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State and Regional

1. Personnel Report – Eric Shay

New Hires – None

Vacancies – We are currently recruiting for the following positions:

- Water Resource Control Engineer, Waste Water & Agricultural Operations Unit, Victorville. This position provides regulatory oversight of projects involving discharges to groundwater or surface waters and projects intended to restore and/or enhance water quality in the Waste Discharge Requirements (WDRs), National Pollutant Discharge Elimination System (NPDES), and Site Cleanup Programs. The previous incumbent was Cephias Hurr.
- Water Resource Control Engineer, North Basin Regulatory Unit, South Lake Tahoe. This position is the office’s primary contact for domestic wastewater treatment facilities and domestic wastewater issues north of Conway summit, in addition to being responsible for several industrial discharges. The position involves conducting field inspections, interacting with County health offices, reviewing design reports, determining compliance permits, and writing Waste Discharge Requirements and National Pollutant Discharge Elimination System Permits. The previous incumbent was Rob Tucker.

Departures – None

2. Harmful Algal Bloom Update – Partnering for More Efficient Response – Mary Fiore-Wagner

In recent years, Water Board staff has responded to increasing reports of harmful algal blooms (HABs). Warmer air and water temperatures, high nutrient levels, and slow and stagnant water have caused cyanobacteria (also known as blue-green algae) to rapidly multiply into HABs. HABs can consist of both toxic and non-toxic algae. Toxic HABs can produce excessive amounts of cyanotoxins (e.g., microcystins, Anatoxin-a) potent enough to threaten the safety of humans, wildlife, and pets sometimes to the point of causing serious illness or mortality. Non-toxic algal blooms have directly impacted beneficial uses of water in the Lahontan Region by reducing aesthetics, imparting unpleasant tastes and odors to water and fish, and by lowering dissolved oxygen levels. In upholding our responsibility to protect water quality and beneficial uses designated for waters (domestic supply, water-contact recreation, agriculture), it is the Water Board's duty to respond to HAB events.

2017 HAB Workload. In 2017, we responded to over ten reports of HAB events throughout the Lahontan Region that impacted surface waters and reservoirs at elevations ranging from 3,200-7,200 feet, located as far south as San Bernardino County and as far north as Lassen County. For some events we worked with the appropriate local agencies or a homeowner's association to ensure a more timely response. The level of response varied for each HAB event depending on the severity and duration of the algal bloom, and the level of exposure to recreational users, domestic pets, and livestock. Response included a combination of (1) site reconnaissance and field testing to confirm an algal bloom, (2) microscopic identification to confirm the presence of cyanobacteria cells followed by additional laboratory testing to determine the presence and concentration of toxins, (3) outreach to public health officials and affected water users, and (4) guidance to lake managers regarding the appropriate advisory level to post to protect the public.

The map (figure 1) shows the location of each HAB event, and indicates whether a coordinated response was initiated and what level of advisory, if any, was posted at the waterbody as a precaution to the public.

During 2017, HAB workload accomplishments included:

- Training four Water Board staff in HAB sampling techniques, field measurements, microscopy
- Responding to over 10 reported HAB events at elevations ranging from 3,200-7,200 feet
- Collaborating with regional partners to sample distant locations
- Recommending health advisory postings for four waterbodies
- Informing local community by providing media & veterinarians up-to-date information
- Building efficient and effective working relationship with State Board

Additionally, the following challenges were realized within the HAB workload:

- Timely responses to HAB events due to enormity of region's north-south span
- Balancing health advisories with recreation/tourism based economies
- Updating State Board's HAB web portal with region-specific data
- Providing sampling supplies for partnering agencies

HAB workload in the Lahontan Region was responding promptly to HAB events as they were reported to us. Our ability to respond quickly was largely dependent on the location and

remoteness of our region, which spans over 600 miles north to south. Last summer as HAB events erupted throughout our region, we built several relationships with partnering agencies (Inyo Co Environmental Health Dept., San Bernardino Health Dept., San Bernardino Parks and Rec, US Forest Service- Lassen and Inyo National Forests, and two Homeowners Associations) so they could collect samples and/or post advisories at locations that were difficult for us to travel to. Regional and State Board funding covered the supplies, shipment costs, and analysis of the samples.

Regional HAB Workshops. To prepare for HAB outbreaks that may increase in abundance, frequency, and duration during the 2018 growing season and beyond, Water Board staff has identified the need to develop a more timely and efficient response plan.

To achieve this goal, the Water Board will host two regional HAB workshops to provide local partners with the technical understanding needed to efficiently and effectively collect water samples for HAB analysis, and post health advisories if harmful levels of cyanotoxins are present.

Though we would like to reach our entire region, we intend to focus on the southern and central portions of our region during the 2018 growing season, since this is where the majority of our HAB events have occurred in the past. (See figure 1.)

The first workshop has been scheduled in Bishop on June 27, 2018, and the second workshop is planned in the Victorville area in early August 2018. If resources permit, Water Board staff will collaborate with the State Board and the Training Academy to hold a HAB training for Water Board staff in South Lake Tahoe by the end of September 2018.

Water Board staff believes that offering workshops throughout our region will help foster partnerships and build capacity in other organizations to help respond to HAB events when and where Water Board staff cannot reach the site quickly. Similar to last year, a limited amount of sampling supplies, shipment costs, and analysis of water samples will be covered with support from the State and Regional Surface Water Ambient Monitoring Program.

Objectives of the workshops include: (1) providing participants with adequate information to respond to reports of HABs, from receipt of report to lab result interpretation; and (2) providing land and waterbody managers, environmental health departments, homeowner associations, and Tribes with up-to-date and relevant information about cyanobacteria and HABs in California including causes and controls and management and mitigation strategies.

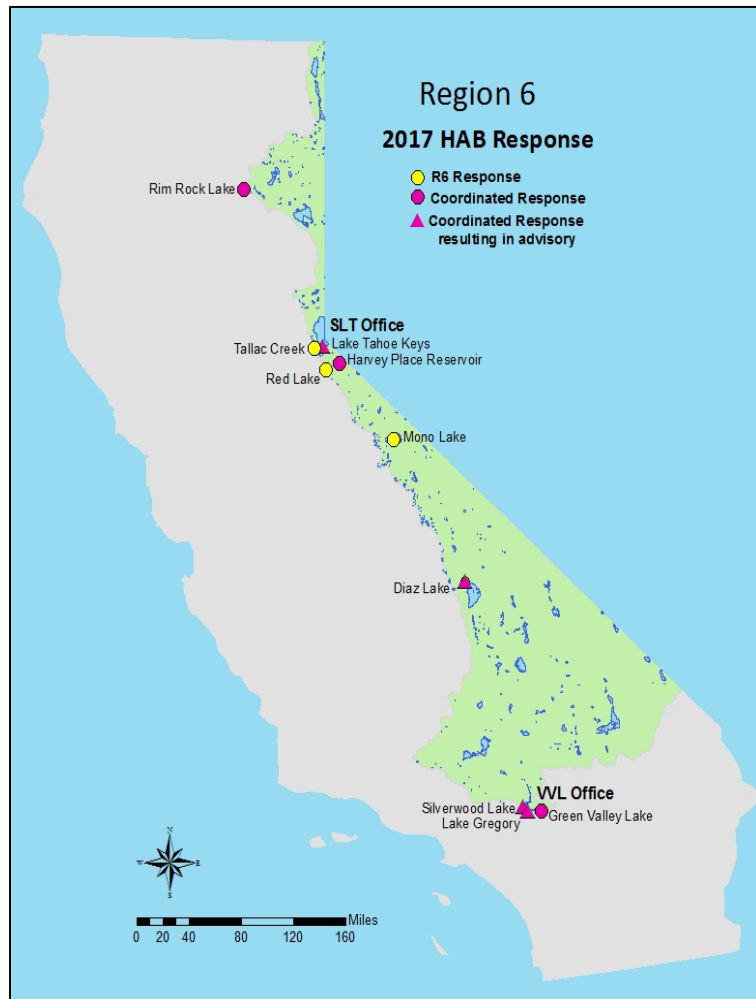


Figure 1 - Map of 2017 HAB events in the Lahontan Region.

Water Board staff is working actively to secure academia and technical experts from State Agencies including the Office of Environmental Health Hazard and Assessment, California Department of Fish and Wildlife, State Water Board, and the California Department of Public Health to present on the following agenda topics:

- (1) Freshwater CyanoHABs Overview
- (2) Sampling and Data Collection Methods (if logistics and time permit, a field portion will be included)
- (3) Lab Analysis, Testing Methods, and Interpreting Results
- (4) Toxin Health Trigger Levels and Posting Health Advisories
- (5) Risks to Human Health, Domestic Pets, Wildlife, and Livestock
- (6) Mitigation Measures and Management Strategies.

State Legislation to Support HAB Response. Acknowledging that the frequency and severity of HABs may increase under future climate scenarios, the Legislature introduced [AB-2053: Freshwater and Estuarine Harmful Algal Bloom Program](#). AB 2053 continues to move through the bill process and most recently gained bipartisan policy Committee support on April 10, 2018, and is moving to the Committee on Appropriations on April 25, 2018. [AB-2053](#) would require the State Water Board to consult with the appropriate state and federal agencies and California Native American Tribes to develop an immediate and long-term response program to protect water quality and public health from HABs. If approved, additional personnel years and contract funds may be available at the state and regional level to improve response to the growing environmental and public health threat associated with HABs.

South Lahontan Region

3. Dispute Elevated to USEPA Administrator Scott Pruitt, Draft Final Explanation of Significant Differences, South Air Force Research Laboratory, Edwards Air Force Base – Alonzo Poach

In an effort to resolve an ongoing dispute between the State of California and the United States Air Force (Air Force) regarding the South Air Force Research Laboratory (AFRL) at Edwards Air Force Base (AFB), Doug Smith, Assistant Executive Officer of the Lahontan Water Board attended a Senior Executive Management meeting in Washington, D.C., on March 30, 2018. Also in attendance were Mohsen Nazemi, Deputy Director of the California EPA/Department of Toxics Substances Control (DTSC); Air Force executive staff, Mark Correll, Marc Trost, Carolyn White, and Otis L. Hicks, Jr.; Albert Kelly, USEPA Office of the Administrator, Headquarters USEPA; USEPA Region IX executive staff, and various members of executive management from multiple departments within the USEPA. The dispute centers around the use of DTSC's risk values for the inhalation of tetrachloroethylene (PCE) versus the new Integrated Risk Information System (IRIS) value established by the federal government.

On January 17, 2018, USEPA Region IX's acting Regional Administrator, Ms. Alexis Strauss, ruled that the California toxicity number for PCE, originally adopted in a 2007 Record of Decision, would stand for the South AFRL at Edwards AFB. Ms. Strauss noted that there was no evidence of site-specific factors that warranted the change and that the California PCE toxicity number remained protective of both human health and the environment. The USAF did not agree with this decision and elevated the dispute to the USEPA Administrator, Scott Pruitt, for his consideration. The California toxicity number for PCE is approximately 23 times more stringent than the USEPA Federal toxicity value.

The discussions during the March 30, 2018, meeting included issues related to the chemical toxicity of PCE and risk management issues currently being disputed at the South AFRL. The dispute primarily focuses on risk management, chemical toxicity, and the vapor intrusion

pathway. The Air Force and DTSC (the main parties in the dispute) reiterated their respective positions of the dispute. Mr. Nazemi pointed out recent evacuations occurred in a building at Edwards AFB due to increased vapor concentrations of chlorinated solvents in the indoor air. Mr. Smith pointed out that all the agencies agreed in 2007 that this site was technically impractical to remediate and that engineering controls and mitigation measures are very important to the protectiveness of the overall remedy in the future. Mr. Smith also pointed out that Edwards Air Force Base, located in the Antelope Valley, has an adjudicated groundwater basin that is currently in overdraft caused by significant increases in population and the protection of all groundwater resources in the area will be ever important to the surrounding communities.



View of the Magnolia trees near the White House, taken by Mr. Smith on his walk to the US EPA offices in Washington, D.C.

Ms. Susan Bodine (USEPA) asked the Air Force and DTSC to review all the data again and evaluate the data from the opposing party's standpoint for discussion in a future meeting prior to Administrator Pruitt's decision.

4. **Standing Item – Salt and Nutrient Management Plans Update in the Lahontan Region** – Lisa Dernbach

This item is a regular update on the progress of Salt and Nutrient Management Plan (SNMP) development in the Region. The State's 2009 Recycled Water Policy (amended in 2013) requires local stakeholders to develop SNMPS for every groundwater basin in the state by 2014 (with time extensions possible). This item and the table that follows it summarize the status of the SNMP efforts underway in the Region and report on new information since last year's 2017 status update.

Our SNMP efforts focus on ten groundwater basins determined to be priority basins under the State's Groundwater Ambient Monitoring and Assessment (GAMA) Program. The ten priority basins (out of more than 345 basins and sub-basins in the Region) are listed below, along with a brief statement on the status of SNMP development for each basin. More detailed status information is in the table that follows on page 9.

Completed SNMPS and Water Board acceptance dates:

- Antelope Valley – 2014
- Mojave – 2016
- Fort Irwin – 2017
- Indian Wells Valley – 2018

SNMPS in progress:

- Fremont Basin – draft plan in progress; status to be presented at May 2018 Water Board meeting
- Honey Lake (Lahontan) Valley – draft plan completed in December 2015 and final plan in progress
- Inyo/Mono (Owens) – no significant actions yet initiated. However, a 2018 Department of Water Resources (DWR) grant award for groundwater sustainability planning should allow an opportunity for also evaluating salt and nutrients in the future

- Martis Valley – no significant actions yet initiated
- Tahoe Sierra – draft plan (technical memo) completed in December 2015 and final plan in progress
- Tehachapi Valley East – draft plan completed in February 2010. Revised draft in progress using a DWR grant award

This information shows that SNMP efforts are underway or completed in eight of our ten priority basins, addressing 78% of the total acreage. The latest effort by the State Water Board has been to develop a GIS map web application depicting statewide SNMP coverage of groundwater basins. Expected by May 2018, the GIS map will be available through a link on the Recycled Water Policy public webpage to coincide with the public review period of the proposed amendment to the Recycled Water Policy and associated Staff Report. In addition to the graphic representation, this webpage also provides links to the SNMP documents, which can be accessed by selecting the basin and looking for the “Link to SNMP” in the information box that pops up.

5. Victor Valley Wastewater Reclamation Authority – Apple Valley Sub-Regional Wastewater Recycling Treatment Plant – John Morales

After twenty years of planning and two years of construction, the Victor Valley Wastewater Reclamation Authority (VWVRA) is now operationally testing the Apple Valley sub-regional wastewater treatment plant, capable of producing one million gallons per day of recycled water. To comply with the Water Board’s Order R6V-2013-0004, the sub-regional plant will treat wastewater to tertiary disinfected standards for use at the Apple Valley Golf Course, the Apple Valley Civic Center, and other area parks for irrigation, thus conserving potable water.



Photograph of the Apple Valley Sub-Regional wastewater treatment plant showing fully covered aeration basins where biological treatment occurs and advanced odor control technology to eliminate unwanted odors.

Large trucks first delivered activated sludge from VWVRA’s main plant to “seed” the Apple Valley plant, located adjacent to Brewster Park, on February 13, 2018. The state-of-the-art facility features hybrid membrane technology for treatment and an ultra-violet disinfection system.

The Apple Valley Sub-Regional Wastewater Treatment Plant is designed to be a good neighbor facility. Much of the plant is actually below ground to deaden the sound of pumps and blowers. The visible portion of the plant is no taller than a two story home and the surrounding grounds are landscaped to blend in with the rest of the area.



The Apple Valley Sub-Regional wastewater treatment plant has a low profile and its appropriate architecture makes the plant blend into the neighborhood.

Although the Town of Apple Valley initially expressed reluctance in locating

the Apple Valley Sub-Regional Wastewater Treatment Plant adjacent to Brewster Park, its location was strategically selected because of the low-point elevation, minimizing infrastructure cost since all of the flow to the plant is by gravity.

Any unwanted odors generated will be treated by diverting the odorous air to bio-filters that remove the odors.



The Apple Valley Sub-Regional wastewater treatment plant uses acoustical paneled walls in the equipment room where noisy blowers are located to minimize noise.



Bio-filters consisting of wood chips are used to scrub odorous air from the underground equipment rooms.

6. Navigating the Rivers of Policy toward Sustainability, the 2018 High Desert Water Symposium in Victorville – Jan Zimmerman

The Mojave Water Agency hosted the High Desert Water Symposium at Victor Valley Community College on April 11, 2018. The theme of the symposium was “Navigating the Rivers of Policy toward Sustainability.” Tom McCarthy, General Manager of Mojave Water Agency, emceed the 3-hour long program. There were approximately 185 attendees from various state agencies, local municipalities, water districts, members of the public, elected officials, and students and faculty from Victor Valley Community College. Kimberly Cox, as Board President of Mojave Water Agency, provided opening remarks and challenged the attendees to share what they were about to learn with others. Using Mojave Water Agency as an example of successful collaboration and a leader in water supply and sustainability, Ms. Cox encouraged collaboration amongst the attendees and remarked, “We can work together, and we can make a difference.”

The keynote speaker, Charles Wilson, currently serves as Executive Director and Chief Executive Officer of the Southern California Water Coalition, a non-profit organization dedicated to securing reliable, affordable, high-quality water for Southern California. Mr. Wilson engaged with the audience and discussed the balance between sustainability and financial burden. Metropolitan Water District will fund the recently approved California Water Fix for approximately \$11 billion, which translates to an increase of less than \$5 per month to the individual ratepayer over a 30-year period. For some, that increase would have little effect on individual ratepayer finances, but in other communities, that increase could be the difference between paying the water bill and paying for essential medication and/or food. Mr. Wilson stressed that the state needs to look beyond the California Water Fix and focus on alternative options for sustainability including storm water capture, water recycling, groundwater cleanup, desalination, and promoting robust conservation and efficiency programs.

Ellen Hanak, Director of Public Policy Institute of California, spoke following Mr. Wilson. Ms. Hanak believes the state needs to take a proactive approach and plan ahead for urban water supply. The California Water Fix would be a much-needed technological improvement over the

existing antiquated aqueduct system that we have now and those improvements would allow the system to be able to take “big gulps and capture flood flows that the environment may not necessarily need.” However, those “big gulps” need to be stored somewhere for future use, so planning and having the infrastructure in place when it is needed is critical. Ms. Hanak’s bottom-line was that policies need to be adopted that make it easier for water purveyors to “trade” water around the state.

A panel discussion was held following the individual speakers. The panel consisted of Joline Walsh, Director of Public Affairs at Eastern Municipal Water District, Ray Kolisz, General Manager of Twentynine Palms Water District, and Ed Manning, a registered lobbyist and attorney with KP Public Affairs. This session of the symposium was particularly interesting because the panel speakers were asked similar questions, but their answers varied greatly as a reflection of their agencies perspectives and the demographics of the people they serve. When asked “what are your main concerns for water supply”, Mr. Manning responded that his highest priority is modernizing the state’s water delivery system and infrastructure to resist and withstand the effects of climate change. Mr. Kolisz responded to the same question, but with a different answer. Twentynine Palms is a 100% disadvantaged community, 75% of which is severely disadvantaged, so the pressure to keep water affordable is real. When maximum contaminant levels (MCLs) are lowered, treatment costs increase. According to Mr. Kolisz, there is a disconnect between establishing MCLs and the need to provide safe and affordable drinking water, and this is just one example of how policy makers may be out-of-touch with the communities that they represent. Ms. Walsh took a different perspective. She pointed out that her agency and its customers have been very effective at conservation and reducing demand, and that when it comes to sustainability and water supply, the burden should be on all Californians. Ms. Walsh remarked that it simply is “not fair to ask ratepayers to fund solutions to problems that are not theirs to solve.”

Jan Zimmerman and Shelby Barker of our Victorville office attended the symposium and look forward to attending the symposium again next year for the learning opportunities provided, as well as enabling us to listen to the various perspectives presented. Our participation at these events allows us to envision how we may improve our relationship with our sister agencies, dischargers, and communities and provide better service for water quality protection.