respective Boards for adoption in early 2023.

South Lahontan Region

4. Initial Boron Consolidation Meeting – February 2, 2021 – Sergio Alonso

February 2, 2021, marked an initial meeting to discuss a technical assistance request for preparing a Feasibility Study (Study) to consolidate wastewater services in the Boron area. In attendance were representatives from the Boron Community Services District (CSD), Park Knolls Homeowner's Association (Park Knolls HOA), and Desert Lake CSD, that initiated the Study. Also present were representatives from the U.S. Borax mine in Boron (US Borax), California Rural Water Association (CRWA), and State Water Resources Control Board, Division of Financial Assistance (State Water Board). Water Board staff in attendance included Jehiel Cass, John Morales, Sergio Alonso, Mark Lemus, and Christina Guerra.

The Boron CSD, Park Knolls HOA, and Desert Lake CSD entities applied to the State Water Board for a grant to prepare a Study evaluating options and costs to consolidate domestic wastewater collection, upgrade treatment processes, and monitor effluent and receiving groundwater quality. The State Water Board accepted the grant application, and in turn, authorized the CRWA to provide technical assistance and complete the Study for consolidating and upgrading wastewater collection and sewer services in the Boron area. The CRWA has a working relationship with the State Water Board to

oversee technical assistance projects for economically disadvantaged rural communities. There are professional staff working for the CRWA that will complete the Study and all parties involved acknowledge their cooperative working relationships.

The possibility of entering into a Joint Powers Agreement (JPA) was discussed during this meeting that would allow the local agencies to work together on this Study while still maintaining their respective jurisdiction sovereignty. In the case that all entities could not agree to join a singular JPA, other options will be explored. Water Board staff suggested the agencies could follow a model similar to that used by Eastern Sierra CSD and the City of Bishop when they created the Bishop Area Wastewater Authority, which is a JPA allowing each entity to retain their sovereignty.

A challenge facing consolidation efforts is how existing systems can connect to each other to reduce the number of treatment areas (Figure 4.1). In addition to the three entities named above and while in conversation with Water Board staff, Caltrans has expressed an interest in using a local wastewater service agency to treat high-strength domestic wastewater from the Boron rest area located west of the Desert Lake CSD facility. US Borax supports the Study but was noncommittal pending the Study results. As show on Figure 4.1, the US Borax mining operations discharges its domestic wastewater effluent to percolation ponds within the vicinity of the other Boron area entities. Depending upon the Study results, it may be feasible to divert US Borax domestic wastewater to an upgraded Boron area wastewater treatment plant in the future. The Study will evaluate this option.

The Park Knolls HOA system is located within one-half mile of the Boron CSD wastewater treatment plant (located to the south). Should formation of a JPA be successful, the potential consolidation agreement would allow for upgrading a central wastewater treatment system, eliminating raw sewage disposal, consolidating monitoring programs, and potentially reduce overall sewer use fees.

CRWA staff estimate the Study will be completed by the end of 2021. During the Study, they anticipate several issues arising due to complexities with the numerous stakeholders involved in the Boron area.

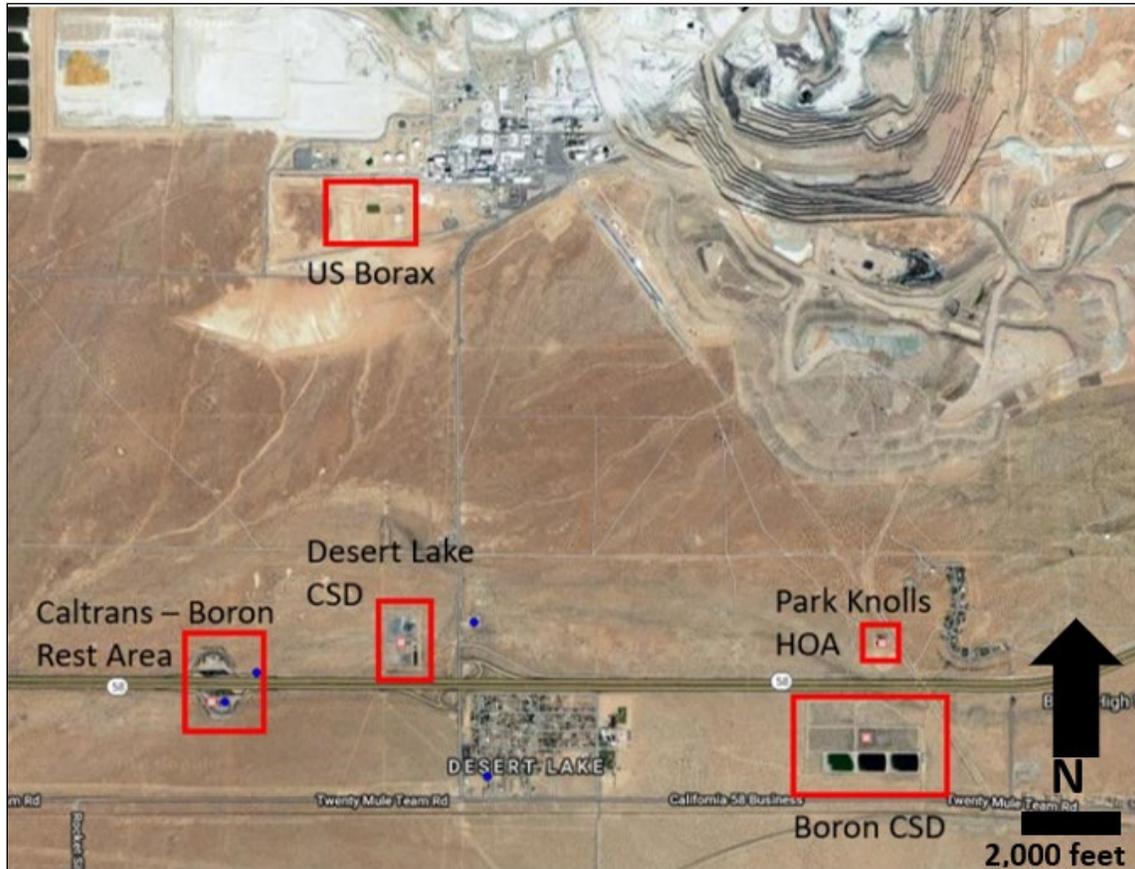


Figure 4.1 – Map showing the locations of all Boron area sewage disposal facilities involved with the consolidation proposal.

5. Inyo-Mono Integrated Regional Water Management Group Stakeholder Meeting – Sergio Alonso & Jeff Fitzsimmons

Water Board staff virtually attended the Inyo-Mono Integrated Regional Water Management (IRWM) Group quarterly stakeholder meeting on January 27, 2021. Attendees of the meeting included members of the public, representatives of California Native American tribes, private organizations, local municipal governments, service districts, and state agencies. These meetings provide an opportunity for members of the Inyo-Mono IRWM Group and other regional stakeholders to voice their concerns, have discussions, collaborate thoughts, coordinate their efforts with management for regional water issues, and give consideration to social and economic concerns of the area.

Financial updates were provided for Disadvantaged Community Involvements Grants, Eastern California Water Association / Integrated Regional Water Management Plan Funds, and Proposition 1 Round 1 Implementation Grants. In general, COVID-19 has minimized spending and hindered outreach efforts. In addition, implementation planning and potential projects were discussed for Round 2 of Proposition 1 Grants.

Grant funding was awarded to the Bishop Paiute Tribe for projects addressing management systems of domestic water, irrigation, wastewater conservation plans, and a rate study for water and sewer rates. The Bishop Paiute Reservation sustains 620 residential water hookups with domestic water provided via groundwater wells. Irrigation water is provided by a pipeline system fed from the Bishop Creek watershed and wastewater service is provided through the Eastern Sierra Community Service District.

The Inyo-Mono IRWM Group also has a general fund that is funded through members. The funds are used to assist with the administrative costs associated with the operations of the Inyo-Mono IRWM Group. During 2020, the seven member entities contributed to the general fund and raised a total of \$16,600, although a \$20,000 goal was set.

Dr. Aaron Steinwand (Director, Inyo County Water Department), informed the meeting participants that components of the Sustainable Groundwater Management Act (SGMA) are prepared and have been presented to and discussed with the Inyo County Board of Supervisors at monthly meetings. Goals and management objectives continue to be refined to ensure undesirable outcomes are avoided. The program is segmented into three regions: Tri-Valley, Fish Slough, and Lone Pine. The Inyo-Mono IRWM Group is working with the Owens Valley Groundwater Authority (OVGA) with outreach efforts. The OVGA website is being updated and kept current with meeting dates and news. Through the website, interested parties can request to be included with the Draft SGMA component distribution, when ready.

The Inyo-Mono IRWM Group promotes water management awareness between communities throughout the region, encourages development of projects, facilitates the implementation of projects towards protecting water quality, and continues to build upon their continued successes.

A date has not yet been determined for the next quarterly Inyo-Mono IRWM Group meeting.

6. Mono County Collaborative Planning Team Meeting – *Jeff Fitzsimmons*

Lahontan Water Board staff virtually attended the Mono County Collaborative Planning Team (CPT) first quarter meeting on January 28, 2021. The Mono County CPT meetings provide an opportunity for representatives from Mono County (County), federal, state, and local agencies, along with tribal representatives and private citizens to share information, voice concerns, and provides a forum for discussion and collaboration on efforts to meet the challenges faced within the County.

The Mono County CPT meeting participants were formally introduced to Colonel Daniel J. Whittnam, Commanding Officer, United States Marine Corps, Mountain Warfare Training Center (MWTC) and to Lesley Yen, Inyo National Forest Supervisor, both of whom briefed the group on their respective agency missions, current issues, and local concerns. Other meeting participants provided overviews and updates of continuing efforts of their respective agencies in response to COVID-19, along with challenges posed by current winter weather conditions within the county.

In general, all agencies are continuing their efforts to minimize COVID-19 impacts. Attendees were informed that the Lahontan Water Board offices in South Lake Tahoe and Victorville remain open with minimal staffing, and that most of our staff are continuing to telework. 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.

Dr. Holly Alpert, an independent contractor, and Mr. Rick Kettleman, an employee with the Eastern California Water Association (ECWA), informed the Mono County CPT of the Regional Forest and Fire Capacity Program (RFFCP). The ECWA received a grant to help build capacity for ecosystem resilience and ecosystem health, with respect to wildfires. The RFFCP includes a workgroup of stakeholders that include local and regional municipal agencies as well as state and federal agencies. The RFFCP has a website, is building an outreach program, and is preparing a list of shovel-ready projects to minimize local impacts.

Janet Hatfield, a Project Manager with the Plumas Corporation, briefed the Mono County CPT on the Eastern Sierra Climate and Communities Resilience “Donut” Project that began in November 2020 and is anticipated to extend over the next 20 years. The Donut Project involves approximately 55,000 acres of Inyo National Forest Lands surrounding Mammoth Lakes. The project’s purposes include building fire resilient landscapes, fire adaptive communities, and safe and effective wildfire responses to benefit local and downstream beneficiaries. Stakeholders are currently drafting goals and identifying project boundaries.

Justin Nalder, the Superintendent of Solid Waste for Mono County, has been temporarily reassigned as the Mono County Emergency Operations Director for the Mountain View Fire incident. On November 17, 2020, the Mountain View Fire in Mono County resulted in the evacuation of residents, damage or destruction of nearly 100 residential structures and numerous other buildings, damage or destruction of critical infrastructure, and encompassed approximately 22,000 acres of land. The initial phase of recovery efforts to manage hazardous waste has completed. Current winter weather conditions have delayed the next phase of recovery efforts. Weather permitting, Mr. Nalder anticipates up to four months to complete recovery efforts. Impacts from the Mountain View Fire have added to COVID-19 challenges faced by the citizens of Mono County and agencies represented at the Mono County CPT meeting.

The Mono County CPT meetings will continue to provide an opportunity to maintain and build partnerships and to succeed in meeting the needs of the County and its communities.

The next quarterly meeting of the Mono County Collaborative Planning Team is scheduled for Thursday, April 29, 2021.

7. City of Barstow Nitrate - *Timothy Middlemis-Clark*

This standing item describes the compliance status for the City of Barstow (City) with waste discharge requirements (WDRs) and various compliance orders issued by the Water Board regarding historical disposal practices from its wastewater treatment plant.

Waste Discharge Requirements

Discharge from the Barstow Wastewater Treatment Plant is currently regulated by waste discharge requirements, Board Order No. R6V-2019-0252 (Board Order). This Board Order requires monitoring and reporting of nitrate effluent and groundwater monitoring well sampling results. Submitted monitoring reports must include maps and graphs to show nitrate trends in groundwater. Additionally, the Board Order established an effluent limit for total nitrogen of 10 milligrams per Liter (mg/L) and a receiving water limitation for nitrate as nitrogen of 10 mg/L.

According to self-monitoring reports submitted by the City, the monthly total nitrogen concentrations in effluent samples averaged 6.24 mg/L and concentrations of nitrate as nitrogen averaged 4.26 mg/L for 2020. Groundwater sample data results, in conjunction with groundwater flow patterns, indicate that the nitrate concentrations predominantly decrease from upgradient to downgradient in the Soapmine area north of the Mojave River as the mass of nitrate in groundwater diffuses and migrates eastward, as illustrated in Figure 7.1.

Nitrate Pollution Groundwater Cleanup

The Water Board adopted Cleanup and Abatement Order (CAO) No. R6V-2013-0045 requiring the City to address nitrate polluted groundwater on the north side of the

Mojave River. The cleanup status is unchanged and on hold until a comingled perchlorate plume, not the City's responsibility, is addressed.

Residential Well Sampling and Replacement Water in the Soapmine Road Area

As required by CAO No. R6V-2007-0017, the City continues to conduct quarterly sampling of residential drinking water wells to measure nitrate concentrations in groundwater. If a residential well sample contains a nitrate as nitrogen concentration equal to or greater than 5 mg/L, then the City must provide residents with uninterrupted replacement water in the Soapmine Road area. During first quarter 2021, the City sampled 36 residential wells (shown in Figure 7.2). This count may vary based on the number of active residences in the Soapmine Road study area.

In aggregate, the nitrate concentration trends have been relatively stable, with a decreasing trend in residential wells sampled since quarterly monitoring began (illustrated in Figure 7.3). According to the City's submitted first quarter 2021 report, only 10 residential well samples contained nitrate as nitrogen concentrations exceeding the replacement water threshold concentration (5 mg/L). However, the City is providing 16 residences within the required study area with uninterrupted replacement water service (bottled water). Based on the difference between the historical groundwater impact and current sampling data, the City requests the Water Board to modify CAO No. R6V-2007-0017 and clarify a methodology for ending replacement water delivery at some residences.

Therefore, Water Board staff are reviewing the City's request to modify residential well sampling and replacement water requirements in CAO No. R6V-2007-0017. These requests are based on the sampling conducted since the CAO was adopted and include the following that is under consideration:

1. Reduce sampling frequency for some residences from quarterly to either semi-annually or annually based on nitrate as nitrogen sample concentrations consistently measuring less than 5 mg/L.
2. Increase nitrate (as nitrogen) trigger threshold concentration from 5 to 10 mg/L.
3. Amend CAO No. R6V-2001-0017 to provide a methodology that would allow the City to propose cessation of the requirement to provide replacement water to Soapmine Road area residents if certain criteria are met.

As staff resources allow, Water Board staff plan to address the City's request to revise CAO No. R6V-2007-0017 during the next fiscal year.

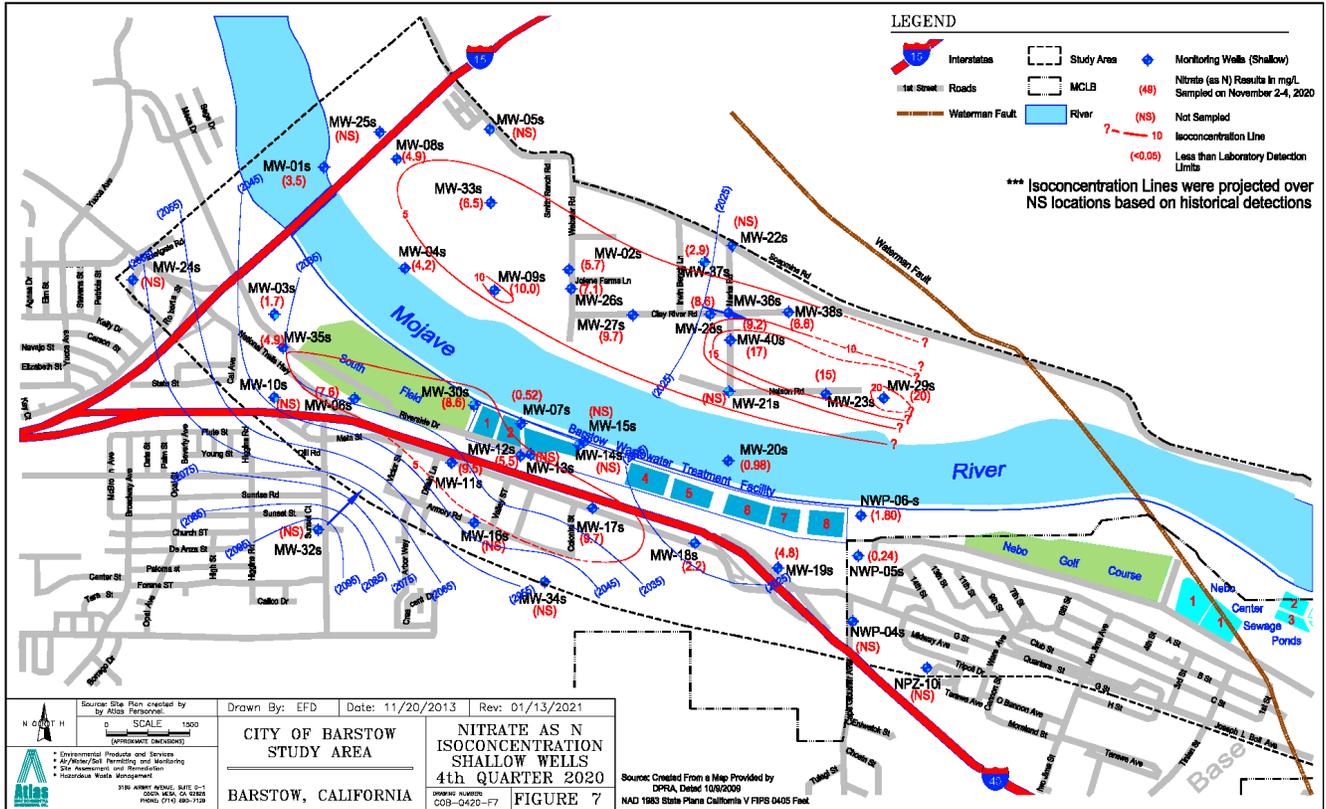


Figure 7.1 - Map illustrating groundwater gradient and sampled nitrate concentrations based on shallow groundwater monitoring wells from the City's 2020 annual self-monitoring report.

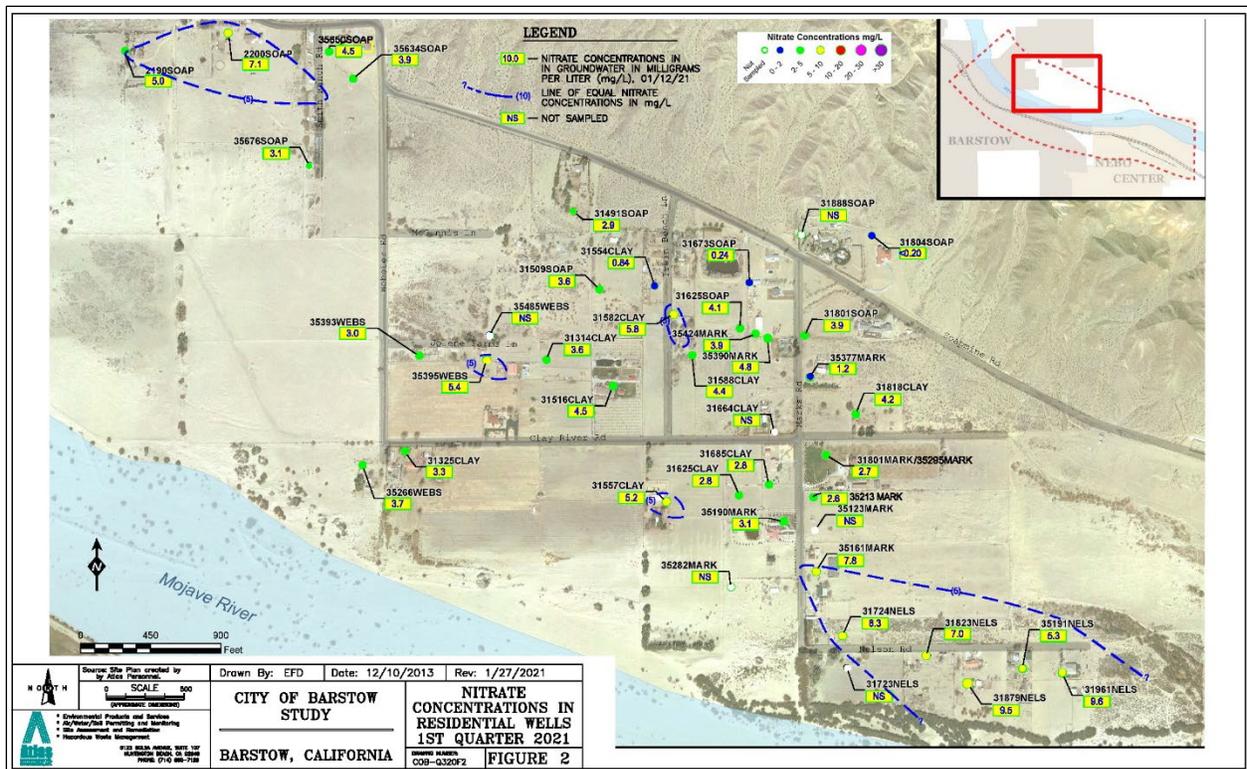


Figure 7.2 - Map illustrating residential well locations and concentrations of sampled nitrate as nitrogen as reported in the City's first quarter 2021 report.

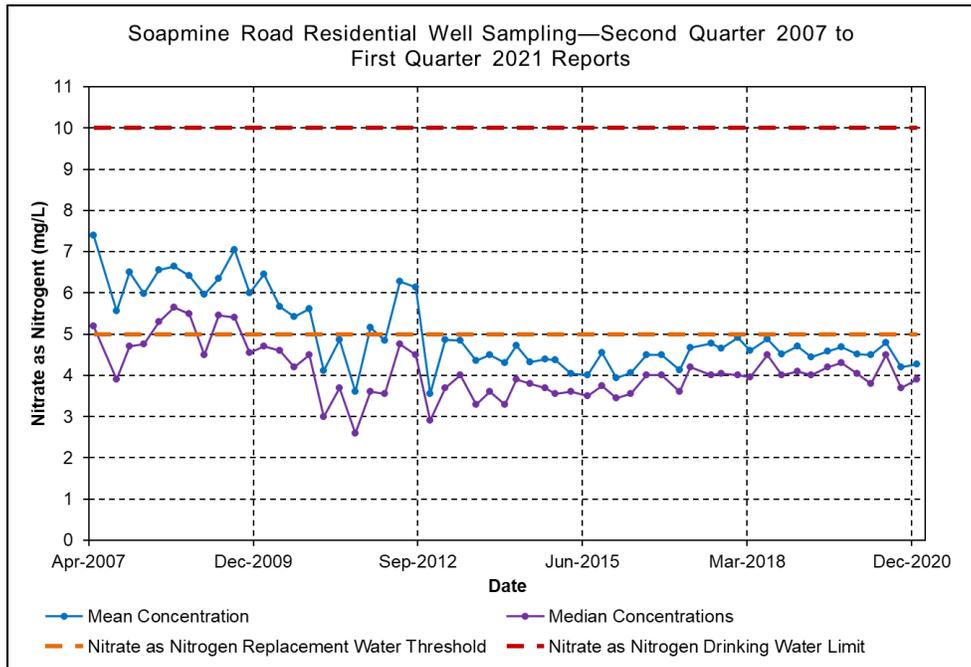


Figure 7.3 - Chart illustrating sampled nitrate as nitrogen concentrations from residential wells reported on a quarterly basis compared to the replacement water threshold concentration contained in the CAO and the drinking water limit

8. Update on Barstow Perchlorate, Barstow, California, February 2021 – *Alonzo Poach* Remediation Work and SB 445 Funding

The consultant for this project, APTIM, prepared a Focused Feasibility Study Report (Focused FS) and is currently preparing a remedial design work plan document for source area remediation of soil. The Focused FS provides an evaluation of costs, effectiveness, and implementability of the various remedial alternatives proposed. Water Board staff reviewed the Focused FS and concur with APTIM’s recommendation for the proposed remedial action in the source area. The Focused FS and remedial design work plan will be combined into one document and is expected to be finalized by second quarter 2021.

- Based on the evaluation in the Focused FS, excavation and composting of shallow soil with in-situ substrate enhanced anaerobic remediation for deep soil was selected for full-scale source area remedial action.
- The Focused FS report estimates the cost of remediation in the source area to be approximately \$2.2 million; and the work will take approximately one year to complete. The Water Board has approximately \$2.2 million remaining in the original SB445 grant funding of \$2.67 million.
- After implementation of the source area remedy, Water Board staff plans to pursue additional SB445 grant funding to treat dissolved-phase perchlorate in the groundwater further downgradient of the source area.

Bottled Water for Impacted Qualified Residents

The Water Board is currently providing replacement bottled water to six impacted residents who meet disadvantaged community guidelines. This funding is available through June 2023.

Status of the Perchlorate Plume

Water Board staff continues to collect groundwater samples from monitoring wells and private residential wells on a quarterly basis in conjunction with samples collected by APTIM in the source area. Sample collection is focused on identifying and protecting receptors and informing residents when perchlorate concentrations are at/or above the maximum contaminant level of 6 micrograms per Liter ($\mu\text{g/L}$) in their wells. The perchlorate plume is approximately 2.5 miles long (where concentrations equal or exceed 6 $\mu\text{g/L}$). However, due to continued plume migration, the downgradient portion of the plume at the very eastern edge is now undefined because the plume front has advanced past groundwater monitoring well MW-38, which is the furthest downgradient monitoring well location in the path of the plume (see Figure 8.1). Additional monitoring wells in the eastern portion of the area are needed to establish the leading edge of the plume. Water Board staff is looking at various funding options including additional grant money to further define the perchlorate plume in the lower Soapmine Road residential area east of Marks Road.

Water Board staff faced several challenges throughout the last year collecting routine samples due to the COVID-19 emergency and problems with our State-wide laboratory. With these issues, a few sampling events were missed, or data sets were smaller than originally planned. Nonetheless, due to a robust groundwater dataset dating back to approximately 2012, the few missed rounds of groundwater data did not negatively impact data analysis for long-term trends.

On-going Activities

- Quarterly groundwater sampling of newly installed source area groundwater monitoring wells MRP-MW-1A, MRP-1B, MRP-MW-2, MRP-MW-3, and MRP MW-4.
- Quarterly monitoring of private residential wells. The next sample collection event is planned for April 2021.

