

# WATER RESOURCES DIVISION



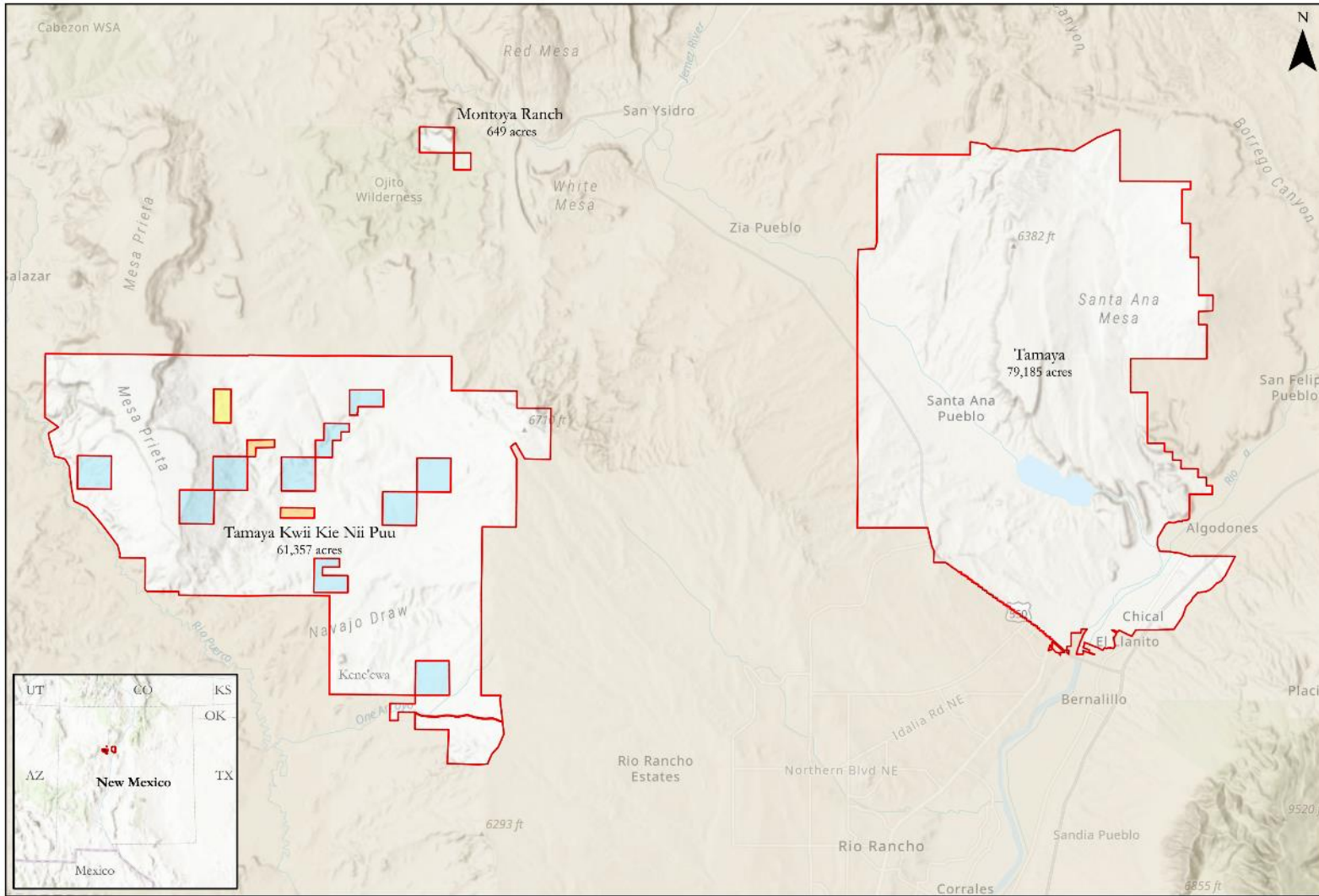
Department of Natural Resources  
Pueblo of Santa Ana



# Santa Ana DNR History

- DNR established in 1996 to combat invasive species
- Directed by Tribal Council to develop and implement natural resource management programs which protect, preserve, and enhance the natural living environment for current tribal members and future generations with the following goals
  - Develop programs which assess the conditions of air, water, and land resources
  - Identify problem areas and provide tribal leadership with management options for correcting the problems
  - Implement management plans which improve and protect the tribes natural resources for future generations
  - Develop and maintain technical expertise within the tribe for managing environmental/natural resources

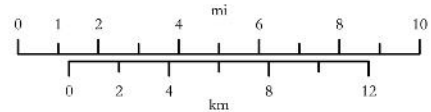




**The Pueblo of Santa Ana**

Trust and fee lands of the Pueblo of Santa Ana totaling 141,191 acres within Sandoval County, New Mexico

- Pueblo of Santa Ana Boundary
- Inholding - Private
- Inholding - Federal, BLM
- Inholding - State of NM





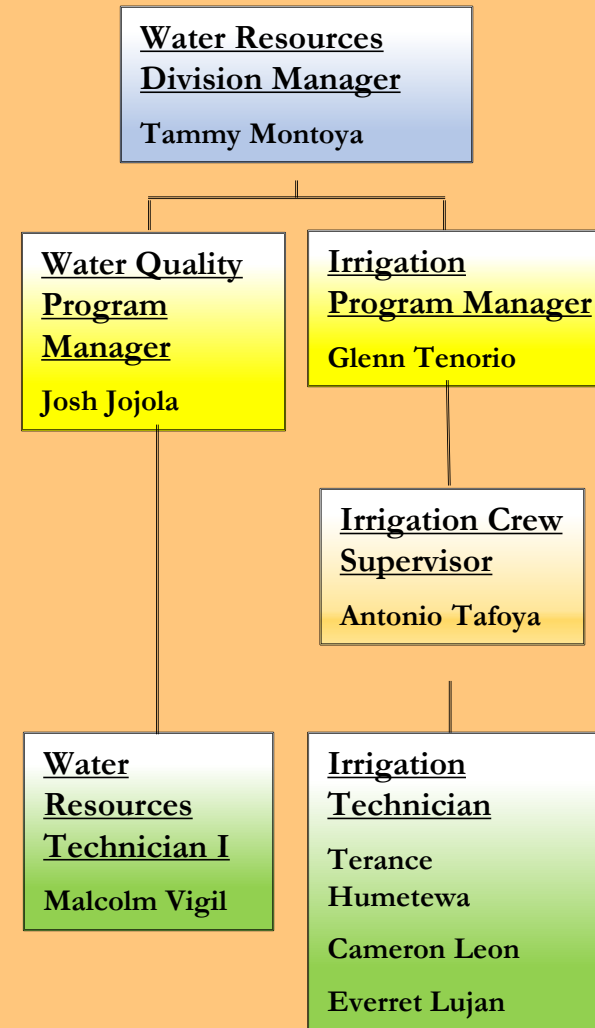
# DNR Overview

## 6 Divisions

- Bosque Restoration
- Range & Wildlife
- Water Resources
- GIS/GPS
- Conservation Enforcement
- Environmental



# Water Resources Division



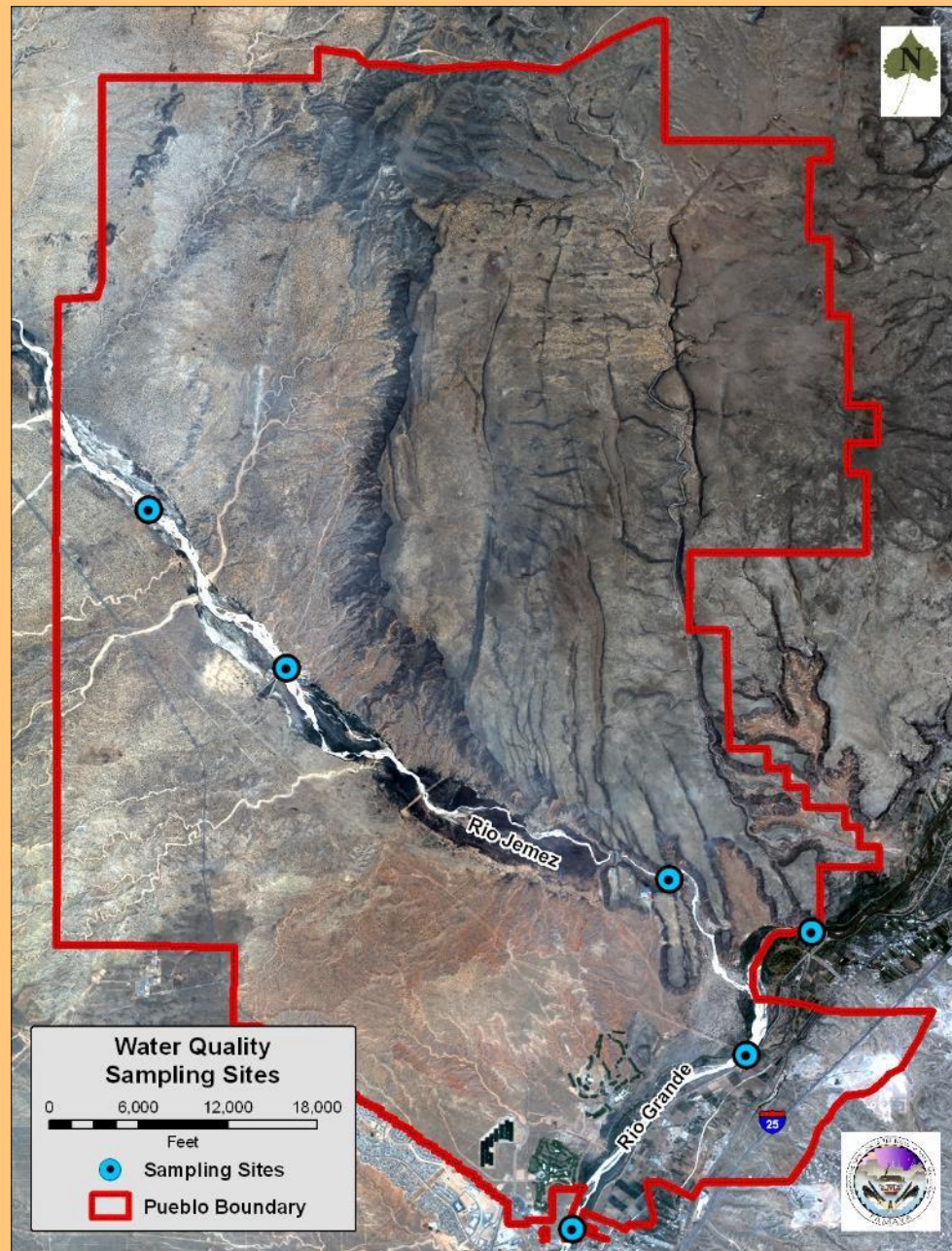


# WQ Monitoring (EPA)

- Monthly WQ Monitoring
  - 7 Sites monitored monthly
    - 3 Rio Grande Sites
    - 4 Rio Jemez Sites
- Parameters Measured
  - Water Temperature
  - pH
  - Specific Conductivity  $\mu\text{S}/\text{cm}$
  - Salinity (psu)
  - TDS (Total Dissolved Solids).
  - Depth (Meters)
  - Turbidity (NTU)
  - LDO ( $\%$ ,  $\text{mg}/\text{l}$ )







# Overview of Water Quality Program

- Water quality data collection started in 1998 using GAP funding
- Pueblo received Treatment as State (TAS) in July 2015
- Pueblo received Water Quality Standards in August 2015
- Pueblo held its first triennial review in 2020 and standards were approved in September 2021
- Pueblo was accepted to the ATTAINS program in 2022





# Water Quality Equipment



Hydrolab HL4 SONDE



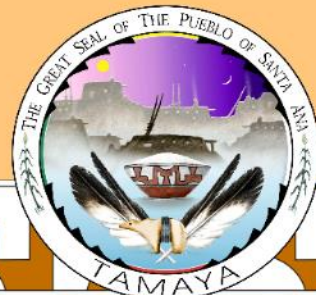
Eureka Manta 30+



# Macroinvertebrate Monitoring



Monitoring on the Rio Grande at 3 designated locations  
Bugs identified at the Pueblo's Lab





# Water Quality Analyte Sampling

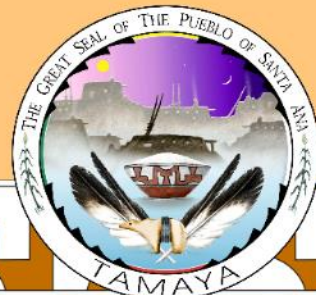
- Grab samples are taken from the Tamaya Bridge twice a year
- Certain analytes will be selected to reflect the Pueblos Water Quality Standards in the Ceremonial and Recreational use criteria
  - Dissolved Metals
  - Total metals
  - Cations
  - Anions
- Grab sample kits are purchased and analyzed through Eurofins labs, previously known as Hall Laboratory.



# E. Coli Monitoring



- *E.coli* samples are taken once a month;  
*E.coli* results could trigger weekly sampling
- Samples are taken to the Pueblo's lab where analysis is done
- *E. coli* test takes up to 24-hours





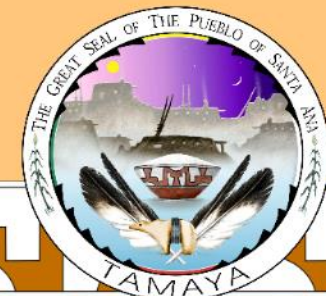
# Additional Monitoring Activities

- Rio Jemez & Rio Grande Watershed Monitoring
  - 4 Locations on the Rio Grande; west of Santa Fe (Buckman) to 550 Bridge in Bernalillo
  - 4 Locations on the Rio Jemez; Valles Caldera (East Fork) to Tamaya Bridge (Old Village)
- Ditch/Pond/Arroyo Monitoring
  - Funded thru EPA Multipurpose grant
  - 6 monitoring sites
- Source Tracking Monitoring
  - Microbial Samples taken on the Rio Jemez Sites
  - Samples are sent to Luminultra Labs in Canada



**Table IV-1  
Designated Uses for Each Water Body**

Water Body	Designated Use					
	Coolwater Aquatic Life/Fishery Use	Warmwater Aquatic Life/Fishery Use	Primary Contact Ceremonial Use	Primary Contact Recreational Use	Agricultural Water Supply Use	Wildlife Habitat Use
<b>Rio Jemez</b>						
Rio Jemez Reach 1 (Confluence to Rio Jemez Dam)	x	x	x	x	x	x
Rio Jemez Reach 2 (Jemez Canyon Dam to USGS Weir)	x	x	x	x	x	x
Rio Jemez Reach 3 (USGS Weir to Tamaya Bridge)	x	x	x	x	x	x
Rio Jemez Reach 4 (Tamaya Bridge to Zia Border)	x	x	x	x	x	x
<b>Rio Grande</b>						
Rio Grande Reach 1 (South Border to Hyatt Tamaya)	x	x	x	x	x	x
Rio Grande Reach 2 (Hyatt Tamaya to Confluence)	x	x	x	x	x	x
Rio Grande Reach 3 (Confluence to North Pueblo Border)	x	x	x	x	x	x
<b>Ditches</b>						
MRGCD Main Reach		x		x	x	x
Riverside Drain Reach	x	x		x	x	x
<b>Ponds</b>						
Ponds		x	x	x	x	x
<b>Arroyos/Springs</b>						
Arroyos/Springs		x	x	x	x	x





# Nonpoint Source Pollution

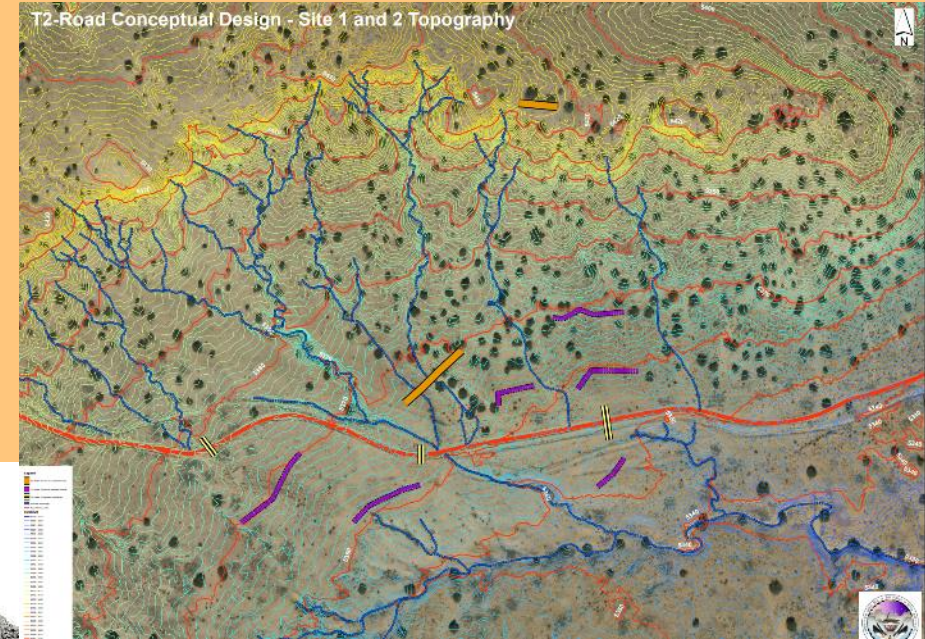
- NPS Stormwater Runoff Monitoring: EPA 319 base
  - Stormwater drainage and pond monitoring
  - Erosion Monitoring



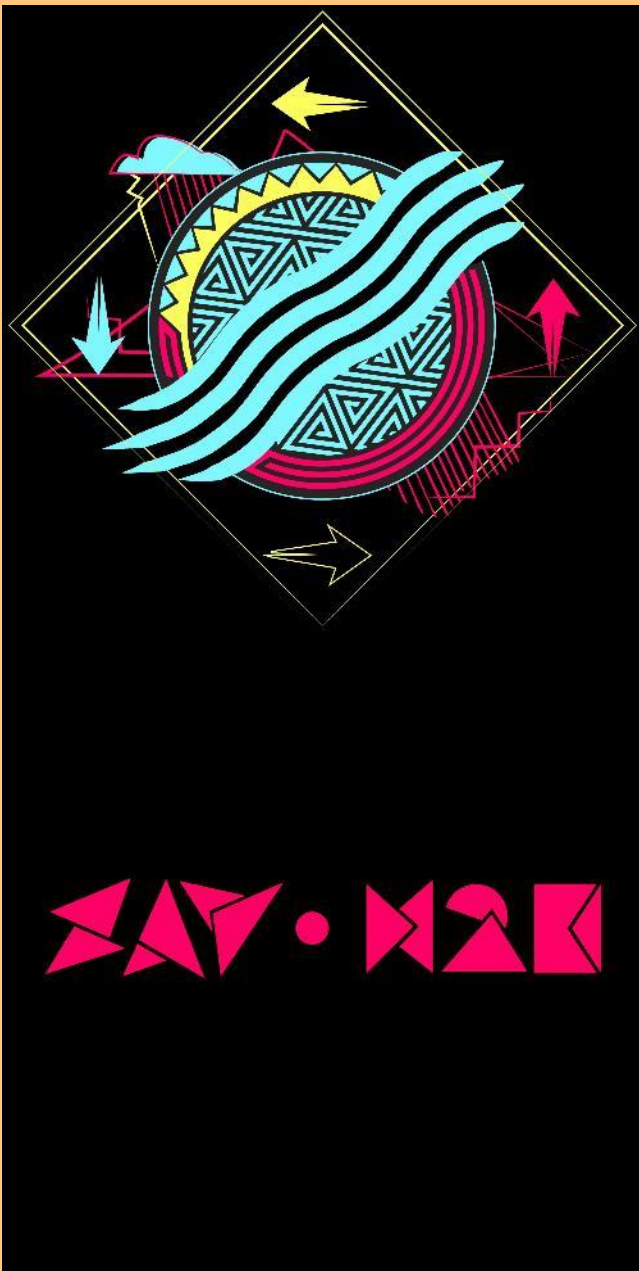


# Nonpoint Source Pollution Monitoring

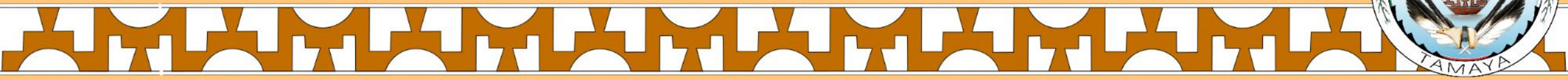
- Stormwater Runoff Erosion Control Implementation Project: EPA 319 Competitive Grant







# Outreach

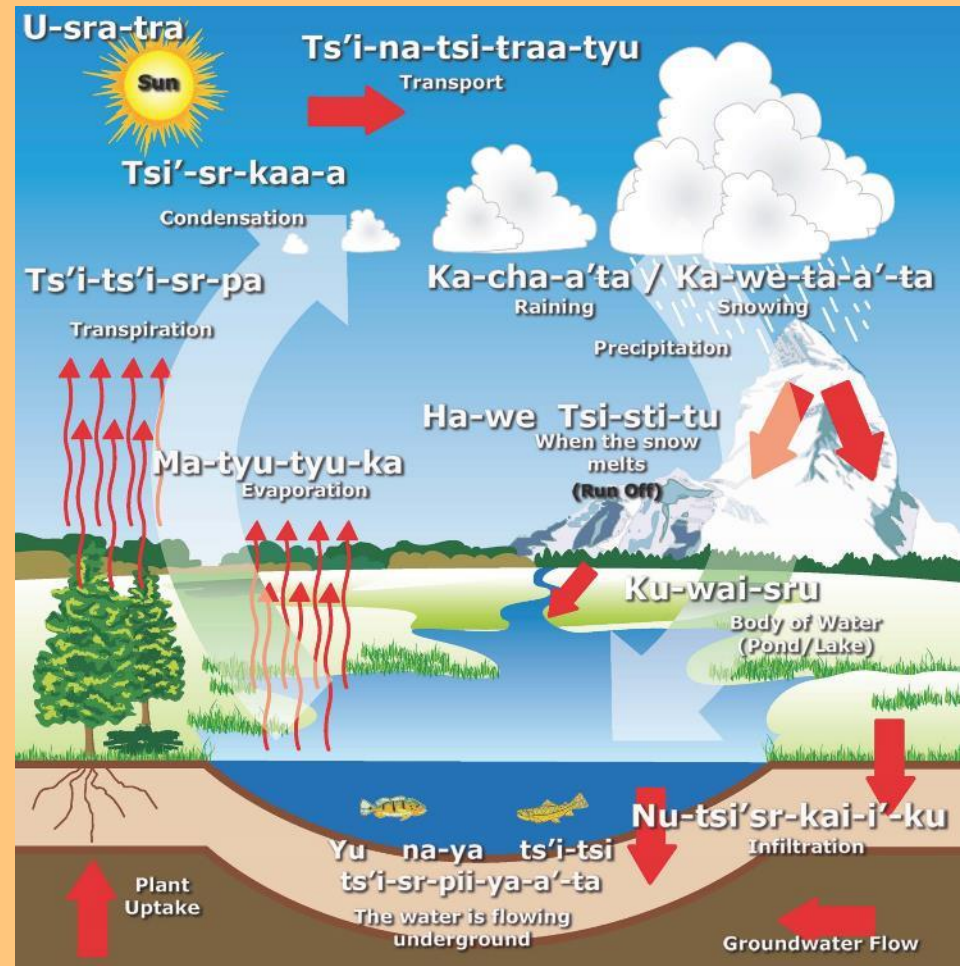


# Santa Ana Youth Hands-on Hydrology Outreach

- Annual summer program
  - 2024 SAYH2O will host its 22<sup>nd</sup> annual summer program this July
  - Each year the SAY H2O summer program highlights a specific natural resource project or environmental issue specific to the Pueblo.
  - The program was established to help promote and encourage Santa Ana youth's interest in understanding their surroundings through cohesive experiential education in the natural sciences.
- Afterschool Program and Outreach Days
  - Teach monthly lessons to kids about water/science
  - Host field trips throughout the year for the youth
  - Host an annual pumpkin Patch























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