

# **Tribal Climate Resilience Internship**

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## Introduction

- Environmental Science & Management (Planning & Policy) major
- Senior
- Saw this internship reposted on Instagram



# 1

# Climate Adaptation Plan

What did I do? Why did I do it?



## Timeline of Events

- Introduction
- Research
- Writing (Key terms + 2 sections)
- Revisions
- Collaboration



## Introduction/Research Phase

### BLR Research

- Looked into BLR efforts
- Tribal Environmental Plan 2021
- CAP Draft 2017
- Tribal Multi-Hazard Mitigation Plan 2021

### Other Tribes

- Numerous other CAP's
- Landed on modeling after the Blackfeet Nation (one of 10 largest tribes)
  - Very organized and thorough
  - Easy readability



## My Sections

### Water Quality/Quantity

- Observed impacts
  - Water quality (industrial park, algae blooms)
  - Water quantity (drought)
- Expected impacts
  - Flow rate changes
  - Stream morphology
- Goals
  - Expand monitoring program
  - Wetland protection
  - Community informed

### Human Health

- Observed impacts
  - Air quality concerns
- Expected impacts
  - Algal blooms
  - Extreme weather events
- Goals
  - Re-initiate air quality monitoring (TAS)
  - Tribal Air Program Coordinator position

## I. Water

*"These rivers are sacred cultural resources to the Tribe and are considered the bloodlines of Wiyot culture, providing nourishment, medicine, spirituality, sustenance, and cultural knowledge to the Wiyot people." - Wiyot Tribe*

This chapter was developed through the Environmental Programs Department, with assistance from Tribal Climate Resilience Interns, and revised through email and in-person correspondence. As a result of previous and current conditions, and expectations according to trends in credible climate change resources, observed and expected impacts on water resources are outlined below. These true and hypothesized impacts were delineated in order to assess the Blue Lake Rancheria's vulnerability and risk to climate change's effects on water. The goals of Blue Lake Rancheria pertaining to water resources are shared and outlined below, along with their targeted actions and strategies that will help to foster the achievement of the goals.



Figure 1: The Baduwa't (Mad River), which provides water for more than 90,000 Humboldt County residents, flows through the Blue Lake Rancheria. Photo by Environmental Programs Department of Blue Lake Rancheria, 2021.

### Goal 7: Keep the community informed about water quantity issues

#### Strategy

Perform outreach on water quantity issues as a part of other water quality outreach.

#### Actions

- Continue mailing brochures to residents on water quantity issues
- Post regularly on social media alerting residents and other community members of issues occurring

### Goal 8: Protect, restore, and enhance wetlands on the Rancheria

#### Strategy

Set up foundational programs so that wetlands information and data can be easily accessed, enabling for more efficient and timely wetland protection planning. Restore and enhance priority wetland habitats.

#### Actions

- Maintain up-to-date information on wetlands, through water quality monitoring, development ordinances and standards, and updating our Wetland Program Plan
- Add wetlands information to Rancheria GIS data available to other departments for planning purposes
- Monitor wetland quality through California Rapid Assessment Method (CRAM)
- Base the restoration and priority on the Wetland Program Plan

### Required and Existing Authority/Capacity

Additions to current plans and programs should be developed and implemented immediately to complement pre-existing plans. The existing authority of water resource planning is the Environmental Programs Department and the Tribal Council. Potential partnerships for the Rancheria to work with when planning for water resource climate adaptation are: US EPA, California State Water Resources Control Board, FEMA, Humboldt Bay Municipal Water District, Mad River Alliance, NOAA, U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation.

### Partners and Potential Funding Sources

In the face of increasing climate change impacting the Tribe, there is a large need for funding to support projects that improve resilience. Potential funding sources include grants through state and federal agencies, tribal funding, or other avenues.



Screenshot of layout



## Some Challenges

### Tribal CAP vs CAP

- Have some experience with CAP's through school, had to learn about Tribal CAP's specifically

### Writing a CAP

- Have never *written* a CAP, only read or looked through
- Took trial and error to understand best practices

### Health Issues

- Got COVID during the summer, inhibited some of my work
- Missed Steelhead Dives





## My Experience

### Independence

- Enjoyed having independence and being able to take my own spin on it
  - Still having direction from Michelle

### Writing a CAP

- Great experience
- Want to do something similar when I graduate

### Learn about BLR

- Got to learn more about BLR, didn't know *too* much before
- Familiar with tribal environmental practices

# 2

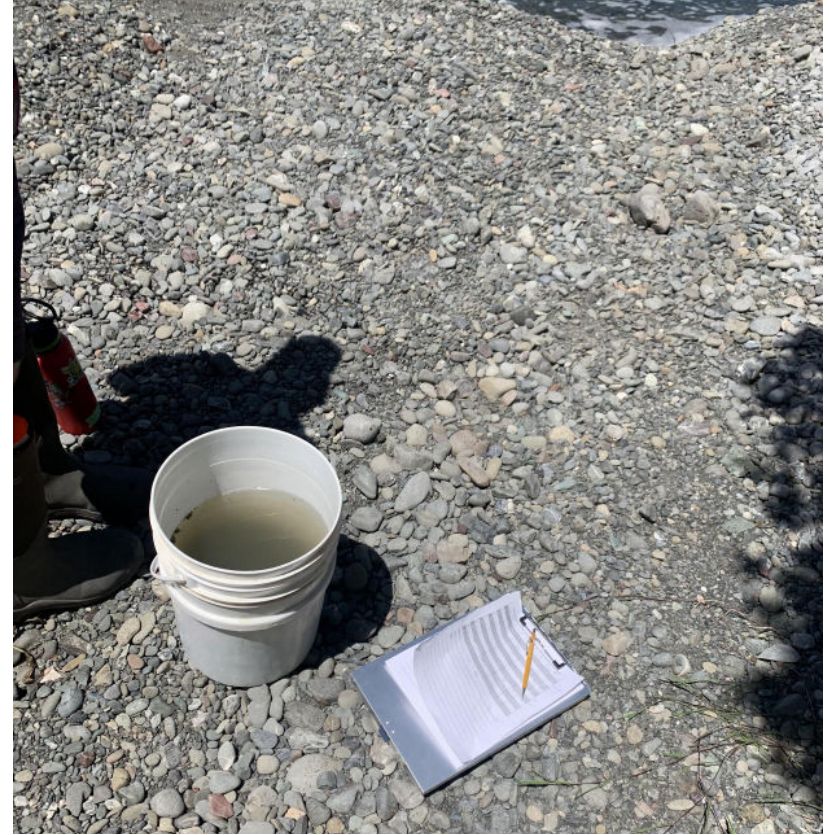
## Other activities

Garden work, Macroinvertebrate  
sampling



## Macroinvertebrate Sampling

- Invited to assist with this annual process
- Got to try my hand at collecting the samples
- Worked with Jacob, Kyle, and Sylvia
- Later, we prepared the samples to be sent to the lab
- Had a nice mix of invertebrates, including Stoneflies





## Garden Work

### Harvesting

- Potatoes
- Brought harvested produce to the kitchen

### Weeding

- To make room for flowers
- To pot up lemongrass

### Preparing beds

- Wheelbarrowed dirt
- Fertilized the straw bales
- Laid straw down

### Cardboard prep

- Tore tape off of cardboard sheets
- Laid it down for thorough coverage

### Compost Run

- Rode along with Daniel on his compost run
- Dumped and returned the bins to their homes

### Misc

- Searched for the lost quail (RIP Quail)
- Watered
- Cleaned-up trimmings



Some of my harvested potatoes

THANK YOU!

Any questions?