EXECUTIVE OFFICER'S REPORT
July 1, 2025 – July 31, 2025

Contents

1. Personnel Report — *Sandra Lopez*

Promotions

- Ben Letton, Executive Officer of the Lahontan Water Quality Control Board

Vacancies

- Assistant Executive Officer for the Lahontan Region
- Senior Water Resource Control Engineer Supervisor (Eastern California Cannabis), Victorville. This position will be responsible for implementing the Water Board's Cannabis Cultivation Regulatory Program in the Lahontan and Colorado River Regions. The Eastern California Cannabis Supervisor will provide the lead responsibility for making policy recommendations, providing technical expertise orally and in written documents, evaluating and drafting engineering reports, staff reports, other technical documents, and performing analysis on technically complex and politically sensitive assignments related to cannabis in the Lahontan and Colorado River regions.

- Senior Environmental Scientist Specialist, South Lake Tahoe. This position will act as Regional Monitoring Coordinator and will lead development of tools to evaluate water-quality at a regional and watershed scale, provide technical expertise and mentorship in surface water monitoring program development and implementation, and lead regional efforts to evaluate and report on water quality in relation to many complex issues including the effects of climate change, fire, and drought.

- Senior Water Resource Engineer Supervisor, South Lake Tahoe. This position supervises the technical staff in the Leviathan Mine Cleanup Unit. The unit also works closely with a Senior Water Resource Engineer Specialist, a Senior Engineering Geologist Specialist, and attorneys. The combined team works together to implement the Water Board's Leviathan Mine site cleanup and program.

- Scientific Aid, Non-Point Source and Forestry/Dredge & Fill Units, South Lake Tahoe. This position will review and evaluate water quality data, assist with harmful algal bloom response, and assess compliance with water quality orders and permits associated with grazing, restoration, timber, and forestry activities.

Departures

- Katrina Fleshman, Executive Assistant/Associate Governmental Program Analyst

2. **Chino Basin Watermaster Field Tour and ties to the Mojave Basin One Water Concept —** *Anna Garcia, Reginald Tan, Lorien Sanders, and Jan Zimmerman*

On July 21, 2025, Lahontan Water Board staff joined staff from Victor Valley Wastewater Reclamation Authority (VVWRA), City of Victorville, and Mojave Water Agency (MWA) on a Chino Basin field tour hosted by the Chino Basin Watermaster. The field tour focused on the Chino Basin Groundwater Recharge Program, located within the Santa Ana Region. Field tour stops included Chino Basin Watermaster groundwater recharge facilities, the Chino Basin Water Conservation District Waterwise Community Center, and the Prado Basin Habitat Area.

The field tour was coordinated by VVWRA General Manager, Darron Poulsen, to gain insight and foster collaborative support for the Mojave Basin One Water Concept within the Lahontan Region. The Mojave Basin One Water Concept promotes the integrated management of stormwater, groundwater, surface water, recycled water, and imported water as a single, interconnected system in the Mojave Basin. The goal is to optimize water use, improve water quality, and ensure a reliable and affordable water supply for the Mojave Basin. The One Water Concept encourages partnership between multiple agencies, including VVWRA, MWA, City of Victorville, and Lahontan Water Board to efficiently manage recycled water to recharge groundwater basins. Mr. Poulsen presented the concept to the MWA Technical Advisory Committee (MWA TAC) at their December 15, 2022 meeting, as described in our Lahontan Water Board December 2022 Executive Officer's Report.

Chino Basin Watermaster

Mr. Poulsen of VVWRA previously served on the Chino Basin Watermaster Board during the time of their 2020 update to the Chino Basin Optimum Basin Management Program (OBMP). The Chino Basin OBMP has four goals: 1) Enhance Basin Water Supplies, 2) Protect and Enhance Water Quality, 3) Enhance Management of the Basin, and 4) Equitably Finance the OBMP. According to the 2020 OBMP Update Report, actions defined by the stakeholders to remove impediments to the OBMP goals were grouped into the nine Program Elements that include the development and implementation of a comprehensive recharge program, a comprehensive monitoring program, and cooperative programs with the Santa Ana Regional Water Quality Control Board and other agencies to improve basin management.

The Chino Basin Groundwater Recharge Program is implemented by the Chino Basin Watermaster, the Inland Empire Utilities Agency (IEUA), the Chino Basin Water Conservation District, and the San Bernardino County Flood Control District. According to OBMP Staff Status Report 2024-1, the Chino Basin Groundwater Recharge Program is a comprehensive water supply program to enhance water supply reliability and improve groundwater quality in local drinking water wells by increasing the recharge of storm, imported, and recycled waters (Figure 2.1). The recharge program is regulated under the IEUA and Chino Basin Watermaster's recycled water recharge permit—Santa Ana Water Board Order No. R8-2007-0039 and Monitoring and Reporting Program No. R8-2007-0039.

Figure 2.1: Chino Basin Watermaster staff describe groundwater recharge efforts at their San Sevine Recharge Basins. The San Sevine Recharge Basins receive State Project Water, Stormwater, and Recycled Water. Chino Basin Watermaster is a co-permittee with the Inland Empire Utilities Agency (IEUA).

The Chino Basin Watermaster also implements a comprehensive groundwater level and water quality monitoring program. This basin-wide monitoring program supports periodic reassessment of basin Safe Yield, monitoring and management of ground-level movement, impact analysis of desalter pumping on private wells, impact analysis of groundwater levels and riparian vegetation in the Prado Basin, and the triennial re-computation of ambient water quality mandated by the Water Quality Control Plan for the Santa Ana River Basin.

According to OBMP Staff Status Report 2024-1, there are approximately 1,150 wells included in the groundwater-level monitoring program. At about 960 of these wells, groundwater levels are measured by well owners, which include municipal water agencies, the California Department of Toxic Substances Control (DTSC), the Counties, and various private consulting firms. At the remaining 190 wells, groundwater levels are measured monthly by Chino Basin Watermaster staff using manual methods or by pressure transducers that record data on a 15-minute interval (Figure 2.2).

Figure 2.2: At the Prado Basin Habitat Area, Chino Basin Watermaster staff demonstrate water level measuring efforts at one of their groundwater monitoring network wells. The Chino Basin Watermaster implements a comprehensive water level and water quality monitoring program.

Groundwater quality data collected from the monitoring program are used for: the biennial Chino Basin OBMP State of the Basin report, the triennial re-computation of ambient water quality, monitoring of nonpoint-source groundwater contamination and plumes associated with point-source contamination, and assessing the overall health of the groundwater basin. Chino Basin Watermaster staff also collect water quality grab samples at two sites along the Santa Ana River on a quarterly basis. Sample data from these surface water sites and from near-river wells are used to characterize the interaction between the Santa Ana River and nearby groundwater.

The Chino Basin Watermaster monitoring program is similar but on a much larger scale to the monitoring program currently implemented by the MWA and Mojave Basin Area Watermaster to manage the water resources of the Mojave River basins. The data collected by the Mojave Basin Area Watermaster will provide valuable information for the integrated water management objectives and goals of the One Water Concept.

Chino Basin Water Conservation District

Figure 2.3: Chino Basin stormwater flow map engraved in stone outside the Chino Basin Water Conservation District Waterwise Community Center in Montclair.

The Chino Basin Water Conservation District was formed in 1949 by a vote of area residents to help protect and preserve the Chino Groundwater Basin. The Chino Basin Water Conservation District provides services to increase water supply, by recharging the Chino Groundwater Basin through the operation and maintenance of eight large-scale percolation basins (Figure 2.3). These basins capture stormwater runoff that would otherwise be lost and allow it to be stored underground for later use by area water providers. Through coordination and collaboration with the Chino Basin Watermaster and IEUA, these basins also receive recycled water and imported water to allow for additional groundwater recharge.

Mojave Basin One Water Concept

The efforts of the Chino Basin Watermaster, IEUA, the Chino Basin Water Conservation District, and other Chino Basin stakeholders can provide insight as the Mojave Basin One Water Concept, proposed by Mr. Poulsen of VVWRA, is further developed. During his December 15, 2022 presentation to the MWA TAC, Mr. Poulsen described a potential project that included transferring recycled water from VVWRA and the City of Victorville, via MWA's underutilized Mojave River Pipeline, to the area of Barstow currently experiencing significant water level declines. Elements of the Mojave Basin One Water Concept also seem to align with MWA's mission to collaboratively manage groundwater basins sustainably, import water responsibly, and address risks proactively using sound science, as identified in MWA's Strategic Plan.

As development of the Mojave Basin One Water Concept evolves, consideration should be given to how the project may affect remediation at cleanup sites, as percolation pond locations and discharge quantities may cause changes in groundwater elevations, flow

directions, and gradients. Regarding remedial activities at Former George Air Force Base and other Department of Defense cleanup sites within the region, Lahontan Water Board staff will continue to monitor progress of the Mojave Basin One Water Concept and support collaboration among the Department of Defense, local cities and agencies to protect water quality. As an example of ongoing communications, the Lahontan Water Board February 2025 Executive Officer's Report described the Air Force's presentation to MWA's TAC, *Impacts of Adelanto Publicly Owned Treatment Works Discharge on Former George Air Force Base*. The Air Force alleges that rising groundwater levels are affecting remedies on the former base and are a result of the Adelanto wastewater discharges. We are evaluating the Air Force's claims and are committed to continuing to work collaboratively with the Air Force, federal partners, state agencies, and surrounding communities like Adelanto, to make progress in remedial efforts. And we are optimistic that a more integrated partnership to better manage recycled water supplies, like the One Water Concept, will have net benefits for all within the Mojave Basin including the Former George Air Force Base.

3. **Environmental Systems Research Institute (ESRI) 2025 User Conference —** *Jose Valle De Leon & Aileen Chea*

Lahontan Water Board staff, Jose Valle De Leon, Water Resource Control Engineer (WRCE), and Aileen Chea, WRCE, attended the Environmental Systems Research Institute (ESRI) 2025 User Conference in San Diego, California during the week of July 13, 2025. Approximately 15,000 Geographic Information Systems (GIS) professionals from around the world, representing a wide range of industries including government, information technology, energy, transportation, agriculture, defense, water resources, environmental, and urban development were in attendance.

The first day of the conference began with a Plenary Session attended by most participants, which showed the latest advancements and applications of GIS across sectors. Highlights included demonstrations of GIS integration with artificial intelligence (AI), as well as case studies illustrating GIS's value in airport operations, city planning, environmental impact analysis, natural resource management, and emergency response.

During the rest of the week, we attended a broad range of technical sessions, covering topics such as Survey123, Experience Builder, GIS tools for assessing environmental health impacts, GIS applications in environmental and natural resource management, imagery processing and analysis, and flood forecasting and simulation. Other useful technical presentations covered how to use the spatial analyst tools in ArcGIS to compare multiple factors that are used to create a suitability model to predict the best location for future projects. We evaluated each topic for its potential application to our work at the Water Board, particularly in site cleanup and spatial data analysis. Beyond the educational sessions, we explored the Map Gallery (Figure 3.1) and Expo Hall, and participated in networking opportunities, including a social event for water resources professionals and a California Environmental Protection Agency lunch gathering.

A key takeaway from the conference was learning about the capabilities of ArcHydro, which is a set of tools used for hydrologic analysis within the ArcGIS software. While much of the conference's focus on using ArcHydro was for surface water and flood modeling, the tool set is also well-suited for mapping and modeling of groundwater and contaminant plumes. This is a tool that could apply towards our work in site cleanup programs to understand current and probable subsurface conditions where data is limited. Another takeaway was the emphasis on utilizing AI software within ArcGIS to help generate useful maps and to even create entire webpages very simply that can be accessed by the public using a variety of devices. While still in its early phase, AI may be a useful feature to leverage to reduce staff time reviewing images and documents.

Attending the ESRI User Conference provided valuable insight into how GIS is being used to improve operational efficiency. It also offered a platform to connect with other California State employees and industry professionals to enhance collaboration and share knowledge.

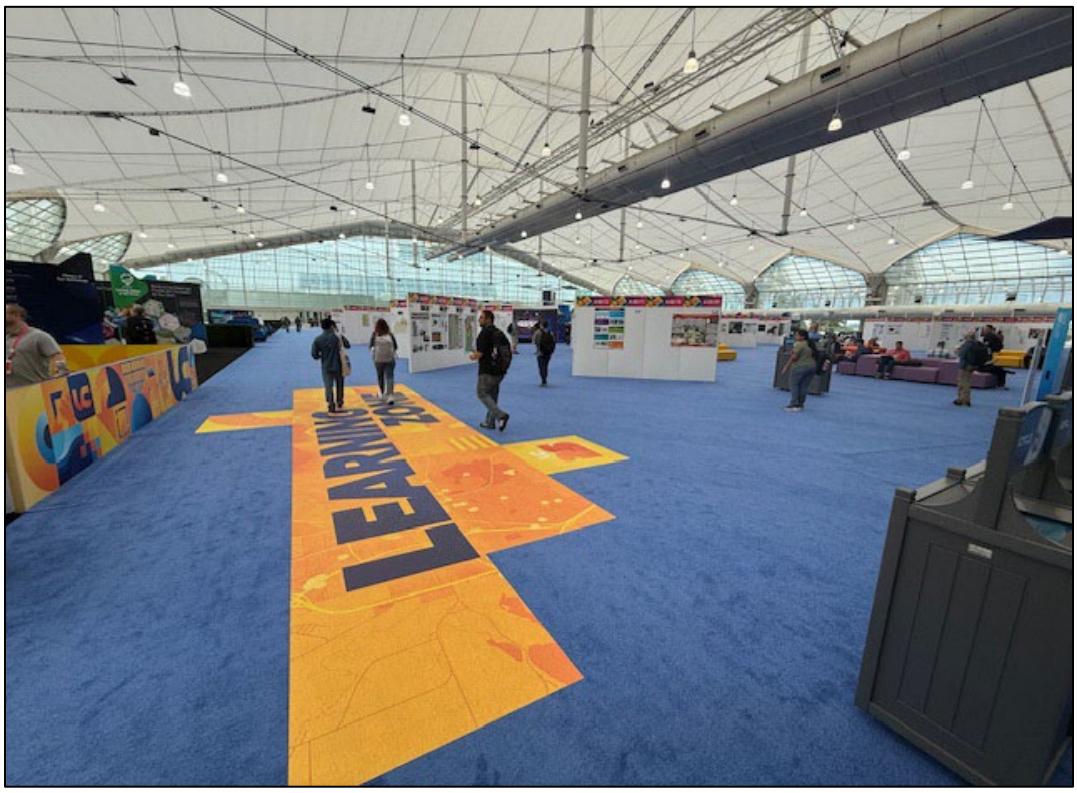

Figure 3.1: The Map Gallery at the ESRI 2025 User Conference, featuring research and projects presented by students and professionals to conference attendees.

4. **Leviathan Tour for Washoe Tribe** — *TJ Middlemis-Clark*

The Leviathan Mine Cleanup Unit staff occasionally set aside their technical work to become tour guides. These tours both educate interested parties and showcase the important cleanup work at the site.

Most recently, Taylor Zentner and Hannah Bartholomew participated in the Annual Washoe Tribal Leadership Tour on July 10. The stops included the following locations:

1. Upper ponds and Pond Water Treatment system overlook.
2. Open pit area
3. Pond 4 area and High-Density Sludge Treatment system
4. Confluence of Leviathan and Aspen creeks
5. Confluence of Leviathan and Mountaineer creeks

The group skipped a planned sixth stop viewing Bureau of Indian Affairs pinenut allotments due to time constraints. Discussion covered the following topics:

- the Superfund process
- history of mining activities
- the Pollution Abatement Project
- stormwater conveyance infrastructure
- acid mine drainage discharges and capture infrastructure
- acid mine drainage treatment system processes
- revegetation efforts
- landslide impacts
- investigation and monitoring activities

Twenty-eight people attended the tour. The attendees included USEPA, Water Board, Atlantic Richfield Company, TriHydro, WSP, Washoe Tribe representatives, and Washoe Environmental Protection Department. Attendees also enjoyed lunch at the fifth stop. The tour ultimately connected site staff with Washoe Tribe representatives to discuss the ongoing investigations, cleanup work, and future remedial actions needed for improved downstream water quality.

5. Mountain Pass Mine, A Short History and Future Outlook — *Andrew Robinson*

Daily, thousands of people unknowingly travel past Mountain Pass mine on Interstate 15 driving between Las Vegas, Nevada and Southern California. The Lahontan Region is littered with historic mines; most ran their course and were forgotten over time. The Clark Mining District surrounding the Mountain Pass Mine started no differently as it was established in 1870 in search of gold, silver, copper, zinc, lead, and antimony, running its course by 1895. The mine at Mountain Pass has found something else of value, not just in minerals but in national security and modern technologies, materials of strategic importance: Rare Earth Elements (REEs).

In 1949, prospectors were first successful in finding uranium at Mountain Pass Mine, and by the 1950s a new class of industrious minerals, REEs, were being mined and extracted onsite by the Molybdenum Corporation of America. The lanthanide group (cerium, lanthanum, samarium, gadolinium, neodymium, praseodymium, and europium) are used in such things as lighter flints, ultraviolet blocking glass, television components, phones/various electronic devices, numerous military applications, and more recently high-power magnets. Throughout the height of the cold war, the Mountain

Pass Mine emerged as the global leader in REE production. In 1977, Union Oil Company of California (Unocal) acquired the mine and continued REE dominance through the 1980s.

In the 1980s, a perfect storm of high-profile spills, creating high environmental remediation costs, improved analytical chemistry techniques making high resolution environmental analysis more possible, international competition, and the end of the Cold War finally prompted Unocal to suspend mining operations in 2002. The United States (US) not seeing the same strategic threat post-Cold War sold off stockpiles of REEs and ceded dominance in the industry to China over this same timeframe.

The continued rise of domestic and military technology requiring REEs, high power electric vehicle magnets, and China as a manufacturing powerhouse/geopolitical adversary was the backdrop for two attempts at reviving mining operations at Mountain Pass Mine. Molycorp acquired the mine, and between 2008-2015 had ambitions to re-establish US rare earth leadership. The price collapse of the REE market in 2015, less than expected production, and higher costs doomed Project Phoenix to bankruptcy. In 2017, the current owners MP Mine Operations LLC (MP Materials) acquired the mine for $20.5 million. By 2019 operations were producing roughly 30,000 metric tons of rare earth oxides, but China having almost all global refining capabilities remained the primary customer. Placing MP Materials in the same vulnerable position Molycorp found itself in 2015.

The Federal Government, seeing the geopolitical “writing on the wall” did not want a repeat of the 2015 “free market” bankruptcy and previous administration made policy moves to secure domestic supply and production of REEs. From 2020-2023 the Department of Defense (DoD) began funding initiatives towards the goal of domestic vertical integration of REE supply chain. A Texas facility was built for domestic production and by 2023 roughly half of Mountain Pass Mine production was being processed domestically. Up until April 2025, China was still the most important buyer of RE-oxides. The current administration changed the trade status quo with China forcing a Chinese trade response and effectively ended US trade of REEs with China. Uncertainty loomed until July 10, 2025, when the following announcement by MP Materials revealed a new partnership with the Federal Government.

MP Materials has entered into a significant public-private partnership with the U.S. Department of Defense (DoD) to bolster the domestic supply chain for RE magnets and reduce reliance on foreign sources. Under the agreement, the DoD will become MP Materials’ largest shareholder by investing $400 million in the company.

This partnership will facilitate the construction of a new magnet manufacturing facility, the second in the U.S. The DoD has committed to purchasing all of the magnets produced at this new facility for the next decade. The DoD has also approved a $150 million loan to expand the existing Mountain Pass rare earth separation capabilities.

-MP Materials Press announcement July 10, 2025

The storied past of Mountain Pass has created a layered facility with current and historic challenges to manage water quality. Current operations include three major milling plants, floatation, chemical and separation plants, four lined evaporation ponds and a lined reclamation pond. Multiple tailing impoundments, mine pit groundwater pumping, closed landfills, groundwater monitoring well networks, stormwater facilities, and municipal wastewater ponds all have the potential to affect water quality. A history of releases from waste management units impacting groundwater onsite in the 1980s, creating groundwater plumes that are still being managed. Groundwater flow and local geology are complex and understanding how impacted groundwaters flow off site is an ongoing investigation. With the influx of federal monies, the Water Board should be expecting rapid expansion of onsite facilities that can impact water quality, expectations for rapid regulatory findings, and hopefully an opportunity to make rapid progress on long-term water quality concerns. The REE mine at Mountain Pass is here for the long run, it's up to Lahontan to make sure the water quality impacts won't be.

Water Board staff and MP Materials are committed to improving communication and collaboration. Regular check-in meetings have begun so that we can stay ahead of any planned changes or upgrades that may require revisions to our existing discharge permits.