



Summer 2023 WEPD NEWSLETTER

WASHOE ENVIRONMENTAL PROTECTION DEPARTMENT

INSIDE THIS ISSUE

Pg 1	WEPD New Staff!
Pg 2	Prescribed Burning
Pg 3	Numbers Fire Restoration
Pg 4	Leviathan Mine Water Testing
Pg 5	Meeks Bay Beach Cleanup
Pg 6	Bi-State Sage-Grouse Update
Pg 7	Invasive Species—Bullfrogs
Pg 8	Recycle Flyer—Curbside/T-Station

WEPD Staff:

- Rhiana Jones** - Environmental Director
- James Gatzke** - Environmental Manager
- Cale Pete** - Environmental Manager
- Tonya Quiner** - Office Manager
- John Warpeha** - Environmental Scientist —
Brownfields & Noxious Weeds Manager
- Kristina Burnette**—Environmental Scientist-
Aquatic Invasive Species & Water Quality
Manager
- Kevin Rogers** — Fire Restoration & Reclamation
Manager
- Allison Kerley** - Climate Resiliency & GIS Manager
- Robert Wyatt** - Environmental Technician
- Jason Kizer** - Environmental Technician
- Craig Christensen** -Environmental Technician
- Yancy Burt**—Conservation Crew

Kristina Burnette is WEPD’s New Environmental Scientist – Aquatic Invasive Species and Water Quality Manager.



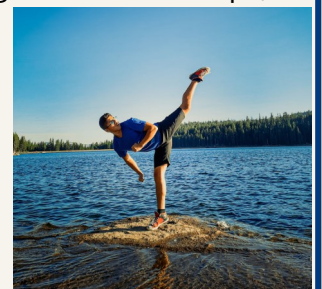
At the Utah Dept. of Natural Resources she assisted with preventing the spread of quagga mussels and educating boaters about the ecological and economic problems associated with aquatic invasive species. She then transferred to NOAA’s Northeast Fisheries Observer Program where she worked on commercial fishing vessels gathering information pertaining to volume catch estimations

to create sustainable fishing management plans and gathering samples for DNA.

As the newest Environmental Scientist, Kristina hopes to understand more about the Washoe lands and resources as well as working with numerous agencies and organizations to preserve tribal lands and surrounding areas for future generations.



Emmanuel Bennett. I began working at the WEPD with the Washoe Summer Youth Employment Program (SYEP). At WEPD I’ve learned how much work we do for our Washoe land and the need to protect culturally significant natural resources. I spent most of my time working on WEPD’s Pinyon pine restoration project in fire affected areas. We planted sage to help the Pinyon pines grow. We worked hard on that project moving resources back and forth and manually watering the vulnerable plants with gallons of water carried on our backs. I’ve also worked assisting with maintenance at our transfer station, helping to collect recycling from communities, participating in beach cleanups, and watering the Pinyons in their nursery. Recently we went to Meeks Meadow and spent two days doing ground water monitoring and meadow conservation/protection. That included us performing maintenance on multiple piezometers and collecting data about the water levels and perfectly installing loggers into the piezometers. My time at the WEPD has been a blessing and I’m grateful for the experience.



Numbers Fire Restoration Planting

By Kevin Rogers—Fire Restoration & Reclamation Manager



On the weeks of June 19th and June 26th, WEPD — with the invaluable assistance of the Emergency Operations Center (EOC) and a private contractor California Reforestation — facilitated the restoration planting of 4,200 sagebrush within the 2020 Numbers Fire burn scar. These sagebrush are the first step in restoring the Pinyon-Juniper Woodlands and Sage Steppe habitat that was destroyed in the Pinenut Mountains by the 18,000 acre Numbers Fire.

Basing replanting actions on Traditional Ecological Knowledge (TEK), these sagebrush have been planted to act as a nurse plant for following Pinyon pine planting.

Once the sagebrush have established themselves in the ground and begin to grow larger, they can act as a nurse plant for Pinyon pine, providing shade from the sun and protection from herbivores that would otherwise kill or eat the baby Pinyon pine. This interdependence between sage and Pinyon can be observed all over the Pinenut Mountains where there exists healthy Pinyon—Juniper stands.

WEPD plans to plant Pinyon pine, currently being grown in the Resilience Garden greenhouse, this fall alongside replanted and naturally recurring sagebrush within the Numbers Fire burn scar. Similar efforts are being taken in scouting units for replanting of sagebrush and Pinyon pine within the 2021 Tamarack Fire burn scar, with the hopes to replant there next spring.



Prescribed Burning with the Lake Tahoe Basin Management Unit (LTBMU) at Lake Tahoe

By Kevin Rogers—Fire Restoration & Reclamation Manager



On June 21st and 29th WEPD Members Kevin Rogers and Craig Christensen assisted the Lake Tahoe Basin Management Unit (LTBMU) with prescribed fire operations. The first burn consisted of 5 acres of hand piles along the east shore of Fallen Leaf Lake, with the latter burn having 13 acres of understory burning along Pioneer Trail Rd southeast of Tahoe Valley. The two WEPD staff assisted in firing, holding, and mop up on the first burn, and mop up operations on the second burn. Staff were able to gain experience crucial to increasing fire knowledge to be used when conducting prescribed and cultural burns on tribal land in the future.

The LTBMU staff were professional and extremely helpful, from the first year forestry technicians all the way up to the burn boss and Fire Management Specialist.

WEPD staff were made to feel extremely welcome, and any questions about how or why things were done were met with proper answers. There was a large volume of interest in what the Tribe is working towards with the fire program, with many questions directed towards the WEPD staff as well. A great working relationship has been established between the LTBMU and Washoe Tribe, with an open invitation to any future prescribed fire events on lands under the control of the LTBMU.



I would personally like to thank Fire Management Specialist Tod Flowers and Fuels Officer David DeLeon of the Lake Tahoe Basin Management Unit, as well as the countless LTBMU personnel who brought us into the fold.— *Kevin Rogers*

Leviathan Mine—Water Testing

By Kristina Burnette Environmental Scientist-Aquatic Invasive Species & Water Quality Manager

Leviathan Mine is a major Superfund site that has shown small improvements as efforts are continued to restore streams throughout the 250-acre site. As efforts are continued at the site, other concerns continue to be of interest especially when it comes to water quality and the aquatic community. One major indicator that tells the quality of the aquatic community is benthic macroinvertebrate identification (BMI) sampling.

Acid mine drainage (AMD) runs out of Leviathan Mine and into several creeks, impacting miles of streams, land, and tribal resources. During the week of July 10th, WEPD's Environmental Scientist worked alongside USEPA

Regional Ecologist and staff from WSP (an environmental contractor) to test the creeks that run in and out of Leviathan Mine. The creeks that were tested include Aspen, Bryant, Leviathan, and Mountaineer.



BMI sampling is conducted twice a year before treatment and after treatment of the mine. Seven sites were sampled at different parts of the creeks. Five samples are taken at each site using a three combined riffle collection method with a micron mesh D-frame net. The sample sorting method is done at each site where gravel, rock, sand, and other debris is removed. The rest is filtered into a smaller style net (smaller invertebrates or aquatic bugs) and then transferred into containers that are filled with ethanol to help preserve the samples.

The type of aquatic invertebrates which indicate a healthy stream include ephemeroptera (mayflies), plecopteran (stoneflies), and trichopteran (caddisflies). These insects are susceptible to changes in water quality.

Areas sampled during previous seasons have not shown healthy indicators for BMI until this recent sampling, according to WSP. Sampling sites closer to the downflow of treated water from the mine have shown BMI improvements compared to other sampling seasons. BMI sampling will continue to be

conducted at the same sites at Leviathan Mine as well as WEPD will continue to test lower areas that these streams connect with on tribal lands.



Photo of Stonefly Kristina Burnette

Meeks Bay Beach Cleanups

This past July WEPD, The League to Save Lake Tahoe (The League), TANF, and kids from the TANF program teamed up for two beach cleanups at Meeks Bay. The second cleanup was also attended by The Sierra Nevada Alliance's (SNA) Take Care Tahoe Ambassadors. At the second cleanup, The League hosted an aquatic invasive species training for the attendees and Eco-Clean Solutions gave a demonstration of the Bebot, a sand cleaning robot that sifts sand for trash up to 4" deep!

Together, **82 lbs of trash** were removed from the beach and roadside

WEPD joined the League to Save Lake Tahoe's Blue Crew Program last fall, and 'adopted' Meeks Bay and Skunk Harbor. All of WEPD's 2023 cleanups have been at Meeks Bay due to high lake levels covering most of Skunk Harbor's beach. The program is a volunteer program where a team of people 'adopt' an area and commit to hosting three or more cleanups at that location. The Blue Crew Program is one of the League's citizen science programs (the Eyes on the Lake Program, which monitors and collects data about AIS sightings is another such program), rely on information, tips, and data gathered by everyday people to monitor the health of Lake Tahoe.

More information about the Tahoe Blue Crew Program can be found on The Leagues' website,

<https://www.keeptahoeblue.org/join-us/tahoe-blue-crew/>.

By Ally Kerley, Climate Resiliency and GIS Manager



Photos By John Peltier



Want to help out?



Follow me to the Citizen Science web page, or download the phone app to report trash, algae, and aquatic invasive species!

Trash Facts

	July 5 th	July 26 th
Total pounds of trash	48.5 lbs.	33.5 lbs.
Most common item	Unidentified plastic pieces	Unidentified plastic pieces
2 nd most common item	Metal cans and pull tabs	Cigarette Butts
3 rd most common item	Plastic food wrappers	Plastic food wrappers
Someone is probably missing their:	Glasses, sock, and shoe sole	

Bi-State Sage-Grouse Update

By James Gatzke, Environmental Manager

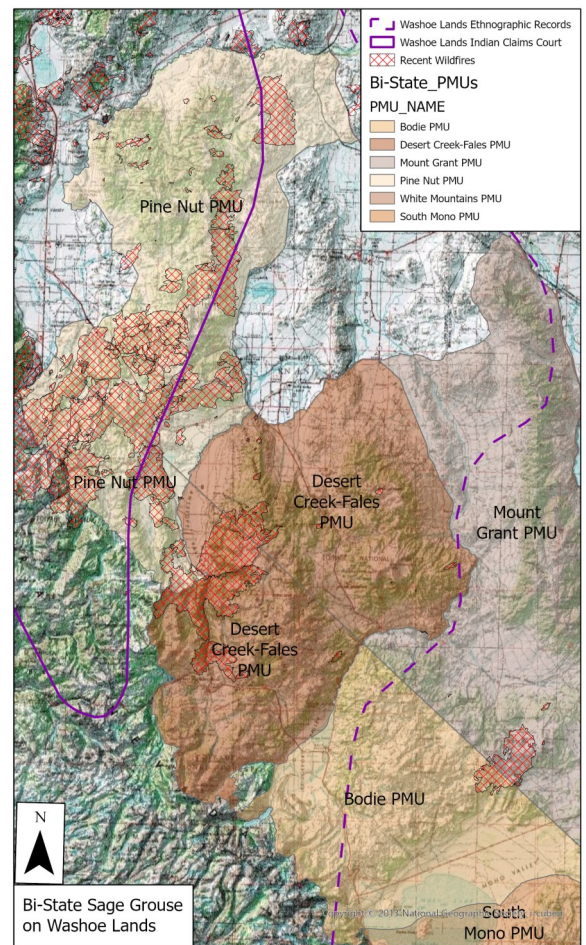
Greater Sage Grouse is unique among chicken-like birds because it is not adapted to consume hard seeds and mostly consumes sagebrush leaves to survive the winters. The annual life cycle of Greater Sage Grouse moves from winter habitat in sagebrush stands above the snow; to leks (dancing and mating grounds) in open, often disturbed areas; to nesting and brood rearing near wet meadows rich in insects for raising young; to sagebrush ecosystems rich in wildflowers; and then return to winter habitats. Greater Sage Grouse occurs throughout many of the ecosystems dominated by big sagebrush in western Canada and western United States.

Bi-State Sage Grouse is a distinct population segment of the Greater Sage Grouse and likely developed unique genetics due to geographic isolation from the rest of the species by historic Lake Lahontan and the more arid valleys and ranges to the east. Bi-State Sage Grouse occur from the White Mountains in the south to the Pine Nut Range in the north. For management purposes, Bi-State Sage Grouse populations are subdivided into six population management units (PMU). The Pine Nut PMU lies entirely within ancestral Washoe lands and includes all Washoe allotment lands extending from Dayton, NV in the north to Walker, California in the south. In addition, portions of Desert Creek/Fales PMU, Bodie Hills PMU, and Mount Grant PMU occur within ancestral Washoe lands.

About twenty years ago, the potential listing of Bi-State Sage Grouse as a threatened or endangered species caused federal, state, and local agencies as well as private stakeholders to convene the Bi-State Sage Grouse Local Area Work Group (LAWG) and create a consensus-based conservation plan for the distinct population segment. Because of the smaller population and distribution relative to Greater Sage Grouse, Bi-State Sage Grouse seemed more likely to be listed as threatened or endangered by the Fish and Wildlife Service. In 2012, the Bi-State Sage Grouse Action Plan (Action Plan) was drafted which summarized prior efforts and identified future actions. In 2013, Fish & Wildlife Service proposed listing of Bi-State Sage Grouse, but subsequently determined not to list due to the commitment demonstrated in the Action Plan and \$45 million of funding.

Within ancestral Washoe lands, Bi-State Sage Grouse have been found the entire length of the Pine Nut PMU mostly in the higher elevations, widespread in the Bodie Hills PMU, near leks in the Desert Creek/Fales PMU, and as isolated observations in the Mount Grant PMU. The Pine Nut PMU has only two active lek sites near the Buckskin Range in the north and on Bald Mountain in the south. The Desert Creek/Fales PMU has active leks near the mouth of Desert Creek, Sweetwater Summit, the Sisters Peaks, Pine Grove

Hills and the headwaters of the Little Walker River. The Mount Grant PMU leks are all outside of ancestral Washoe lands. The Bodie Hills PMU has numerous leks scattered throughout the PMU and has the highest population of Bi-State Sage Grouse. In contrast, the Pine Nut PMU has the lowest population of Bi-State Sage Grouse. Populations are so low in the Pine Nut PMU that no monitoring has occurred since 2015 due to potential negative impacts of handling the birds.



PMU	Threats Identified as High Priority in 2012 Action Plan
Pine Nut	conifer encroachment, wildfire, invasive species, urbanization, human disturbance & recreation, infrastructure, energy development
Desert Creek/Fales	conifer encroachment, wildfire, urbanization, infrastructure
Bodie Hills	conifer encroachment, wildfire
Mount Grant	conifer encroachment, wildfire, infrastructure

About a third of all Bi-State Sage Grouse projects in Washoe ancestral land involved removal of Pinyon pine woodland to address conifer encroachment (over 20,000 acres in the Pine Nut PMU alone). The removal of Pinyon pine, a culturally important plant for many tribes, created conflict between the tribes and the land management agencies. The Bi-State Tribal Natural Resources Committee was created from this conflict to allow better coordination between tribes and agencies. Washoe Environmental Protection Department (WEPD) provided early leadership of the Bi-State Tribal Natural Resources Committee.

In contrast to the Action Plan, the Bi-State Sage Grouse Ten Year Report states, "Drought, wildfire, and wild horse impacts have all played a role in limiting habitat and reproductive success" in the Pine Nut PMU and that the population is likely to disappear. Wildfire impacts are the biggest change to the Pine Nut PMU in the past decade with almost one third of the lands in the PMU recently burning. Currently, the Action Plan is being updated which provides an opportunity for Washoe Tribe members to provide input on priorities in the coming decade. The first opportunity for input was a Tribal Engagement Meeting held at the TANF Headquarters on July 31, 2023. The WEPD will promote future opportunities for Washoe Tribe members to provide input on Washoe Tribe website and WEPD's facebook page.



<https://washoetribe.us/departmentslandingpage/489-page-environmental-protection>

Aquatic Invasive Species Monitoring: Lake Tahoe Basin

By John Warpeha, Ph d, Environmental Scientist



WEPD staff monitored for Bull frogs in the Lake Tahoe Basin, which is an invasive amphibian species that consumes native amphibians like toads. Bull frogs were monitored under the WEPD's Aquatic Invasive Species Cooperative Agreement with the U.S. Fish and Wildlife Service. This amphibian was monitored in cooperation with a field crew from the U.S. Forest Service's Lake Tahoe Basin Management Unit. Lake Baron, Sawmill Pond and Frog Pond were surveyed for Bull frogs. Please see photos below. The photo to the left shows a Bullfrog tadpole up close at Sawmill Pond. Sawmill Pond, a recreational body of water, had hundreds of tadpole stage Bull frogs, with some sub-adults and adults. The field crew had dip nets to catch the frogs and look at them up close for data collection purposes. The photo to the right shows a Forest Service crew member looking for frogs in Sawmill pond. Observations of frogs at various stages were recorded on a data sheet. The goal is to remove these species to improve the success of native populations in the Basin like toads. There are many other invasive aquatic species in the Tahoe Basin like Largemouth bass. Thank you for your review of this article. Cordially, John Warpeha , WEPD. 775-265-8680.



Recycling Curbside Pickup Schedule

Tuesday
Tribal Offices,
Stewart & Carson

Wednesday
Dresslerville

Thursday
Hun á lel ti

Recyclable items only,
please

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1000 Memdewee Run
(In the yellow metal building)

Please Call
775-265-8680

For appointments/to verify
that the gate is open.

A drop off area is under
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recycling is available at all
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What: FREE Mattress Recycling for Alpine County Residents
MATTRESSES, BOX SPRINGS AND FUTON MATTRESSES
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9:30 a.m. - 11:30 p.m.

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Markleeville, CA 96120

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Names of Hawks and Eagles

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O K P R E L D I D H E A C P L E R T H B
N W P E O C R O D S A R A S E D K O L R
E A A S A L P C R I A R I S R E N N M O
T H T D E H N E I W E N P S R A O E C A
A D A A D D S T W A E I L S E K H A D D
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R E D S H O U L D E R E D D L C A H E L
D R N O R T H E R N H A R R I E R A P A

- White-tailed kite
- Golden Eagle
- Northern Harrier
- Mississippi Kite
- Black Hawk
- Red Shouldered
- Bald Eagle
- Red-Tailed Hawk
- Zone-Tailed Hawk
- Mississippi Kite
- Black Hawk
- Red Shouldered
- Broad-Winged Haw

