Impacts of Climate Change on the Wiyot Tribe

Sea level rise and increasing weather variability are contributing to the loss of critical habitats and species in Wiyot territory and threatening the culture and economy of the Wiyot Tribe, including their food sovereignty, culturally important species and places, and cultural artifacts.

Since time immemorial, the Wiyot people have lived amongst the diverse ecosystems of present-day Humboldt County, California, including tidal mudflats, eelgrass beds, salt marshes, estuarine, dunes and wetlands. Forested, prairie and grassland ecosystems occur in more inland regions. Wiyot traditional homelands extend throughout much of the Humboldt County coast, from Little River in the North to Bear River Ridge in the South and encompass significant waterways such as Baduwa't (the Mad River), Wigi (Humboldt Bay) and Wiya't (the Eel River). These vital waterways served not only as travel and trade routes, but as permanent Wiyot village sites as well.

Indicators of climate change which are significant to the Wiyot include changes to precipitation and more intense winter storms, rising sea levels along the coast, significant drought in the upland regions with associated impacts to the watershed that trickle down to the estuaries surrounding Wigi, increase in invasive species, and losses of native flora and fauna associated with several of these phenomena. The Wiyot are also impacted by significant loss of lifeways that involved harvesting and consuming fish and shellfish from the ocean, Bay and river systems due to harmful algal blooms (HABs), and fishery declines, among other causes. The Wiyot are seeing a rapid loss of culturally important sites closest to the shore, including village sites on the historic Tuluwat Island and wetland sites that were critical habitat for bulb species. Tribal landholdings are currently few and mostly in low-lying areas. Wiyot lifeways tied to these threatened or dwindling habitats are thus equally vulnerable.

The Wiyot have seen precipitation become more variable, leading to the loss of harvesting opportunities and associated lifeways. The Tribe has always established gathering camps for certain berries and basketry materials during a short time window in the late summer or early fall. The critical harvest window is increasingly disrupted by early rains, leading to the loss of these cultural practices. Because many of the ancestral gathering grounds are now considered public or private land on which the Tribe is barred from gathering, there is increasing pressure on a diminishing number of locations.

The Wiyot Tribe has experienced larger and more frequent storms, including atmospheric rivers. These storms increase the risk of flooding of coastal roadways,

homes and other developed areas where soil is already more saturated due to rising sea levels. Along with flooding, the Wiyot Tribe reports more intense winds accompanying these storms than in the past.

While coastal areas such as the Wiyot Tribe's Table Bluff Reservation (TBR) experience more flooding, the upland regions of the watershed are experiencing longer and more severe drought conditions. These droughts, particularly those of 2013-2016 and 2020-2022, caused significant less streamflow and warmer temperatures in critical river and tributary habitats for anadromous fish. California Coastal Chinook salmon, Southern Oregon/Northern California Coho salmon and Northern California Summer and Winter steelhead are all culturally important, threatened or endangered (Summer steelhead being endangered) species whose populations are especially impacted by loss of both in-stream habitat and juvenile rearing habitat in Wigi's estuary. Drought and reduced coastal fog also contribute to tree stress and susceptibility to diseases, pests, and wildfire. Wildfires in the upland portion of these watersheds can cause increased erosion and degradation of water quality which further impacts anadromous fish and other aquatic species.

Changing ocean conditions have a variety of impacts on the Tribe. Relative sea level rise is occurring faster in southern Wigi than anywhere else along California's coast, at a rate of approximately 6 millimeters per year. This change, mostly driven by plate tectonics with some contribution from global sea rise, causes flooding, erosion, loss of critical estuary and wetland habitats, and loss of Wiyot cultural and historical sites such as Tuluwat Island. Ocean warming and salinization have widespread impacts on ocean species and may contribute to declines in anadromous fish populations via increasing populations of predator species and other changes to the marine food chain affecting their pelagic life phase. Warming and salinization have also contributed to the loss of eelgrass beds, which provide habitat for marine species, stopover feeding habitat for migratory birds, and critical juvenile rearing habitat for salmonids. Warming also plays a role in the development of marine HABs, which lead to the loss of shellfish that are subsistence and cultural foods for the Tribe.

Climate change has also had direct impacts on the health of Wiyot Tribal members. Most notably, the Tribe is losing plants, animals, and places which their lifeways depend on, which means they are experiencing the loss of medicines, foods and practices associated with physical and emotional well-being. The Tribe is impacted by the increase in severe wildfires in the areas around their territory through wildfire smoke exposure. Lyme disease incidence rates are higher than they have been in the past, and the occurrence of the disease in Wiyot territory at all is a relatively new development.

In response to climate change, the Wiyot Tribe is working to restore degraded habitats, remove invasives, and assist in the upland migration and climate mitigation of habitats that will otherwise be lost. As stewards of their homelands since time immemorial, they continue to seek access to land—cultural and moral spaces where community members can tend to and sustain reciprocal relationships with the land and pass down knowledge to future generations.

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