

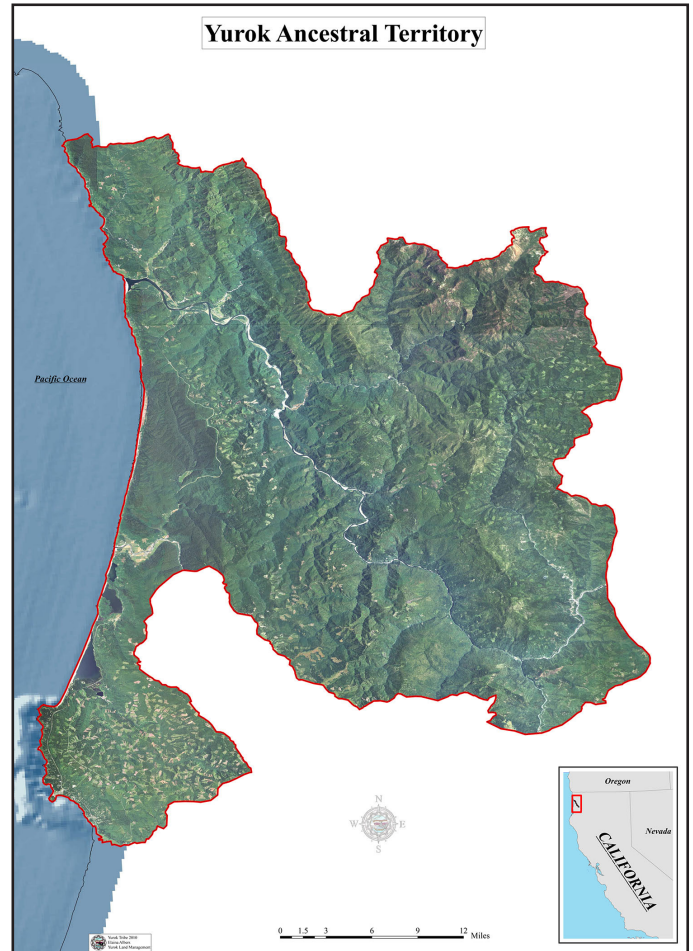
YUROK TRIBE DROUGHT CRISIS





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INTRODUCTION

The Yurok Tribe is the most populous federally recognized tribe in California. Since time immemorial, the Yurok people have lived along the Lower Klamath River and Pacific Coast near the northernmost corner of the state. We are prayer people, salmon people and heal the world people. Today, a large majority of our citizens reside on and near the Yurok Reservation. Comprised of approximately 10 percent of our ancestral territory, the reservation is one-mile wide and straddles the last 44 miles of the Klamath. The Yurok tribal government is led by nine democratically elected Tribal Council Members. With a workforce of more than 600 individuals, the Tribal government administers approximately 40 programs and departments dedicated to serving the Yurok population and restoring the environment within the Tribe's homeland. Most notably, the Tribe



is responsible for managing one of the largest and most sophisticated fisheries departments on the West Coast, which is emblematic of how important salmon are to the Tribe. The Tribe's government is sustained by grants, earnings from a dozen environmentally sustainable small businesses and revenue from California's Cap and Trade Program.

For uncountable generations, the Yurok lifeway has revolved around the Klamath River and its once prolific fish runs. Our traditional culture is inextricably linked to the river, as is the physical, emotional and spiritual health of our people. In good years, the river sustains our nutritional needs in the form of salmon, Pacific lamprey and sturgeon. We obtain much of our medicine as well as many food sources from the forests and prairies surrounding the Klamath. The streams that flow through the reservation supply our villages with clean drinking water. We obtain materials to make our ceremonial regalia from the seashore, the river and the forest. Our ceremonies are conducted everywhere from the high mountaintops to the coast. All of these life-supporting resources as well as our sacred sites are presently at risk.

The record-breaking drought this year threatens these essential components of our culture as well as the physical safety of our citizens and our property. ***On May 13, 2021, the Yurok Tribal Council issued an emergency declaration to mobilize Tribal personnel and resources toward addressing the many different threats posed the drought.*** In the next few months, hundreds of homes will be without drinking water because the streams that feed our municipal systems are expected to run dry. We are also facing an extremely elevated forest fire risk due to the drought and a 100-year-long ban on cultural burning, which has led to a massive buildup of exceedingly flammable fuels. The potential for a calamitous fire is most acute on the eastern half of our reservation. In this area, temperatures regularly exceed 100 degrees and there is a vast volume of dried brush scattered just outside of the reservation border. If a fire starts on a day with strong winds, it could quickly overrun our community due to the parched conditions. Additionally, there are numerous elder and family homes, as well as tribal, private and school district properties, including: Kepel Head Start and Early Head Start, multiple tribal housing projects, several communication towers, a power grid, Jack Norton Elementary School, Weitchpec Magnet School, Weitchpec Nursery, Weitchpec Community Garden, Neall McKinnon Community Center, Libby Haripop Nix Community Center, Tully Creek Firehouse and Fitness Center, Pek-tah Fuel Mart, Yurok Police Office, Yurok Office of Emergency Services office and Yurok Fire Department office. While the Yurok Fire crew is not yet capable of addressing a large blaze on its own, it is quickly building capacity to better protect the reservation. The fast-growing department is comprised of 10 credentialed firefighters, including a chief with more than three decades of high-level experience. Earlier this year, the department became a chartered entity, making it qualified to fight fire anywhere in the US. The Tribe is also concerned about the potential for a forest fire to cause irreparable damage to the Kewet Ceremonial District and the 15,000-acre Blue Creek Salmon Sanctuary. Encompassing the whole of Weitchpec Mountain, the Kewet Ceremonial contains an uncountable number of sacred places and objects, including ceremonial sites and historic burial grounds. The Tribe's Blue Creek Salmon Sanctuary is home to several threatened and endangered species, such as coho salmon and Humboldt marten. Blue Creek is one of the most important tributaries on the Klamath River because it serves as one of only a handful of cold-water refuges for all migrating salmon. Currently, the Tribe is working to restore the pristine environmental conditions that existed in this biologically dense watershed prior to European contact.

Last year, the Yurok Reservation was surrounded by destructive forest fires and experienced the worst air quality on record. For a full two weeks, the reservation and surrounding area were covered in shroud of smoke so dense that it

was impossible to ascertain whether it was day or night. Many of our elders, living in Humboldt, Del Norte and Trinity Counties, reported difficulty breathing as a result of the abhorrent conditions. We anticipate this will happen again this year.

The lack of water has produced other problems too. Fish disease rates are skyrocketing because the flows on river are so low on the Klamath River. Our highly regarded biologists predict that the pathogen, Ceratonova shasta, will kill more than 95 percent of the baby salmon and we will lose an entire year class of fish. This will have a devastating impact on the Klamath salmon stocks for many years to come. It will also harm the hundreds of species that depend on salmon for all or part of their lifecycles, such as orca whales, black bears and bald eagles. Adding insult to injury, the 2021 adult salmon forecast is one of the worst in the history of the Klamath Basin. As a conservation measure, the Tribe cancelled its commercial fishery for a fifth year. The swiftly declining fish stocks has made it difficult to impossible for many Yurok citizens to pay bills and put food on the table.

Ranging from widespread drinking water outages to unprecedented wildfire danger, the Yurok Tribe is working on solutions to address these concurrent drought-related challenges, while continuing to confront the many different aspects of the COVID-19 crisis. As a largely grant-funded organization, the Tribal government has very limited resources to contend with real-time emergencies, like the drought. We are seeking funding to meet the near- and long-term needs of our community. For example, there is a need to provide drinking water for an extended period of time because the shortage will last until the fall rains recharge the Tribe's distribution systems. We also want to offer air purifiers to elders and individuals who experience health complications due to wildfire smoke. Equally important, we are also seeking funds to implement our plan to protect lives and property as well as natural and cultural resources in the event of a wildfire. There is an urgent need to expand upon an ongoing effort to establish defensible space around the following locations: homes, schools, tribal offices and community centers.

Within this document, you will find the fine details of our drought mitigation plan. The blueprint contains a series of prescriptions designed to shield our community from the many drought-related perils at our doorstep. As you can surely see, with the severe drought and fire danger, so much hangs in the balance. Please consider supporting a portion of our proactive response to this impending emergency.

EDUCATION

Yurok Education Department: Serves Children ages pre-school (0- 5) to K-12, college age adults and elders. With fire season and the drought that is upon us our major concerns are for the little ones from ages 0 to 5 and the elders who are some of the most vulnerable members of our community. Both of these age groups are vulnerable to smoke and poor air quality. We want to ensure these vulnerable groups are supported as fire season and the drought comes upon us bringing additional health and safety concerns.

We need the following support from Yurok Education for the drought conditions:

- Air purifiers for the Head Start classrooms and Boys and Girls Clubs -at least 8 units per, \$400 each, for five sites \$16,000
- Air purifiers Homes of our preschooler's. About 120 units at \$200.00 each \$24,000
- In home water filters for family's homes that rely on spring water systems and well system for water \$15,000
- Costs for water to be delivered to families if their water system is affected by the drought - \$10,000 estimated for staff time
- A Drought Educational Consultant to teach and provide family education on the following topics: \$50,000
- Creating and teaching what's in your 'go bag' for emergency evacuations for families
- Education for families on fire-safe zones around the homes
- Evacuation plans for each home
- Backup water systems (rain barrel system or other back up)
- Other fire suppression methods (roof top sprinkler systems or other)



- Food security for emergency situations
- Fire safe landscaping around your home
- PSAs to increase drought-awareness: Estimate \$10,000 for staff time
- Interview Head Start staff and talk about how it affects the students and school?
- Interview maybe a student 5 yrs. old maybe saying something like “I don’t like when it’s smoky because we can’t go outside to play”. (high-risk age)
- Interview Margo Robbins, Traditional Fire Coordinator on Traditional burning benefits and to reduce fuels and other benefits of using fire.
- Interview an elder (high-risk age)
- In Case of evacuations of our families to safer areas \$25,000 set aside to house them

FISHERIES

The Yurok Tribe has relied upon the fishery resources of the Klamath Basin since time immemorial. Throughout history and continuing today, the Tribe has depended upon the resources of the Klamath River for sustenance, culture, commerce, and religion. The fishery of the Klamath River is integral to the Yurok way of life and the health of the Klamath Basin ecosystem is intertwined with the identity of Yurok People.

The Yurok Tribal Fisheries Department (YTFD) carries out the will of the Yurok People to restore, protect, and enhance the Klamath River and associated ecosystems that make up the Klamath Basin. The Fisheries Department accomplishes this goal through various research, monitoring, and restoration projects throughout the Klamath and Trinity River watersheds. With over 50 employees, the YTFD is the largest fisheries organization operating in the Klamath Basin.

Most projects undertaken by the YTFD are planned and funded well in advance, and little funding exists within budgets to react to emergency situations like are experiencing this year. This leaves a the research, monitoring, restoration, related to the ongoing catastrophic

The YTFD is requesting emergency needs of the Yurok Tribe in relation to and the associated impacts to the River, and the fishery resource. We refrigeration and freezer infrastructure plant. These large cold storage rooms



of food that may be needed if drought driven wildfire or other emergency conditions develop. 2) Increase research and monitoring activities related to drought induced fish kill documentation and prevention. 3) Conduct fish rescue operations on the mainstem and tributaries of the Klamath River. Extremely drought related low stream flows will lead to juvenile salmonids being stranded in cut off pools. We plan on rescuing theses fish and relocating them to suitable habitat. 4) Implement small scale restoration activities at tributary mouths to enhance juvenile salmonid access to colder tributary water. The mainstem Klamath River will reach elevated temperature levels that are not suitable for salmonids. This project will also include a monitoring component to assess the effectiveness of the actions and to evaluate these critical habitats in relation to drought and the associated impacts. 5) Purchase extreme shallow running jet boats. As the Klamath River flows drop to historically low levels, the YTFD will not be able to access project sampling locations with our current fleet of jet boats. Jet boats that can navigate extremely shallow water may be needed in order to complete funded projects or to respond to any drought related emergency operations. Two would necessary to service the entire Yurok Reservation. 6) Use photo and video documentation of drought conditions in the Klamath Basin and the activities the Yurok Tribe will be undertaking to combat the historic drought. 7) Conduct climate change resiliency restoration and monitoring activities within the lower Blue Creek watershed. This project will implement instream restoration actions that will assist with ground water recharge and retention in the Blue Creek Salmon Sanctuary, one of the most important salmonid habitats in the Klamath Basin. 8) Conduct wildfire preparedness for remote field office locations. The YTFD operates 3 field office sites in high fire danger areas of Humboldt and Trinity County. Funds would be to create fuel breaks, reduce fuels, and to develop a wildfire readiness plan for these office sites and associated equipment.

Below are the 8 projects and their approximate cost. Total request is \$815,000.

- Refrigeration and Freezer rooms at processing plant: \$400,000

- Fish kill Documentation and Prevention: \$25,000
- Fish Rescue Operations: \$50,000
- Cold Water Refuge Enhancement and Monitoring: \$50,000
- Purchase Extreme Shallow Jet Boats: \$150,000
- Photo/Video Drought Documentation: \$10,000
- Climate Resiliency Restoration in Blue Creek: \$110,000
- Wildfire preparedness for remote field office locations: \$20,000

INFORMATION TECHNOLOGY

The Yurok Tribe operates a Wireless Internet Service Provider (WISP) known as Yurok Connect for the benefit of both the Yurok Reservation and portions of southern Del Norte County. The Yurok Reservation is a vast and rural landbase with little to no communications on or around the area. Yurok Connect has a 7 tower network that can be utilized for the purposes of early fire detection and emergency funding is essential to enable swift response to drought anticipated this year.

Firewatch cameras would be mounted on the Reservation and can be monitored remotely by members, and collaborating municipal fire and Firewatch Camera System for 7 Communication software agreement.

- \$360,000.00
- Currently on the Yurok Reservation, when you are at a Tribal Facility or at a whatsoever in many large sections of the tower network, these additional communication across the reservation being an extreme drought year brings many hazards but one thing that could help reduce the impact is being able to communicate throughout the reservation.



communications for first responders. The hazards that come from the extreme

150ft communication towers on the Yurok by the Yurok Fire Department, community emergency response personnel.

Towers on the Yurok Reservation with 3 year

communication of any sort is limited to residence. There is no cellular coverage reservation. Utilizing the communication funds would provide a means for radio where there is none currently. This year

- Two-Way Communications System for Yurok Reservation for Fire Department, Public Safety, Office of Emergency Service, and Public Utilities.

Total request - \$6,000,000.00

PLANNING

Kenek Water System secondary water source: The Kenek Water System provides water service to several families and to extremely critical tribal infrastructure on the upper Yurok Reservation. The water source for the Kenek System is a small creek with flows that can be dangerously low during drought events. This funding will be used to incorporate a much needed back up water source into the Kenek Water System.

- 4" HDPE (approx. 3,400 linear feet) waterline from source to water treatment facility installed @ \$550,000

Section Total: \$550,000.00

Emergency Water Delivery This program will provide emergency drinking water to individuals that lose access to water at their homes.

- (6) Ford F350 2019 pickup trucks GSA (6 months plus insurance) - \$16,460
- (6) Truck gas and maintenance GSA rates for mileage - \$74,400
- (100) 250-gallon mobile potable water tank truck bed tanks - \$87,290
- (250) 250-gallon stationary potable water tanks with stands - \$187,050
- (450) Spigots, NSF hoses, and parts - \$24,940
- (8) ADA porta-potties (125 per month, 6 months) - \$7,482
- (12 sets) Upgraded 10ply tires for trucks - \$17,957
- (6,764) Potable water storage 5-gallon containers with spigot - \$134,955
- (2) Water home delivery staff (\$18 per/hr - 40 hours per week for 6 months with fringe of 35%) - \$58,180

- (4) Water filling station delivery staff (\$18 per/hr - 40 hours per week for 6 months - \$116,360)
- (6) On-site filling station monitors (\$18 per/hr - 40 hours per week for 6 months - \$174,540)

Section Total: \$1,074,615

Private Water System User/Homeowner Drought Preparedness Program There are approximately 350 households on the Yurok Reservation that are not located within the service area of a Tribal or Community Water Service District. These households rely on private water systems to supply their domestic water needs. The vast majority of these private water systems are using drought susceptible surface waters (streams and creeks) as their primary water source. This program will help homeowners to conduct the minor repairs and maintenance on their water systems to help ensure they are able to collect, store, and access water as needed.

- Parts and supplies (Filters, waterline and plumbing parts, etc.) - \$15,000
- Training (IHS to train 6 technicians) - \$11,223
- (6) Technicians (40 hours a week @ 6 months with fringe @ 35%) - \$174,540
- (2020 ea.) Low flow faucets, shower heads (option to turn off water with button), hose nozzles - \$ 110,833
- (2020 ea.) Rechargeable shower and sink systems - \$133,504
- (3) Ford F-150 pickup trucks (monthly lease @ 6 months) - \$8,230
- (3) Truck gas and maintenance - \$46,501

Section Total: \$499,831

Tulley Creek Emergency Services District and Weitchpec and Klamath Refuge. These funds will be used to set up shelter facilities in the event of widespread water shortages or other disaster events.

- (3) Relocatable shower system (4 units) - \$180,000
- (3) Relocatable bathroom system (4 units) - \$135,000
- (15) Sleeping tents (30' diameter and 11' height) - 150,000
- (15) Portable HVAC units - \$600,000
- (5) 65KW generators on trailers w 200-gallon tanks and shipping - \$300,000
- (3) 10,000-gallon tank for central potable water - \$45,000
- (200) Cots at 150 with shipping - \$37,410
- (200) Sleeping bags - \$37,410
- (200) Pillows - \$37,410

Section Total: \$1,488,561

Total Planning and Community Development Department drought relief request: \$3,438,003.86

PUBLIC HEALTH DEPARTMENT

Drought and the potential for wildfire in the region bring challenges to the health of the tribal community as lack of resources and the possibility of smoke from wildfires in the area cause serious health challenges including damage to the lungs, kidneys, and liver. Studies also show that this exposure and the aftereffects of inflammation in the body can also decrease the body's ability to fight off infections such as COVID-19. In individuals with chronic lung conditions such as chronic obstructive pulmonary disease (COPD) and asthma, smoke inhalation can be extremely dangerous. The newly formed Yurok Public Health Department desires to be ready to respond to increased requests for prevention of respiratory issues, general health monitoring, and education to our tribal members, specifically those living in remote locations with limited access to health care services.

The following request for funding provides Yurok public health the ability to prevent, respond, and support our tribal members, specifically the 649 individuals living on the reservation and their families, to remain in their homes when possible with additional trained temporary staff and the necessary basic equipment for the team to provide regular health evaluations. The remoteness of the reservation along with potentially decreased access to health professionals who generally travel into the area make this request critical. In the event that there may be disruption to water, power, transportation, and other services in the community, having staff and the necessary basic equipment to provide triage and basic medical interventions to those suffering from symptom exacerbation would be of utmost importance.

Funding Request	Total Units	Cost per Unit	Total Expense
Temporary Registered Nurse	4 months	6250/month	25,000.00
Temporary Community Health Worker	4 months	4000/month	16,000.00
Portable Air Cleaner with HEPA filter	200	124.97	24,994.00
Electronic Blood Pressure machine	3	120.79	362.37
Face masks N95	4 cases	777.90/case	3111.60
Basic Emergency Response Kit	3	249.99	749.97
Stethoscope	3	35.99	107.97
SPO2 pediatric	3	176.79	530.37
Pulse oximeter	3	707.99	2123.97
		<i>Total Request</i>	72,980.25

YUOK TRIBE PUBLIC UTILITIES DISTRICT

The Yurok Tribe Public Utilities District operates 4 surface water systems and 2 ground water systems. The 4 surface water systems are fed by creeks that may become dangerously low and unable to serve their communities due to the ongoing drought. The average rainfall in our area is 60 inches – we received between 25 and 41 inches of rain at our treatment plant sites, well below average. Our creeks are already running lower than normal for early May and it is expected to get much worse this summer.

The YPUD has a multi-pronged plan to help with our water security and to provide water for our community during this stressful, ongoing emergency. To increase water security, YPUD would like to add a secondary source of water to 2 of our systems and increase storage capacity at our largest Surface Water System – this will allow the ability for these systems to be more self-sufficient and to help serve the community during this prolonged drought. YPUD – partnering with the Planning Department – would like to purchase 20 Potable Water Buffalos to stage strategically to allow the community the ability to access potable water without having to drive up to 2 hours round trip. There will be a need for staffing and vehicles for this project, as well as potable water containers and appurtenances to go along with those.

Wautec Water System backup water source

- Create additional water source for most remote system. Intake system and piping (approx. 1500 linear feet) and required valving. - \$250,000.00
- Section Total: \$250,000.00
- Weitchpec Redwood Tank Rehabilitation
- Complete the rehabilitation of 60,000-gallon Redwood Tank – gives they system with the strongest creek additional storage capacity to allow for water security on the Upper Reservation as well as water source for firefighting. - 93,000.00

Section Total: \$93,000.00

Water Delivery

- (6) Ford F250 pickup trucks
- Truck gas and maintenance
- (20) 500-gallon potable water tanks on trailers (Water Buffalos) - \$175,000 total
- (100) 250-gallon mobile potable water tanks on trailers - \$40,000 total
- (250) At-home 250-gallon stationary potable water tanks with stands - \$137,500.00 total
- (450) Spigots, NSF hoses, and parts - \$15,750 total
- (8) ADA porta-potties (125 per month @ 6 months) - \$9,600 total
- Upgraded 10ply tires for trucks (12 sets) - \$ 14,400
- (6,764) Potable water storage and transportation 5-gallon containers - 108,224
- (2) Independent Water Delivery Staff (\$18 per hour, 40 hours per week for 3 months with labor and fringe)
- (4) on-site filling station monitors (\$18 per hour, 40 hours per week for 3 months with labor and fringe)

PUBLIC WORKS

The Yurok Public Works Department provides support and various services to all tribal departments within the organization, including Facility Management. This includes maintaining tribal facilities that may be activated as Red Cross or emergency shelters, clean air shelters, triage and reunification centers, cooling centers, OES operations, resource receiving, staging and distribution, and community resource centers. The focus will be on the critical facilities listed below.



- The Klamath Main Office, Police, YTEP, and OES buildings in Klamath.
- The Libby Nix Community Center in Weitchpec
- The Morek Won building at Kepel.
- The Weitchpec Transfer Station and Firehouse in Weitchpec.
- The Tulley Creek Firehouse and YHHS building at Tulley Creek.
- The Wautec Firehouse at Wautec.
- The Bonnie Green building in Eureka.
- The Marjorie Buckskin and Food Distribution buildings in Crescent City.

There are three primary components which will allow us to successfully utilize these tribal facilities as described. These include:

- Backup power generation for critical facilities currently without backup power.
- Propane backup generators that are hard-wired to each identified critical facility in Klamath, Weitchpec, Tulley Creek, Eureka, and Crescent City locations. Estimated costs will vary per site, depending on generator type, additional structure (concrete pad, vented, sound-dampening enclosure, security fencing). Generators may run \$65k-75k (including install) per facility for rough cost estimates.
- Additions and/or upgrades to existing HVAC systems including MERV 16 rated air filters, air scrubbers, and potential HVAC system redesign.
- 130, 30-day MERV 16 rated filters total @ an estimated average of \$125 per filter = \$16,250/month, multiplied by 6 months of projected drought conditions = \$97,500
- Roughly 150 air scrubbers - \$1000 per unit = \$150,000
- Additional surveillance cameras for critical tribal facilities.
- 4 cameras per facility, multiplied by 15 facilities, - \$1072 per camera = \$64,320

TRANSPORTATION

- The Transportation Department can assist with drought by utilizing our Trail Crews to perform preventative Fire Clearance and the purchase of a truck and water buffalo to deliver water to those affected by drought. Additionally, the purchase of a Hovercraft would be vital to continuing to provide service, delivery of supplies via the river and evacuation during fires.
- Need
- Purchase Hovercraft, 12 passenger \$267,000.00
- FORD F250 Truck \$60,250.00
- (2) Water Buffalo \$16,700.00

The Yurok Tribe Wildlife Department (YTWD) is a critical component of Natural, Economic, and Cultural Resource management for the Yurok Tribal government and Yurok people. YTWD is divided into three major programmatic objectives, including: (1) Threatened and endangered (T&E) species management, which contributes to both species conservation and federal and state compliance related to economic and restorative forest management activity; (2) habitat and cultural resource restoration, which includes supporting food and subsistence economy resiliency for tribal people, and habitat restoration and resiliency for fish and wildlife species of concern; and (3) California condor recovery, which represents a significant contribution to both Yurok tribal restoration related to this species, and to overall federal and state recovery goals for the species.



YTWD's commitment to wildlife conservation requires that staff conduct field work throughout Yurok tribal lands and ancestral territories including wildlife surveys, habitat restoration projects, and providing support for other Natural Resource departments in conducting the same. In the case of California condor restoration, for which the Yurok Tribe is a primary lead agent in this region, that commitment extends to monitoring and safeguarding the highly endangered condors within our care, regardless of where they travel throughout the northern California and the Pacific Northwest.

In the face of continued and devastating drought conditions, YTWD foresees that it will be primarily impacted by the growing threat of wildfire to the Yurok landscape. Additional funding is required to support Natural Resource Division drought mitigation and response measures, long-term forest resiliency restoration planning and implementation, and supplies and equipment to protect YTWD crew and the species we caretake in potentially dangerous emergency situations, such as uncontained wildfire, that may arise from the drought. Returning Yurok lands to a diverse mosaic of healthy forests, prairies, wetlands, and oak woodland supports protection against catastrophic fire, water conservation and purification, re-establishment and maintenance of critical water tables, and carbon sequestration to help combat the growing threat of climate change and increasing drought conditions. These landscape resiliency restoration actions further support both human and wildlife safety, including for threatened and endangered species reliant on tribal and surrounding lands, such as the California condor, Humboldt marten, northern spotted owl, and marbled murrelet. They also promote food resource abundance that local tribal people have relied on since time immemorial such as elk, deer, and salmon. These food resources have proven to be particularly critical during other emergencies, such as the COVID-19 pandemic, when food resources have become scarce, expensive, or even inaccessible. California condor management may additionally entail high risk actions to be taken by YTWD staff in an effort to save individual birds under emergency conditions, necessitating additional personal protection equipment. Funding, supplies, and equipment needed would support:

- Staff time to conduct critical threatened and endangered species monitoring in advance of fuels reduction projects, fuel break creation, and restoration of historical prairies, wetlands, oak woodland, and riparian areas which provide protection against wildfire;
- Participation in re-establishment of historical prairies, wetlands, oak woodlands, and riparian areas as part of fire- and drought-resilient landscape restoration;
- Staff time to conduct fuels management around critical threatened and endangered species habitat and management infrastructure;
- Equipment, supplies, and personal protective equipment (PPE) to provide protection for crew, infrastructure, critical habitat, and endangered California condor.

Personnel – includes wages, fringe, and indirect

- Staff and fringe to support monitoring of threatened and endangered species in advance of fuels reduction and forest health projects - \$210,500

- Staff and fringe to contribute to landscape restoration planning and implementation to support climate and fire resilience - \$129,000
- Fuels reduction and maintenance around critical habitat and management infrastructure for protection of staff and T&E species - \$123,500

Supplies – includes indirect

- PPE for field crews (vehicle fire extinguishers, fire protective clothing, respirators and eye protection, personal fire shelters and blankets) - \$11,000
- Fuels management supplies to protect habitat and infrastructure (electric trimmers, mowers, PPE, fuel, maintenance supplies) - \$6,000
- Large capacity water tanks to supply water to condors and emergency fire response for condor management infrastructure protection - \$4,000
- Road clearance supplies to be carried in vehicles for emergency entry or escape from remote field locations (axes, chainsaws, fuel, maintenance supplies) - \$7,500.
- Satellite emergency communication and tracking devices and subscriptions to ensure safety and communications for crew and condors at all times (satellite phones or communicators and associated subscription, condor infrastructure satellite communications subscription, condor patagial tag satellite subscriptions) - \$33,000
- Condor capture supplies (necessary if a condor must be rescued under an emergency) - \$4,000
- Air purifiers and filters for YTWD offices and infrastructure - \$1,500

Equipment – over \$5,000, no indirect

- UTV or ATV for T&E monitoring or emergency condor capture - \$14,000
- Travel trailers x 4 (for field crew who may be staying in the field to conduct work under high smoke conditions) - \$125,000

YUOK ECONOMIC DEVELOPMENT CORPORATION

The Yurok Economic Development Corporation is an owned corporation of the Yurok Tribe. YEDC is currently operating 10 businesses within the boundaries of the Yurok Reservation. Moving forward knowing that drought and fire season will be upon us we have specific needs that should be addressed immediately to prepare. The following is a list that will address infrastructure upgrades, safety and emergency needs that will increase the safety of our community.

Pem Mey fuel Mart

- Additional storage/ dry goods/ freezers \$200,000

Pek Tah fuel Mart

- Additional storage/ dry goods/ freezers \$200,000
- On site water storage \$40,000
- Expanded fuel storage \$300,000
- Property clearing \$20,000

YEDC Office

- Generator \$20,000

YEDC Fiscal Office

- Generator \$20,000

Bluff Creek RV

- Electrical upgrades \$250,000
- Expansion to the park: Adding additional cabins, yurts, or tiny homes to develop possible shelter in place cabins for community members in case of a fire. \$500,000
- Property clearing \$20,000
- Restroom expansion \$50,000

Redwood RV

- Electrical upgrades, \$250,000
- Restroom expansion \$50,000
- On site water storage \$40,000
- Generator \$20,000

Riverside RV

- Electrical upgrades \$250,000
- Restroom expansion \$50,000
- On site water storage \$40,000
- Generator \$20,000

Redwood Hotel

- Emergency funding available for evacuees \$250,000
- On site water storage \$40,000

Total Estimated costs-\$2,070,000



YUROK FIRE DEPARTMENT

The Yurok Reservation is a region of steep terrain, large areas of continuous fire fuels, subject to long periods of drought, and a region known to have high arson activity make wildfire a major concern for the Tribe. Ongoing periodic drought exacerbate’s the threat from wildfire. Action can and should be taken to help reduce the increased threat of catastrophic wildfire because of drought, while developing a community that is resilient to the aftereffect of a major fire. These steps can also help improve the ecosystem on Yurok lands by restoring native plants (used for ceremony, sustenance, and economy) and improve response capability and outcomes of wildfire. To achieve this a combination of assessment, prevention education, fuel mitigation and additional staffing to provide effective fire suppression and to achieve the goal of developing a resilient and fire-resistant community and its surrounding wildlands.



The Yurok Fire Department will utilize this opportunity in the following ways:

- Create defensible space around approximately 150 individual residences and approximately 30 tribal facilities in/on the Yurok Reservation. Utilizing an enhanced workforce capability.
- Provide Fire prevention public education and outreach to all community members, schools, businesses, and employees. This will be conducted through the Fire Department utilizing current and enhanced staff.
- Conduct a thorough Hazard Risk Assessment pertaining to wildland fire and develop a Mitigation strategy. This will be an inhouse team effort that includes multiple departments and organizations.

- Develop a drought contingency plan for the Fire Department and utilize this plan to conserve water and dovetail this plan into the tribe's hazard mitigation plan. This will be a team effort and will include multiple departments and organizations and possibly contracting.

Three major themes are identified for this proposal: 1) Reduction of hazardous fuels will increase water yield; 2) An aggressive Hazardous Fuels removal project will help to build a defensible infrastructure; 3) Build organizational capacity to provide services commensurate with the complexity of the Reservation. These main themes parallel the three primary components of the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy). The three components are: restoring and maintaining resilient landscapes, creating fire-adapted communities, and responding to wildfires.

With the predicted and exacerbated drought conditions on the Reservation it is imperative that we take a proactive approach at planning and mitigation. Providing a planned and systematic hazardous fuels reduction project coupled with increasing staffing capability of our Fire Department, and working closely with our state, federal and local tribal cooperators will enhance our effort.

This Proposal includes these additional components; Increased staffing capability for response to assist CalFire and other surrounding agencies in the event of a Wildland Fire. Increased work force capability for hazardous fuels reduction, and increased equipment capacity to be able to complete and sustain the overall project of the hazardous fuel's reduction component. In this proposal we are requesting resources and funding for a 3-year period. Funding would be utilized for planning, strategy development and mitigation, staffing of on duty firefighting personnel, purchasing or leasing additional vehicles; chippers, track skid steer units with brushing and mulching implement's, trailers to haul the equipment, Personal Protective Equipment, Fuel, and support items such as supplies to operate and support the personnel and equipment, and administrative assistance. Attached are the proposed costs for personnel, equipment, and supplies.



Funding request:

Personnel (3-year period)	\$2,878,821.41
Equipment and supplies	\$1,331,166.29
Total request for project	\$4,209,987.70

YUOK OFFICE OF EMERGENCY SERVICES

Continuity of operations, our elders and critical population is the highest concern within the OES department and Tribal Government. In 2020 YOES requested (10) 500-gallon portable water buffalos from Cal OES to use in the drought conditions faced last year. All ten portable water tanks were used in different ways. Seven water tanks were used at elder residents to supplement water supply. These tanks had to be shocked to deem the tanks and water (potable) for safe consumption. Also hook ups and house attachments needed to be purchased for elders to hook into the home. The other three water tanks were used in fire mitigation. The Cultural Fire Management Council utilized 2 tanks for fire mitigation around their daily operations. The Yurok Indian Housing Authority made use of 1-tank for fire mitigation in construction sites.



Additionally, with drought the high possibility of fire is a major concern. HEPA air filtration units are needed for all households.

YOES is working to combat the many dangers posed by the drought, such as a sustained water shortages.

Tulley Creek Vehicles Repairs

- F-450 Super Duty repairs and maintenance @ \$8,000. -Estimated cost
- 2000-gallon potable water truck repairs @ \$ 17,000. -Estimated cost
- YOES F-350 super duty 10 ply tires-E rated for hauling, Etc. @ \$1,200.

Section Estimated totals: \$26,200

Private Water System Assistance

- (350) 5/8", 100' garden hoses Premium grade @ \$60.00x 350 = \$21,000.
- (700) 5-gallon buckets W/ lids Gamma Seal lids Food Grade \$18.00x 700 = \$12,600.
- (120,000) 4-month supply Biodegradable Sanitation wipes (Eco Pea) @ \$5.00x = \$10,000.

Section Actual total = \$43,600

Food and Water under sheltering operations

- AED medical 15 @ 2,000. Ea. = \$30,000.
- 40 pallets of water 16.9 fl. Oz bottles 48 per pallet \$389.99 Ea. \$15,599.60
- Food distribution- \$12.00 per meal x 3 meals a day 350 people x 120-days = \$1,512,000.

This estimate includes a kitchen supplying food.

Section Estimated total: \$1,557,799.60

Yurok Volunteer Fire

- 4000-gallon water tender estimate- 760,000.

Section Estimated total: 760,000.

Wildfire mitigation and preparedness

- 1800- HEPA air filtration units for residential homes @ \$200.00 Ea. = \$360,000.
- 10,000 – N95 air filtration masks 500-cases @ \$800 a case = \$ 400,000.

Section Estimated total: 760,000.

Total Request: \$3,147,599.60

YUOK POLICE DEPARTMENT

The Yurok Tribal Police (YTP) has identified the following areas of financial need to help mitigate the impact that the drought will have on YTP and the tribal community. We anticipate that illegal marijuana grows will have a significantly severe impact on the creeks and springs along the Klamath River. Despite historic efforts of the Yurok Tribe to combat illegal gardens, the looming threat of a drought highlights the importance of eradication operations this year. YTP is prioritizing water diversion and environmental impact of illegal marijuana grows and we are working closely with other tribal departments and our allied agencies to facilitate a successful eradication season. The following have been identified as critical resource that can help our efforts:



Matrice 300 Drone: \$39,400

The Matrice 300 is a state-of-the-art unmanned aerial vehicle (UAV). The law enforcement application of this model, and accoutrements, will be primarily to reconnoiter illegal gardens and to follow water lines to identify possible diversion of streams. The unique and rugged terrain our YTP's jurisdiction presents challenges and obstacles to officers and our equipment. First and foremost is officer safety. Possessing the ability to reconnoiter an occupied grow without putting YTP staff at risk is mitigating potentially larger medical costs to the tribe. Additionally, the UAV can also help to alleviate potential damage to YTP vehicles. Our last eradication efforts resulted in damage to one of our patrol vehicles that cost approximately ten thousand dollars to repair. This upgraded package features additions that will help the department overcome the geographic challenges that are present. This UAV has an extended battery life to fifty-five minutes (as opposed to the standard twenty-five) and an extended range of operation to approximately 9.3 miles. The payload includes an infra-red high-definition camera, 23x zoom, with the capability to live stream footage. There is a spotlight and external microphone, allowing the operator to broadcast. With the features offered by this UAV, YTP hopes to not only utilize this drone during eradication, but also other emergent circumstances, such as search and rescue missions.

Additional Flight Time: \$85,000

It is not an uncommon practice to replant marijuana after eradication efforts made by law enforcement and plants destroyed. Illegal farmers will often replant in an effort to recuperate some of the loss from the initial eradication. These secondary grows are often late in the season, which will be late in the drought when any type of water diversion will be hyper-critical.

Overtime: \$7,650

The above ask is an estimate for the overtime required to pay officers during a secondary eradication campaign. Four officer working five twelve-hours shift, on average, for two weeks will estimate to \$7,650

Total Request: \$132,050

YUOK FORESTRY DEPARTMENT

The Yurok Reservation is a region of steep terrain, large areas of continuous fire fuels, subject to long periods of drought, and a region known to have high arson activity make wildfire a major concern for the Tribe. Ongoing periodic drought exacerbate's the threat from wildfire. Action can and should be taken to help assess, evaluate, and reduce the increased threat of catastrophic wildfire because of drought, while developing a community that is resilient to the after effect of a major fire. These steps can also help improve the ecosystem on Yurok lands by restoring native plants (used for ceremony, sustenance, and economy) and improve response capability and outcomes of wildfire. To achieve this, a combination of assessment, evaluation, planning, prevention education, fuel mitigation, and additional staffing is required to provide effective fire prevention planning and suppression and to achieve the goal of developing a resilient and fire-resistant community and its surrounding wildlands.

The Yurok Fire Department and Yurok Forestry Department will cooperate to assess, evaluate, plan, and implement a comprehensive wildfire and arson prevention strategy. This strategy will utilize forest assessment information from remote sensing, and forest inventory, and fuels condition analyses to prioritize and sequence projects for fuels reduction, prescribed burning, shaded-fuels breaks, and other wild fire prevention projects. Yurok Forestry will work closely with Yurok Fire, and other NR departments as required, to plan and scope projects which will effect and/or benefit forest management efforts for sustainable forest management, carbon sequestration, and cultural/traditional foods, medicines, and materials. Yurok Fire Department will primarily implement the identified wildfire prevention, and fuels management projects, including prescribed burning activities.



Specifically, the Yurok Forestry, Carbon, and Fire Department will utilize this opportunity in the following ways.

- Utilize remote sensing, forest inventory, and other assessments to evaluate tree mortality, forest health, fuels condition, and wildfire risk to support drought/wildfire mitigation strategy (see below).
- Develop implementation plan to prioritize and sequence wildfire prevention and fuels management projects to integrate and complement existing sustainable forest management strategy, carbon sequestration projects, and ensure compliance with all pertinent plans, permits, and agreements.
- Create defensible space around approximately 150 individual residences and approximately 30 tribal facilities in/on the Yurok Reservation. Utilizing an enhanced workforce capability.
- Provide Fire prevention public education and outreach to all community members, schools, businesses, and employees. This will be conducted through the Fire Department utilizing current and enhanced staff.
- Conduct a thorough Hazard Risk Assessment pertaining to wildland fire and develop a Mitigation strategy. This will be an inhouse team effort that includes multiple departments and organizations.
- Develop a drought contingency plan for the Fire Department and utilize this plan to conserve water and dovetail this plan into the tribe's hazard mitigation plan. This will be a team effort and will include multiple departments and organizations and possibly contracting.

Four major themes are identified for this proposal: 1) Assessment and planning to identify, prioritize, sequence, and integrate project areas on tribal lands; 2) Hazardous fuels reduction to reduce wildfire risk and increase water yield; 3)

implementation of a sequence of comprehensive Hazardous Fuels removal projects to help build a Reservation-wide defensible infrastructure; 3) Build organizational capacity to provide services commensurate with the complexity of the Reservation. These main themes parallel the primary components of the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy). The three components are: restoring and maintaining resilient landscapes, creating fire-adapted communities, and responding to wildfires.

With the predicted and exacerbated drought conditions on the Reservation it is imperative that we take a proactive approach at planning and mitigation. Providing a planned and systematic series of hazardous fuels reduction projects, coupled with increasing staffing capability of Yurok Fire and Forestry Departments, and working closely with our state, federal and local tribal cooperators will enhance our effort.

This proposal includes these additional components; increased staffing capability to support Yurok Forestry and Carbon Management planning and assessment efforts, increased staffing for Yurok Fire for response to assist CalFire and other surrounding agencies in the event of a Wildland Fire. Increased work force capability for hazardous fuels reduction, and increased equipment capacity to be able to complete and sustain the overall project of the hazardous fuel's reduction component. In this proposal we are requesting resources and funding for a 3-year period. Funding would be utilized for remote sensing contract support, training, assessments, planning, strategy development and mitigation, staffing of on duty firefighting personnel, purchasing or leasing additional vehicles; chippers, track skid steer units with brushing and mulching implement's, trailers to haul the equipment, Personal Protective Equipment, fuel, and support items such as supplies to operate and support the personnel and equipment, and administrative assistance.



Table 1. Integrated Yurok Forestry, Carbon, and Fire Department drought response funding request summary.

Department	Item	Number/Amount	Funding Amount
Yurok Forestry/Carbon	Personnel (3-year period)		\$1,223,850
	Equipment		\$1,133,166
	Remote sensing contract/training/support		\$700,000
Yurok Fire	Personnel (3-year period)		\$2,878,821
	Equipment and supplies		\$1,331,166
		Total	\$7,465,003

If you have any questions, please contact Rod Mendes, Fire Chief and Dawn Blake, Yurok Forestry Director.

CONCLUSION

It is not hyperbole to say the horrific drought presents a substantial risk to every aspect of our existence. This year's significantly increased fire risk threatens tribal infrastructure, homes and schools as well as a broad array of natural and cultural resources, including forests and sacred sites. We also expect to experience long periods of unsafe air quality and prolonged drinking water outages. Most of our families and elders are not in a position to purchase water when the streams that feed our distribution systems dry up. The median income among families on the reservation is \$11,000 and many elders are on a fixed income. Additionally, we want our citizens to minimize the number of trips to crowded grocery stores where there is increased risk of contracting COVID-19. We have gone to great lengths to prevent the spread of the virus and to get our people vaccinated. As noted in this report, all of the components in our drought plan seek to minimize exposure to the illness.

Forest fires, water shortages and the loss of natural and cultural assets are equally damaging to the long-term health of our community. Over the last decade, we have put a tremendous amount of effort into establishing water, power and internet infrastructure in addition to restoring the ecology of the region. We cannot afford to take a single step back when it comes to these life-sustaining initiatives. More importantly, we cannot lose a single one of our citizens to a catastrophic wildfire or hazardous air quality conditions. We are prepared to do everything in our power to maintain our positive trajectory and protect the lives of our people. As described in this document, the drought presents a significant risk to the Yurok community. Please consider supporting one or more of the projects outlined in this report. Please help us preserve our community and our way of life.

If you have questions or if you would like additional information, please don't hesitate to reach out to our Executive Director Don Barnes, who can be reached by phone at (707)482-1350 or via email at dbarnes@yuroktribe.nsn.us



NEW NORMAL

The current conditions appear to be the new normal. Extreme droughts are a long-predicted symptom of climate change. We are seeing other signs that the world is warming at a rapid rate too. Every year, there is less snowpack in the mountains. Large forest fires are becoming more frequent, occur earlier in the year and more damaging. The river has been reduced to a trickle and massive fish disease outbreaks now occur on a near annual basis.

In response to the enduring threat of climate change, the Yurok Tribe is taking bold actions to make the ecology of Klamath River region more resilient. However, there is much work to be done. In only 16 decades, extending from the gold rush to present times, European settlers have caused nearly irreversible damage to our world. In the 1800s, hydraulic gold miners blasted apart the hillsides and deformed hundreds of miles of fish habitat in the Klamath watershed. They also perpetrated unspeakable acts of violence, including massacres and murders, many of which were supported by the state. In the 1900s, unregulated logging companies clear cut nearly all of the forests and planted over a majority of the prairies in our territory. In many locations, the logging companies cultivated trees like dense crops of corn and in many instances, they planted the wrong tree species for the area. The plantations are extremely prone to catastrophic fire. In the early 2000s, clandestine cannabis growers removed entire mountain tops to cultivate crops and left hundreds of tons of trash in the forest, further escalating the fire risk.

The Tribe's natural resources departments are preparing to participate in the removal of four, fish-killing dams on the Klamath River, which will permanently improve conditions for fish and wildlife. The Yurok Fisheries Department is using Traditional Ecological Knowledge and Western science to turn old mining dump sites into productive salmon habitat. The Forestry Department is reducing the fire risk by thinning and increasing forest health on former timber lands. This will also ensure that more water stays in the creeks and will prevent future water shortages. The Yurok Fire Department is employing time-honored cultural burning techniques to reduce fuel loads and minimize the potential for a devastating fire. The traditional tool also revitalizes the upland environment and puts more water back in the streams. The Environmental Program is cleaning up old marijuana grow sites. The Tribe has also recovered and is repairing nearly 80,000 acres of forest within our ancestral territory, which will benefit fish, wildlife and other traditional food sources. Together, these strategic endeavors are making our part of state less prone to the ill-effects of climate change. The repaired forests also sequester more carbon dioxide and produce greater amounts of oxygen for the planet with each passing year.

We are doing our part to reduce the risks associated with climate change-driven drought. This year's water shortage clearly indicates that there is an urgent need to significantly increase the scale of climate change mitigation projects on tribal lands and throughout the state before it's too late. In addition to dollars for drought mitigation work, we are looking for funding to accelerate the restoration of our homeland.



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