August 2020

Volume IV, Issue I

Pyramid Lake Paiute Tribe Natural Resources Newsletter

The Social Distancing Issue!

From the Natural Resources Director

- Donna Noel, Natural Resources Director

Greetings from the Natural Resources Department!

We have had an interesting year in the Natural Resources Department with the COVID-19 pandemic making usual business challenging. The Earth Day and Youth Camp events had to be cancelled, along with all the other public outreach activities. We are looking forward to having these events next year if the pandemic is under control. The Natural Resources Department is compelled to promote public outreach, and provides opportunities for the youth and community to get involved in environmental activities. We are planning next year's events, so if you have any suggestions please call or email us and let us know.

The Natural Resources Department is entirely funded by grants. Our continuing grants help us achieve our objectives in monitoring water and air quality, minimizing non-point source pollution, eradicating noxious weeds, evaluating Brownfields sites, assessing wetlands, scheduling water deliveries, overseeing the irrigation systems, exploring renewable energy projects, supporting summer college interns, monitoring illegal dumping, and buying water rights for Pyramid Lake. These tasks are very important in the protection of Tribal resources, but we are always building capacity within the department to include sustainable programs to address other environmental concerns. To help determine where the department will focus on in the future, we are assessing and prioritizing the critical issues impacting the environment.

It has been a challenge to perform these tasks this year with COVID-19 looming over the country. To maintain our databases and environmental monitoring, we adopted new protocols to keep the employees of the Natural Resources Department and others on the reservation safe. The protocols follow the CDC and Tribal Council Directives while working in the field or the office. By regular communication with all staff, and ensuring that everyone follows strict social distancing and other preventative measures, we hope to continue this work through the shutdown; implementing the following measures:

- Continue telecommuting from home, making use of laptops, internet, email, and telephone. Supervisors continue to check-in with staff to ensure that grant deliverables are being completed on schedule. Prior to working, staff are required to send daily emails to their supervisors in regards to which deliverables will be completed that day, for accountability.

- Supervisors continue coordination with grant project officers to ensure deliverables are completed on time, as well as submitting Quarterly Reports and budget/work-plan proposals and modifications.

- Staff continue coordinating with Federal and non-Federal partners on proposed and ongoing projects to ensure the Tribe provides input, including submitting public comments and participating in webinars and conference calls.

Inside this issue:

Special points of interest:

- Brownsfield Assessment Site Map (Page 6)
- Pyramid Lake Rangeland Inventory Site (Page 16)
- The Natural Resources Department Staff (Page 18)
- The Natural Resources Directory (Page 19)

From the Natural Resources Director

(Continued from Page 1)

- Essential field work such as water quality, wetlands, harmful algal blooms, groundwater, air quality, rangeland, aquatic invasive species, bighorn sheep, water resources, and other monitoring are scheduled in staggered fieldwork days to limit contact between staff members. Fieldwork staff will be limited to groups of two and will utilize separate vehicles when possible. Supervisors also regularly communicate with staff to ensure safety protocols are being followed.

- When completing field or essential office work, staff are required to follow CDC guidelines including: distancing 6 feet apart, frequent hand washing (when possible), use of hand sanitizer, and wearing facial coverings.

- Restrict any staff that are in high-risk groups, such as immunocompromised or 65 and older, with coming into contact with another staff member.

- When conducting water quality laboratory analysis, driving in a vehicle, or in the office, staff are scheduled so that only one or two person(s) will be working in the same room at a time unless they can remain 6 feet apart.

We believe that between staggered work time, field work, and working from home, the department can function in a safe manner. By continuing our work, we're able to protect the environment and ensure that our programs contribute financially to the Tribe through indirect costs.

Aquatic Invasive Species

We were able to start and develop the Aquatic Invasive Species program in coordination with the Fisheries Program. We hired an Environmental Specialist and have two technicians that are working on the program. They have developed standard operating procedures for monitoring the river and lake, assess the invasive species present, are developing management plans, developed Ordinances, and the boat inspection/decontamination station should be operational this fall. We are working with Fisheries on this program and are looking to make it self-sustaining after a few years.

Water Quality

The other programs the department intends to address in the next few years are Total Maximum Daily Loads for nutrients, and water quality modeling in the lake; as well as fish barrier removal in the river. The Water Quality Program will be reviewing the Tribe's water quality standards to look for improvements to further protect Pyramid Lake, the Truckee River, and the ecosystem. They will also be looking into the conditions that promote cyanobacteria blooms in the lake.

Fish Passage

Grants were secured for the Fish Passage project at Numana Dam and began in May of 2020 with Stetson Engineers, the consultant for the project. The project includes building a fish friendly ramp, which will allow the fish to swim over the dam to reach the spawning grounds. Another fish passage grant was secured to rehabilitate and improve the diversion into Herman Ditch, to allow for better fish passage in that reach of the river. These grants, and the development of new programs, allow our department to grow without encumbering the current work being done.

Water Management

Water management of the reservoirs and Truckee River flows was challenging this year. Since the winter produced little snow, and the rest of the year was dry, we relied on the storage in the reservoirs to complete a successful spawning run in the river. Fish and Wildlife Service was limited in their monitoring, primarily due to the COVID 19 restrictions, but also the water was cut back to a dryer flow regime after the river warmed and the fry returned to the lake.

Groundwater

The groundwater issues persisted in the Wadsworth area as the Tribe reviewed the mining methods being used by CEMEX. Adjustments were made to their mining methods to help prevent impacts to the Tribes resources. The groundwater and geothermal water on the east side of the reservation may be threatened by a new geothermal plant in the San Emidio valley. Ormat

From the Natural Resources Director

(Continued from Page 2)

has prepared an Environmental Assessment that the Natural Resources Department is commenting on, and we are following the progress to develop a monitoring program that will measure any impact on the Tribe's natural resources.

Fire Restoration

Our deepartment is still working on the restoration of the Tule, Truckee, Tokahum, and Perry Fires. Most of the restoration and protection work was completed, but we are still working on the herbicide treatment to reduce the cheat grass so we can start seeding. The Tule Fire herbicide treatment was completed this year, with seeding beginning in the spring. Herbicide treatments followed by seeding will continue on the Truckee, Tokahum, and Perry areas through 2021. We are focused on the restoration of these lands and protecting the water quality in the streams and lake. There is still much work to do and we will be completing the tasks as time, resources, and weather allows.

The Natural Resources Departments mission is, "***to ensure clean air, water and lands to maintain healthy fish, wildlife, and plant populations for future generations to preserve the Pyramid Lake Paiute Tribe's culture and way of life***," and we take this mission seriously by thinking about it every work day and with every decision made.

Donna Marie Noel
Natural Resources Director

Aquatic Invasive Species Program: New Staff Updates

- Adrienne Juby, Aquatic Invasive Species Specialist

I would like to take a moment to introduce myself, I am the new Environmental Specialist for the Aquatic Invasive Species (AIS) Program. I am very excited to be part of the ongoing success of this program, and feel fortunate for the opportunity to help protect the Pyramid Lake Paiute Tribe's valuable natural resources. I received my Master of Science at UNR in Natural Resources and Environmental Science and have gained work experience in interpretive education, community outreach, and grant writing for a wetland restoration project. I plan to use these skills to develop a sustainable AIS Program and an AIS Management Plan aimed at prevention, monitoring, control/eradication, and education; which will ensure we maintain a healthy environment for native species.

Aquatic invasive species are among the top threats facing our waters and have the potential to degrade water quality, habitat, and outcompete native species. One of our goals for 2020 is to get the Watercraft Inspection and Decontamination (WID) Station operational for the upcoming season. The WID station will help to protect our water resources and aid in preventing the highly invasive, and detrimental, Dreissenid mussels and New Zealand mud snail from contaminating the lake. Prior to my arrival, the two environmental technicians, Justin and Sloan, received WID II training which has prepared them to provide education and outreach to lake users, and will allow them to inspect and decontaminate boats once the WID station opens. They have also been hard at work to create and provide ***clean, drain, dry*** educational materials to boaters and anglers.

Additionally, for the 2020 season, we will continue to monitor for AIS in the lower Truckee River and Pyramid Lake. We have deployed artificial substrate samplers into the lake and river that we will check monthly for AIS, specifically; Dreissenid mussels and New Zealand mud snails, which prefer the material for colonizing. As a part of monitoring, we will also create a rapid response plan that will better prepare us to act quickly in the case of a new AIS introduction. We will be collaborating with regional interest groups to provide best management practices for these efforts. A major concern and focus area will be the mixing zone. It is unclear if Dreissenid mussels and other AIS of concern can survive in Pyramid Lake due to the saline

Aquatic Invasive Species Program: New Staff Updates

(Continued from Page 3)

water, but they could possibly adapt to these conditions over time where the river and lake meet. We want to prevent this, so we'll make this area a priority to monitor for AIS, along with adjacent areas to track any movement.

Public outreach development has consisted of creating scripts for short films, and taking advantage of social media trends. It is our belief that by creating awareness of AIS through mainstream avenues, we will reach a wider audience and can also create effective educational tools that prove memorable. These plans include a potential TikTok and YouTube page. At this point we are still in the developmental stage of writing and brain storming, but would like to encourage all PLPT employees to become involved in this process by sharing potential ideas, be willing to appear on camera for projects, or would like to be involved in general; reach out to Sloan Sampson at ssampson@plpt.nsn.us.

We are excited for a great field season ahead of us and are working on innovative outreach materials that we look forward to sharing with you. If you have any questions or comments, please feel free to reach out to me at ajuby@plpt.nsn.us.

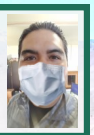
Adrienne Juby
Aquatic Invasive
Species Specialist
ajuby@plpt.nsn.us

Sloan Sampson
Aquatic Invasive
Species Technician
ssampson@plpt.nsn.us.

Justin Jackson
Aquatic Invasive
Species Technician
jjackson@plpt.nsn.us

Nonpoint Source Pollution & Algae Bloom Updates

- Aaron Bill, Water Quality Standards Specialist



Nonpoint Source (NPS) pollution is defined as the pollution that is otherwise not discharged or emitted from a point source, such as a drainage channel, conduit, or pipe.

NPSs of pollution are aspects of water quality often overlooked as they are factors that cannot be directly altered, mitigated, or even measured; such as flows that transport minerals or toxins from a deposit to a waterbody, or the mobilization of nutrients flowing over a mountain highland. Overland flows contribute nutrients and other things in excess, which lead to parameter impairments the water quality department can measure. One small input doesn't have much impact, but collectively they contribute to ecosystem degradation. In their sum, NPS inputs ultimately lead to the degradation of a waterbody, and thus require sound environmental management with a comprehensive approach to all stakeholders within its structure.

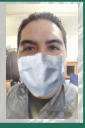
July 27 – From Popcorn Rock

The ecosystem in Pyramid Lake exists under an equilibrium, or a balance of what flows into it. The balance becomes unsteady should one particular input be added in excess. For example, the recent algal bloom that forced beach closures in July 2020, occurred due to excessive nutrients, most likely nitrogen. Excessive nutrients led to an explosion in the cyanobacterial populations with Nodularia spp. dominating and releasing microcystin toxins in large concentrations, unsafe to human health.

An event like the recent algal bloom underscores the need for complete environmental management, with monitoring activities

Nonpoint Source Pollution & Algae Bloom Updates

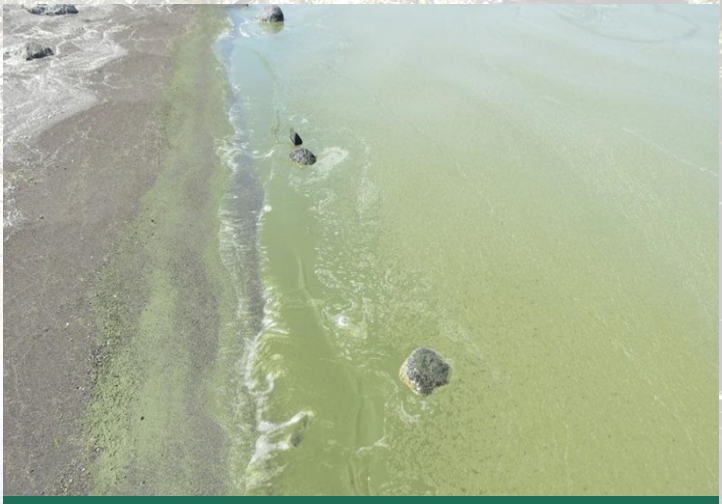
(Continued from Page 4)



including sample analysis using current scientific practices and techniques, and with coordination and cooperation from upstream environmental managers. Armed with data, the Tribe can identify shortfalls within an environmental management plan and compel changes for their approach to policy.

The Water Quality Program, within the Natural Resources Department, works to mitigate nonpoint source pollution in order to protect the established use of the Tribe's aquatic resources, and an effective method is through public participation. Unfortunately, the persistence of the COVID-19 pandemic halted many activities which require public input; such as NPS Management Plan workshops, and in-person meetings with stakeholders and their organization. However, these activities will resume once the pandemic subsides, and the water quality program will be seeking public input to adequately address stakeholders' concerns. It is through these public workshops where stakeholders can improve Tribal efforts through the exchange of ideas. Stay tuned for more information.

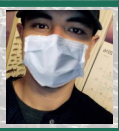
Aaron Bill
Water Quality
Standards Specialist
abill@plpt.nsn.us



Another example of a HAB event that occurred in 2013.

Brownfields Tribal Response Program Updates

- Ruben Ramos-Avina, Tribal Response Program Coordinator



Greetings community members!

The Brownfields Program has been putting together an ordinance and management guide to address releases of hazardous substances into the Reservation's environment. Specifically, the ordinance and management guides are being written to:

1) set guidelines for cleaning-up contaminated sites to the satisfaction of the Tribe,

2) help the Tribe determine who is responsible for cleaning-up contaminated sites,

3) help the Tribe recover cleanup costs and natural resource damage costs as a result of the release of a hazardous substance into the Reservation's environment.

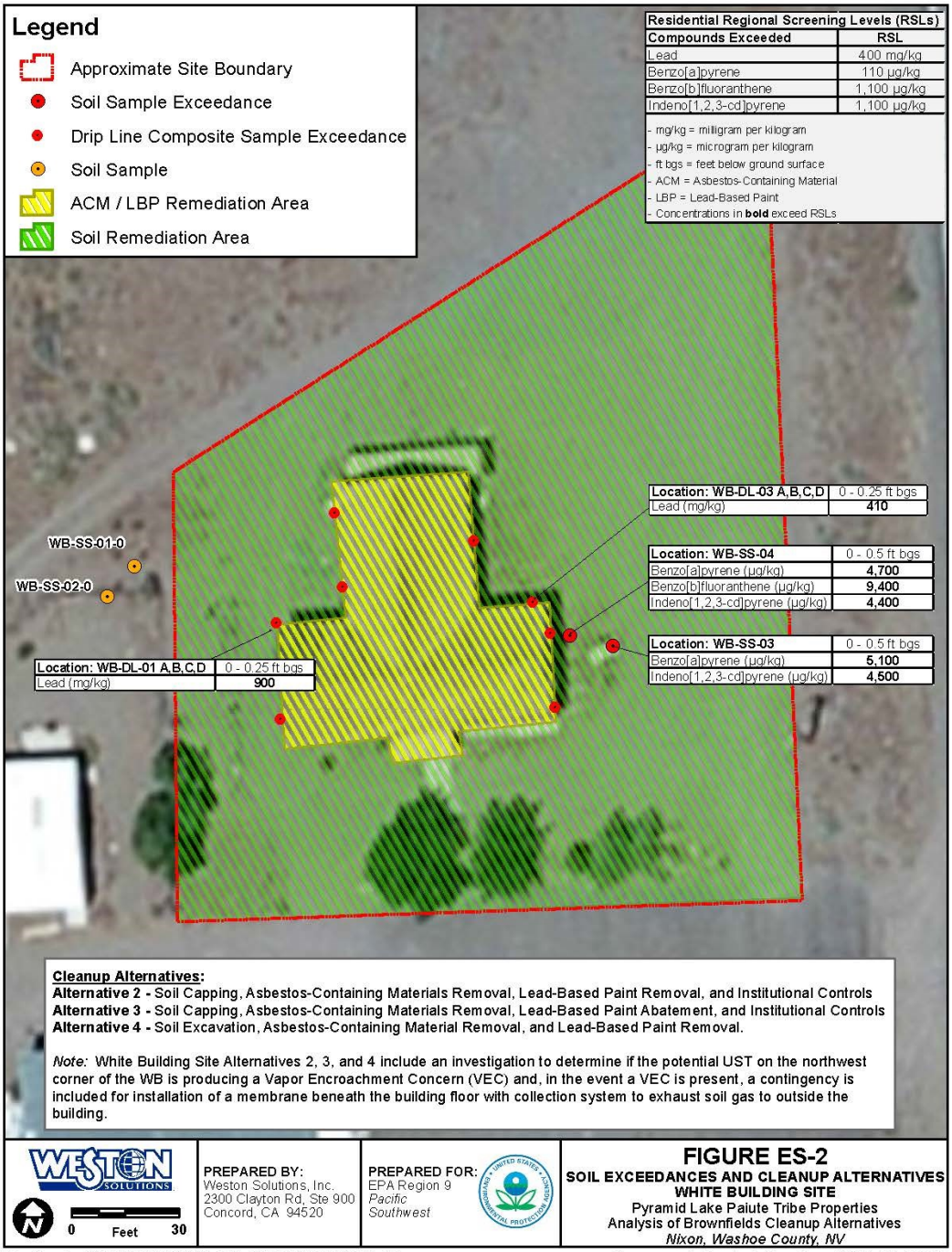
Overall, the purpose of the ordinance and management guides are to help protect human health and the environment. The Brownfields Program will soon accept comments from the community regarding both of these documents.

On another note, the environmental site assessment report for the White Building, Rock Building, and Oil Pit sites was made available on the Brownfields Program Website in February. Please visit — https://www.plptbrownfields.org/public-record — to read the report.

Likewise, you may coordinate with Ruben Ramos-Avina, 775-574-0101 extension 10, if you would like to get a hard copy of the report. The Brownfields Program is working with other tribal departments and programs to find funding and ways to clean-up and reuse (or redevelop) the White Building, Rock Building, and Oil Pit sites.

Brownfields Tribal Response Program Updates

(Continued from Page 5)



Map showing areas of the White Building site (one of the three sites assessed) needing cleanup. A list of ways the site may be cleaned-up is presented on the bottom of the map.

Wetlands Program Update

- Robyn Mercer, Wetlands Specialist

The Wetlands program has remained busy this past year with new and on-going projects, and has also seen changes within the program itself. Emily Hagler who was the previous Wetlands Specialist has taken on the Bighorn Sheep project, and during this transition I was able to train under Emily to become the new Wetlands Specialist. My name is Robyn Mercer and I began working for the tribe in January 2019 as a water quality intern, I then became a water quality and wetlands technician which slowly transitioned into my position now as the Wetlands Specialist. I graduated from the University of Nevada, Reno in the spring of 2019 with a Bachelor's Degree in Environmental Science with focuses on water quality, watersheds, plant identification, and more. I am excited to take on the Wetlands Program and continue the important work being done, as well as finding new projects and work to tackle in the future.

From restoration work at Numana, to amphibian and hydrologic monitoring, the Wetlands Program continues to work diligently on protecting and preserving the wetlands here on the Pyramid Lake Paiute Reservation (PLPR).

Adult Northern Leopard Frog – Tested for Bd

Continuous Hydrologic Monitoring:

Monitoring the hydrology in wetlands is beneficial for better management practices. For two years the Wetlands Program has been monitoring the hydrology at two separate and geographically different wetlands. The overall hydrology is monitored through a water level logger and a precipitation gauge installed at each site. After downloading the data from each site, the Wetlands Program staff can merge this data onto graphs to see exactly how the two wetlands differ hydrologically, and how the wetlands themselves change between seasons and from year to year. Using this information, various management practices can be put into place at these wetlands along with the other wetlands found on the reservation, to improve the health of these essential ecosystems.

Amphibian Monitoring:

The Wetlands Program has continued to monitor the Northern leopard frog population here on the reservation. Along with Northern leopard frogs, when found other amphibians are surveyed to notate the different species living on the reservation. This is done to gain insight on certain habitat requirements and to contrast different amphibian behavior throughout their unique life cycles.

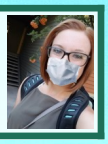
The Northern leopard frog, a relict species from the Truckee River Watershed, now occupies one small geographic area along the lower Truckee River in Wadsworth. This is a species of concern in Nevada but is not yet identified as being endangered or threatened, which is why the population is being monitored and managed by the Wetlands Program; to ensure their extirpation from the reservation does not occur. Threats to the Northern leopard frog include but are not limited to, habitat destruction, introduced/invasive species (Bullfrogs), and non-point source pollution.

The Wetlands Program staff conducts surveys seasonally to collect data on the population of Northern leopard frogs. Through call surveys, egg mass surveys, and visual encounter surveys, the staff can estimate the population

Northern Leopard Frog in final developmental stage

Wetlands Program Update

(Continued from Page 7)



size and compare year to year data on the populations extent. Other monitoring efforts include Bd testing. Bd (Batrachochytrium dendrobatidis) is a skin disease which Bullfrogs carry, and Northern leopard frogs can contract. This disease can turn into Chytrid, which ultimately can kill the Northern leopard frog. In hopes of stabilizing the population of Northern leopard frogs here on the reservation, these Bd tests have been conducted to show if Bd is present, and if so, the staff will see how prevalent the disease is within the population. Last season the results showed that a small percentage of Northern leopard frogs tested positive for this disease, but the majority of the population tested negative. With this information the staff is hopeful the population will not decline, and with other measures such as Bullfrog eradication the population will see an incline. Overall, the Northern leopard frog population remains stable, and the staff continuously researches new ways to monitor and manage this relict species.

If you want to know more about what the Wetland Program does or if you have any questions or concerns, we are available at the Natural Resources Department building, or reach us by phone or email. Also, if you have any encounters with amphibians please reach out. We are always interested in doing surveys in new areas and learning more about where amphibians reside here on the reservation, and hope to find new locations of Northern leopard frog populations.

Adult Northern Leopard Frog sunbathing

Contact information:

Robyn Mercer
Wetland Specialist
rmiller@plpt.nsn.us
(or office phone with Amanda's extension)
775-574-0101, EXT: 16

Jeremiah Sampson
Wetland Technician
jsampson@plpt.nsn.us
775-574-0101, EXT: 11

Unknown Amphibian egg mass found on Truckee River surface

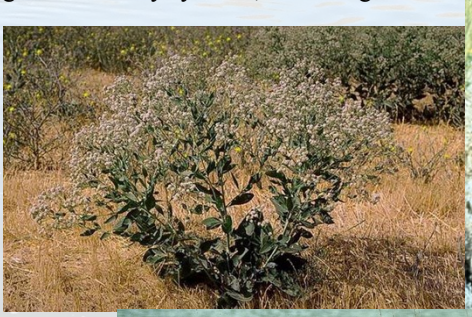
Updates from the Environmental Manager

- Mervin Wright Jr., Environmental Manager

The Environmental Manager is working with the Environmental Protection Agency (EPA) Region 9 Administration on issues such as consultation, GAP, clean water, the budget, solid waste, and clean air. Region 9 tribes are continuing their effort to protect their respective environments using the available resources; the regulations, policies, and laws. Monitoring the changes and rollbacks of environmental protection measures is a constant task, but with the intention of protecting the resources of our environment. Most, if not all of the actions have been litigated, so before any of it goes into effect the cases must be heard and ruled upon. The summer RTOC meeting is scheduled for August 11 through August 13, 2020. The meeting will be coordinated as a virtual meeting. All of the Region 9 tribes will be invited to participate. The spring RTOC meeting was held as a virtual meeting and it was well attended.

The Tribal Irrigation O&M Program is in full operation this 2020 irrigation season. The use of decreed water rights is important to assure water deliveries are being made with efficiency. The effort to continue with agriculture production is a priority as our land use practice improves with our water use. The tribe rotation is based upon irrigators calling the ditch rider and scheduling their delivery. Our objective is to provide a full head (***left***) so that the irrigation diversion is completed as soon as it is practical.

The Tribal Noxious Weeds Program continues to treat for the control of noxious weeds on the reservation along the Truckee River corridor, within certain grazing units, along irrigation delivery systems, and along tribal roadways. The effort is challenging with the limited resources provided to combat the infestation of white top, tamarisk, Russian knapweed, curly dock, Russian olive, medusahead, and scotch thistle. The treatment activity will be through chemical treatment, mechanical and physical removal of noxious plants, shrubs, and trees.



The Tribe received a grant award for its FEMA Pre-Disaster Mitigation grant that aims to support completing preliminary engineering reports (PER) to ultimately achieve the protection of our streambanks and the restoration of our cold-water fishery. The Tribe received one-half of the funding requested, so it will be setting a priority for the exposed streambanks to be analyzed for the PER. Once the preliminary engineering reports are completed, the Tribe can then apply its resources to obtain funding to complete the streambank protections. The ultimate goal is to establish bank stabilization to prevent erosion sedimentation in the river, and to protect lands from erosion and acreage loss. The optional measures for protecting the streambank include bioengineering and conventional engineering techniques. Bids will be obtained and a consultant/company will be selected to complete the PER.

Top left Perennial Pepperweed (Tall Whitetop), Top right Curly Dock, Bottom Purple Loosestrife

(***Next Page***) are some of the exposed streambanks that will be analyzed for the preliminary engineering report.