



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

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*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.

<b>Priority</b>	<b>Project</b>	<b>Progress</b>
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.

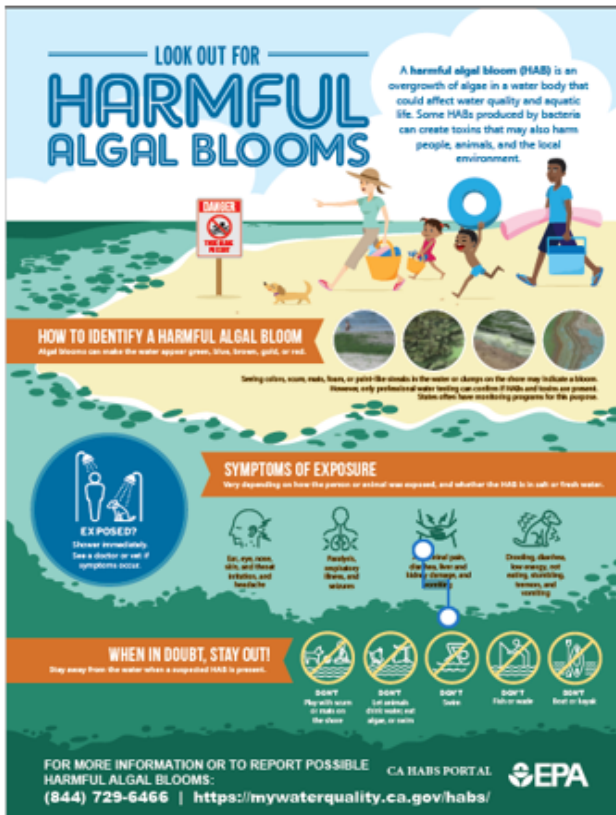


Figure 4.1: Photos of signage about Harmful Algal Blooms (HABs). Left Photo: General Awareness Sign about HABs. Top Right Photo: English Language Version of Caution Level Advisory Sign for HABs. Bottom Right: Spanish Language Version of Danger Level Advisory Sign for HABs.

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 diameter 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.

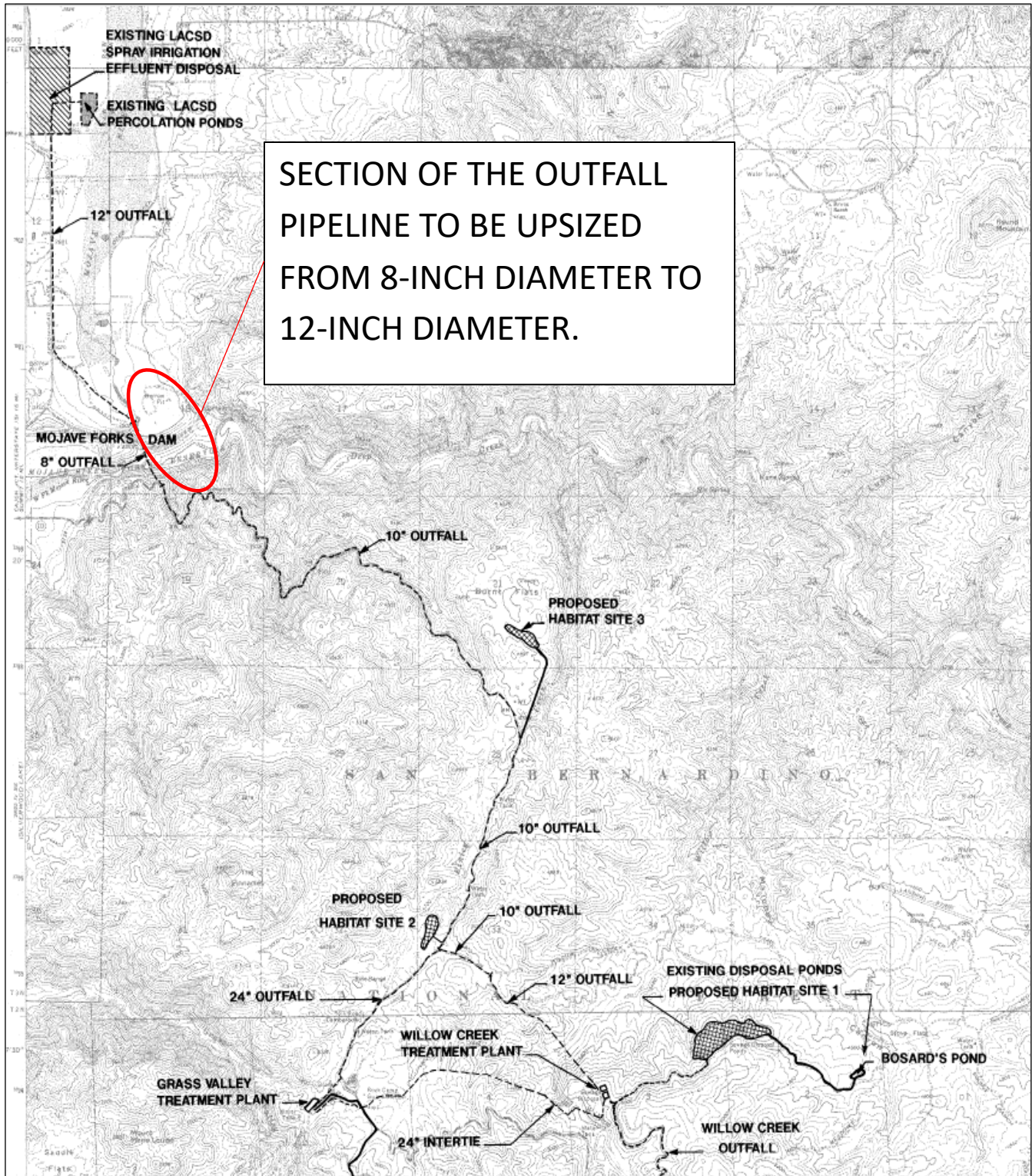


Figure 5.1 – This map shows the District’s outfall pipeline from the Grass Valley Wastewater Treatment Plant heading down the north slope of the San Bernardino Mountains to the percolation ponds near Hesperia. It also shows the outfall pipeline constriction beneath the Mojave Forks Dam that will be addressed 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

Average Dry Weather Design Flow Rate	# of POTWs	TREATMENT SYSTEM SAMPLING		REVERSE OSMOSIS CONCENTRATE (ROC)	BIOSOLIDS	GROUNDWATER MONITORING (POTWS with GW MRP)	
		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

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

Figure 8.3 – Sampling must begin in the 4<sup>th</sup> 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.

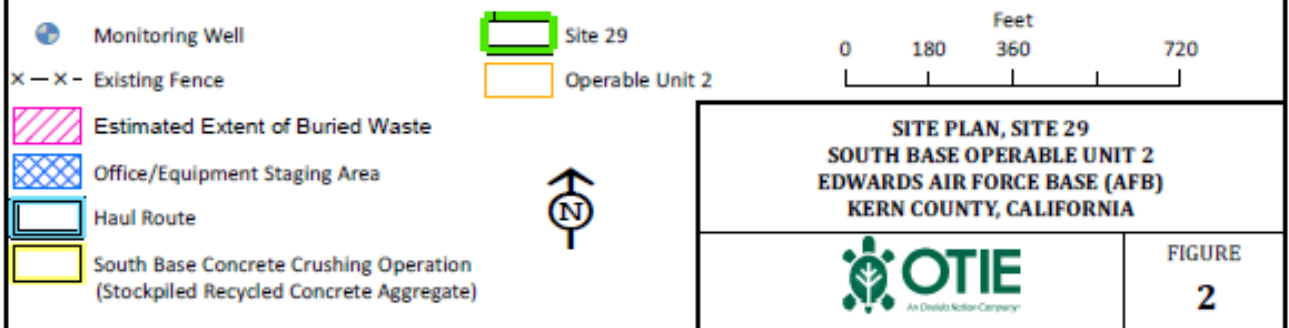
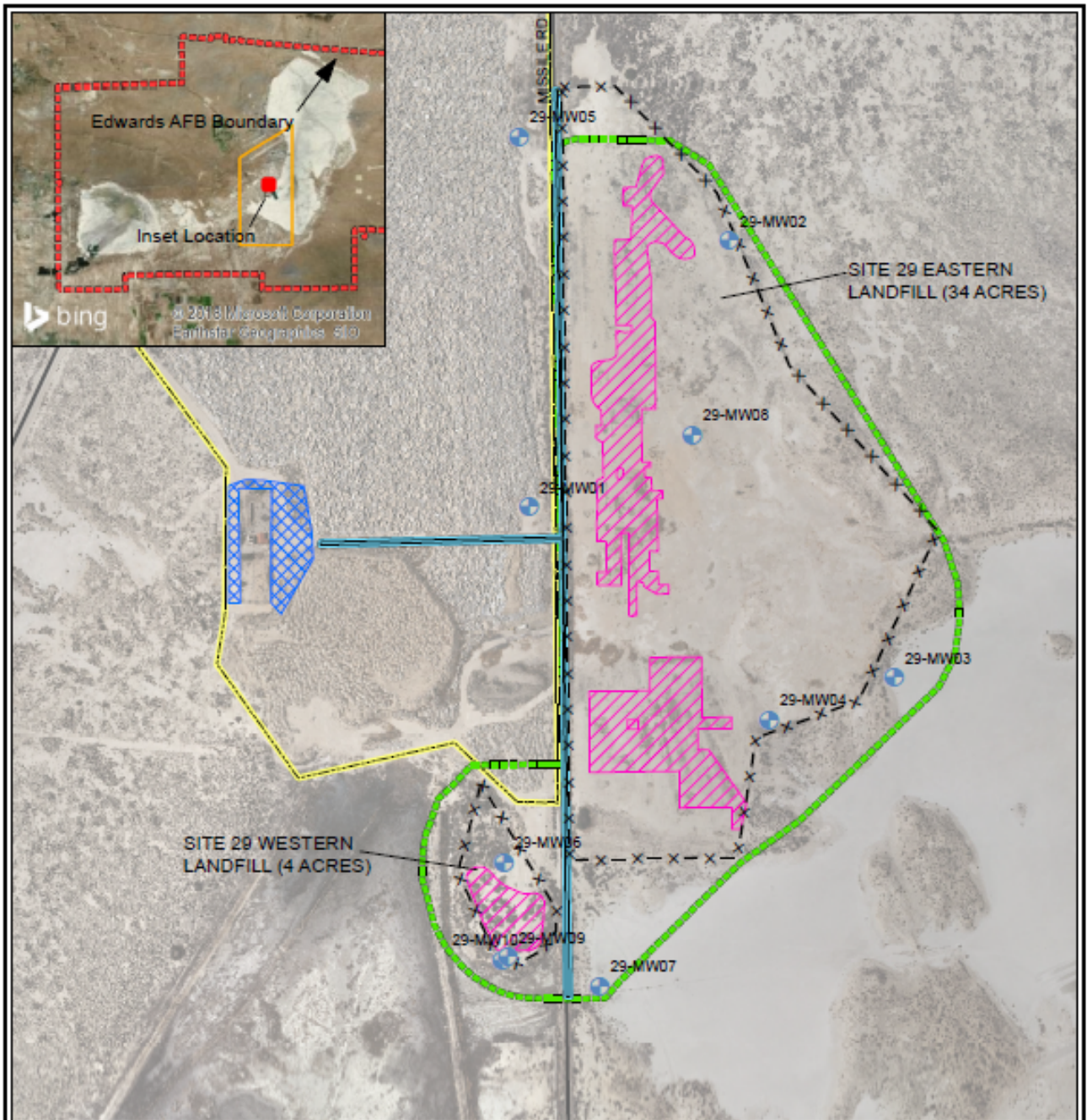


Figure 10.1 – Map of Site 29 showing the aerial extent of the waste cells.