

## Rez Recycler– Summer 2022



### **Finally, Out with the Old & in with the NEW!**

In June 2021, the Nation's Planning & Environmental Protection (PEP) was awarded \$147,768 from the Volkswagen Diesel Emission Environmental Mitigation Trust for Indian Tribes. The funds are to mitigate emissions through replacement of older diesel engines and/or installation of electrified parking spaces. PEP utilized the awarded funds to replace the Nation's 2005 Kenworth T300 with a 2021 Kenworth T370.

This replacement will assist Wastewater's Operator, Marcus Oliveira, and Operator-in-Training, Ricardo Toledo, in their daily wastewater operations and community septic requests. The '21 Kenworth T370 comes equipped with a 2,400-gallon vacuum tank, a NVE607 MaxPak vacuum pump, and CAT 12V Pressure Washer. Additionally, the settlement will provide a small cost-share toward the replacement of another heavy diesel truck at the Road & Bridge Department.

This effort was initiated under the PBPN Air Quality Program, coordinated by Billie Toledo, which focuses on ambient (outdoor) and indoor air quality inventory, monitoring and education/outreach. PBPN's new purchase would not be possible without our coordinating partners, PBPN Tribal Fire, PBPN Road & Bridge and the technical assistance provider, Institute of Tribal Environmental Professionals.

## SUMMER YOUTH WORKERS- 2022



PEP was once again fortunate to work with a great group of youth employees; Jameison Simon, Ronin Gentile, and Jordan Miller. The young men assisted with the waste, recycling, 128A/Tribal Response Program, wastewater and the orchard site. They worked through the heat, mud, poison ivy, and other challenging workplace conditions typical to our environmental and utility programs. We greatly appreciated their assistance and as always, had lots of fun working with them. We'll continue welcoming a new group of youth every summer. We hope they'll return someday to contribute again and offer new ideas to grow, change and improve our program.

*EARTH DAY!!! Over 3.5 billion people participate worldwide in 192 countries!*

### Earth Day 2022



PEP staff  
planned

and coordinated the 2022 Earth Day event. The event kicked off with a roadside clean up on April 22nd. Over 100 volunteers participated in the clean up of 23 miles of Reservation roads, removing 2,104 pounds of litter/waste. A community outreach event was held on April 24th at Prairie People's Park. The event included environmental outreach booths, tree/shrub/pollinator plant education, a "Reuse Table, consisting of gently used household items available for trade or giveaway, a 1.5 mile walk activity, and a s'mores fire pit/table aimed at promoting family outdoor activities.





BEFORE



CHANNELIZATION REMOVED AND STREAM BUFFER INSTALLED



AFTER



## MIMICKING NATURE TO IMPROVE WATER QUALITY ISSUES

“The project involved removing the concrete liner and grading the area to allow a new meandering channel to be installed. The grading and meandering made it possible to correct the grade and create some hydrologic head pressure to move water all the way through the park. Coconut rolls were placed in the graded area to roughly mimic the meander frequency observed above and below the park. The stream was allowed to establish its own meander pattern within the boundary of the coconut rolls. In a couple places, the stream spilled over the coconut rolls, so the rolls were readjusted to allow the stream to form its own natural meander. A streamside buffer was planted with native grasses and wild flowers.

**The result was a stable and aesthetically pleasing stream through the park.** The biggest problem was training the park maintenance crew not to mow the stream buffer. That took three years with the park supervisor having to go to the park frequently to supervise the mowing. Also, the city had to pacify numerous citizen complaints about the weedy mess until the grasses and wild flowers got well enough established to provide an aesthetically pleasing landscape.”-Elbert Traylor, Environmental Programs Specialist, Nebraska

Project implemented in Central Park, Alliance, Nebraska

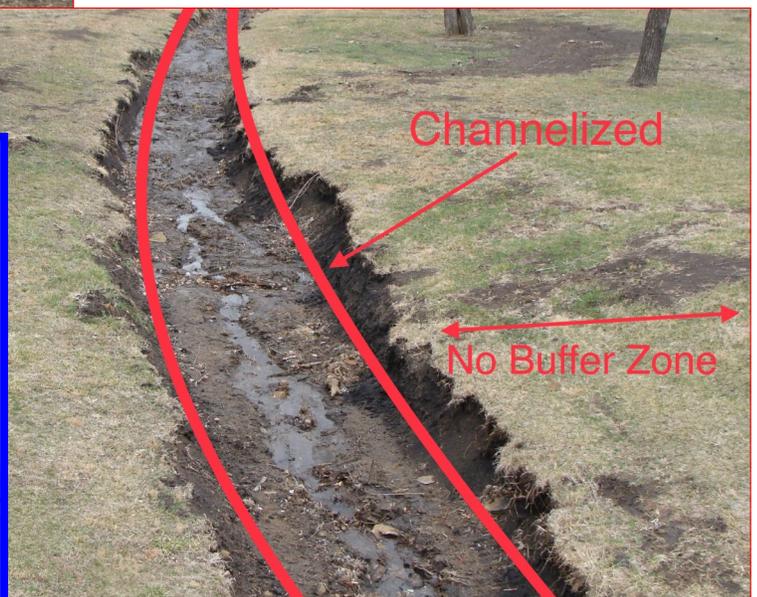
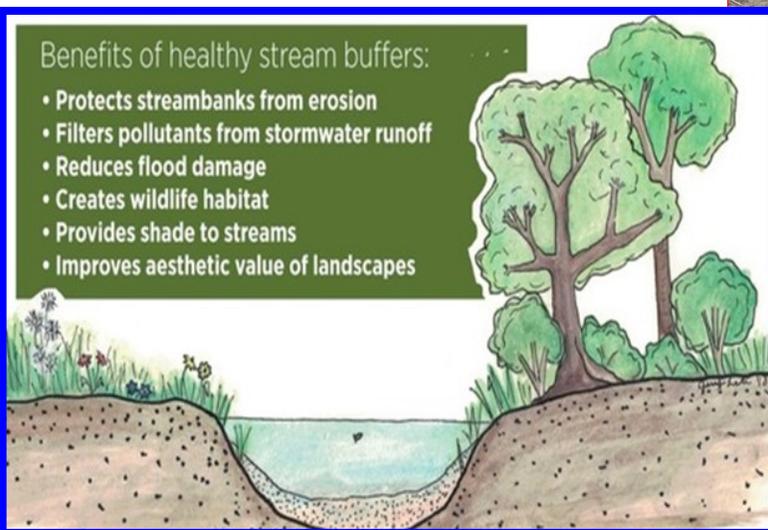
## NO RIPARIAN ZONE = POOR HABITAT AND POOR WATER QUALITY

Soil erosion (identified in the photos below) is a huge water quality issue in Soldier Creek Watershed. Soil erosion is one form of soil degradation. This process occurs naturally but it can also be introduced into the system by human activities. This stream has been channelized and streambank vegetation detruncated. This practice is not encouraged or recommended. Stream bank channelization (**STRAIGHTENING OF STREAMS**) accelerates water velocity and scours stream banks. This practice does not mimic nature, since streams and rivers naturally meander over the watershed. Vegetation along a stream aid in improving water quality by filtering out sediments, nutrients and pollutants from run-off before they enter the stream. PEP promotes and implements best management practices



that aid in capturing water pollutants related to soil erosion. This site does not have a stream buffer and can be easily remediated by planting vegetation for pollinators and other wildlife.

Flowering vegetation is esthetically pleasing to the community and promotes pollinators throughout the PBPB reservation. A mix of spring, summer and fall flowering perennials would be a valued asset along this stream.



### Riparian Buffers & Water Quality

What are Riparian Buffers? Riparian buffers are an area next door to a stream, wetland, or lake that contain trees, shrubs, or any other plant. Every riparian buffer is unique and require different land management practices based on the landscape. Buffers can be used in various settings such as urban, agricultural, and even golf courses!

The benefits of riparian buffers are the impacts of water quality. Proper management of riparian buffers can filter out sediment, nutrients, and pesticides! Also, they are a great resource to prevent erosion control because of the root system in place. Recently, the PEP department has implemented two riparian buffers alongside Big Soldier & Little Soldier Creek to improve water quality and erosion control. PEP is conducting routine maintenance on the riparian buffer sites to ensure proper growth of the tree saplings leading to long-term success of the buffers and water quality.



## Buffalo Bridge Streambank Restoration

The Prairie Band Potawatomi Nation Planning and Environmental Protection (PBPNEP) applied for and received a \$100,000 Clean Water Act Section 319 grant award from the U.S. Environmental Protection Agency. PBPNEP competed against other entities across the country to win the award and implement the two-year project beginning in January 2021. The overall project goals were to improve water quality conditions, reduce sedimentation, and support the PBPNEP Bison Program in the Soldier Creek Watershed. To achieve these goals, PEP partnered with the PBPNEP Road and Bridge and Land Management Departments to install streambank stabilization and best management practices (BMP) on a small area of Soldier Creek referred to as the “Buffalo Bridge”. The “Buffalo Bridge” is aptly named so because underneath the N Road bridge, the buffalo cross the stream to access two separate grazing pastures being managed by rotational grazing practices. The project kicked off with contract preparation and coordination meetings in 2021 and early 2022. Road and Bridge then coordinated with engineers/contractors from Wildhorse Riverworks and Water Resources Solutions, prior to mobilizing in June 2022. Once onsite, they cleared, excavated, and constructed a hardened crossing according to engineered plans. In addition to the onsite operator expertise, Road & Bridge also transported and delivered nearly 2000 tons of rock needed to complete the BMP. The Land Management

Department closed out the BMP installation with the native grass seeding and tree plantings. With the rock work and vegetation grow-in final, a once degraded crossing will be made safer for the buffalo and result in less sedimentation to Soldier Creek.

The PBPNEP land and infrastructure-related departments coordinate frequently for Tribal and federal grant projects of all scopes and sizes. These collaborations allow the departments to share data, pool resources, generate mutually-beneficial outcomes for every involved department, and ultimately support the Nation and community in more efficient and holistic manner.



### **What is the Air Program Doing?**

The Nation's Air Program has been undergoing a variety of transitions to improve programmatic support and ambient air monitoring. This includes:

- ◆ Revamped the Meteorological Monitoring Quality Assurance Project Plan. Approved revisions will support stronger procedures in the field during maintenance and calibrations.
- ◆ Identified air monitoring needs and worked with EPA R7 to approve a workplan for Enhancing Air Quality Monitoring funds under the ARP. Funding will cover a rebuild of the PM2.5 monitoring station to enhance controlled environment standards and quality assurances and controls.
- ◆ Transition the Nation's Clean Air Act (CAA) 105 grant into a Performance Partnership Grant (PPG). The transition will allow the Nation's Air Program to house multiple air related programs and their funding under one grant to prioritize air related problems or needs and approach a wider range of initiatives that was limited in the CAA 105 grant.
- ◆ Fiscal 2023's PPG will focus on updating the Nation's Emission Inventory, offering Indoor Air Quality Assessment, and participating in the National Tribal Air Association which is a policy development group.

For additional program information or to provide input on needs or concerns, please call 785-966-8032. Collected needs and concerns will be used to draft future workplan components to improve air quality within the PBPB community.

### **PBPB's Wetland Reserve Easement Site: [RESTORATION COMPLETE MARCH 2022!](#)**

Current site conditions include a completed restoration that has water and wetland vegetation present. Water fowl, monarch butterflies, swamp milkweed, frogs and other wetland loving species are now present. Work completed included excavation for shallow water development with one dike embankment and two wave berms. The restoration site has a functioning dike and water control structure in place.

The primary objectives of this project are to restore and enhance wetland wildlife habitat and improve the overall water quality for the contract area. The Prairie Band Potawatomi Nation aspire to restore the values and functions of the degraded wetland by restoring hydrology and enhancing the wetland and adjacent upland buffer area for pollinators.

Photos taken: wetlands PT75/50 by M. Kerron and monarch butterfly on swamp milkweed by V. Potts



# POLLINATOR PROJECT

PEP utilized a pollinator care package received by the Tribal Alliance for Pollinators to start plants. The plants were transplanted to a second demonstration garden at the PBPN Tribal Orchard. Virginia LeClere and Susan Torres continued pollinator outreach activities by maintaining the 2 pollinator/native plant sites during the grow-in. The 4 honey bee hives were also maintained during this time. Signage is currently being purchased for the 2 native plant sites.



**MONARCH BUTTERFLY CATERPILLAR-**  
*photo taken by Laurie Brown*

PRAIRIE BAND  
POTAWATOMI NATION  
DIVISION OF PLANNING &  
ENVIRONMENTAL  
PROTECTION  
15498 K ROAD  
MAYETTA, KS 66509

PRSR STD  
US postage PAID  
Mayetta, KS  
Permit No. 10

RESIDENT  
RR #2 , BOX HOLDER  
MAYETTA, KS 66509

