Wetland Program Plan for the Manzanita Band of the Kumeyaay Nation

October 1, 2017 - September 30, 2022

Prepared by;
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TABLE OF CONTENT

Wetland Program Plan for the
Manzanita Band of the Kumeyaay Nation

Approval Page

The Manzanita Wetland Program Plan has been reviewed by the Manzanita Band and is hereby approved:

Angela Elliott Santos 5-11-17

Angela Elliott Santos, Manzanita Tribal Chairwoman Date

APPROVAL

In addition to the *Approval Page* contained herein, the Manzanita Wetland Program Plan was reviewed by the Manzanita Band and approved by Executive Resolution No. 16.10 on November 7, 2016.

PURPOSE

The purpose this Tribal Wetland Program Plan (WPP) is to develop steps for the monitoring, assessment, protection, restoration, and management of wetland resources on the Manzanita Indian Reservation.

OVERALL GOAL STATEMENT AND TIME FRAME

The Manzanita Band of the Kumeyaay Nation recognizes that wetlands provide many traditional cultural values and critical human health and environmental functions that are vital to the community and that the protection and management of these water resources on the Manzanita Reservation is a priority to ensure the future well-being of the Manzanita Community.

This Wetland Program Plan (WPP) has been prepared to describe a clear action plan for the next five years for how the Manzanita Band will work to protect the wetlands on the Manzanita Indian Reservation. The Manzanita Environmental Protection Agency (MEPA) will implement this Wetland Program Plan, over the next five years, from 2017 to 2022, to monitor, protect, restore and manage the wetlands on the Manzanita Indian Reservation. MEPA will use this information for the development of prioritized restoration projects and for the protection and effective management of our valuable wetland resources.

OVERVIEW OF THE MANZANITA INDIAN RESERVATION

The Manzanita Band of the Kumeyaay Nation occupied their lands long before first contact with European civilization. Kumeyaay lands originally stretched 50 to 75 miles north and south of the Mexican border, from the Pacific coast to the Colorado River. The Kumeyaay people were hunters, acorn gatherers, basket weavers, and potters.

Today the Manzanita Indian Reservation is approximately 4,580 acres. It is located in southeastern San Diego County, California, on the Tecate Divide, a regional watershed divide that separates the Anza-Borrego Watershed to the east and the Tijuana River Watershed to the west, 65 miles east of San Diego and 10 miles north of the Mexican border, near the communities of Boulevard and Live Oak Springs. Because of the remote location of the reservation, much of the land within the region is classified as undeveloped. Large tracts of U.S. Forest Service and

Bureau of Land Management land to the west and east of the Reservation are agricultural preserve and contract lands. See *Figure 1, Manzanita Reservation Location*

The reservation consists primarily of gently rolling hills, ridges and grassy valleys fed by seasonal streams, springs and Tule Creek. Elevations range from approximately 5,100 feet above mean sea level in the northwest to 3,600 feet in the southeast. Slopes of the Reservation are relatively steep. Vegetation consists mostly of chaparral communities with limited oak woodlands occurring along streams east and west of the Tecate Divide. The reservation is approximately 50 miles east of the Pacific Ocean, and has an inland climate with wide diurnal and seasonal fluctuations. The air is typically dry and warm in summer, and moist and mild in winter. Temperatures may range from 12 degrees to over 100 degrees F. Average annual rainfall is approximately 14 inches, which is indicative of a semi-arid climate. Pacific storms, which occur generally from December through March, provide most of the precipitation, although late summer storms do occur intermittently. Annual relative humidity for the San Diego region ranges from approximately 62 to 70 percent.

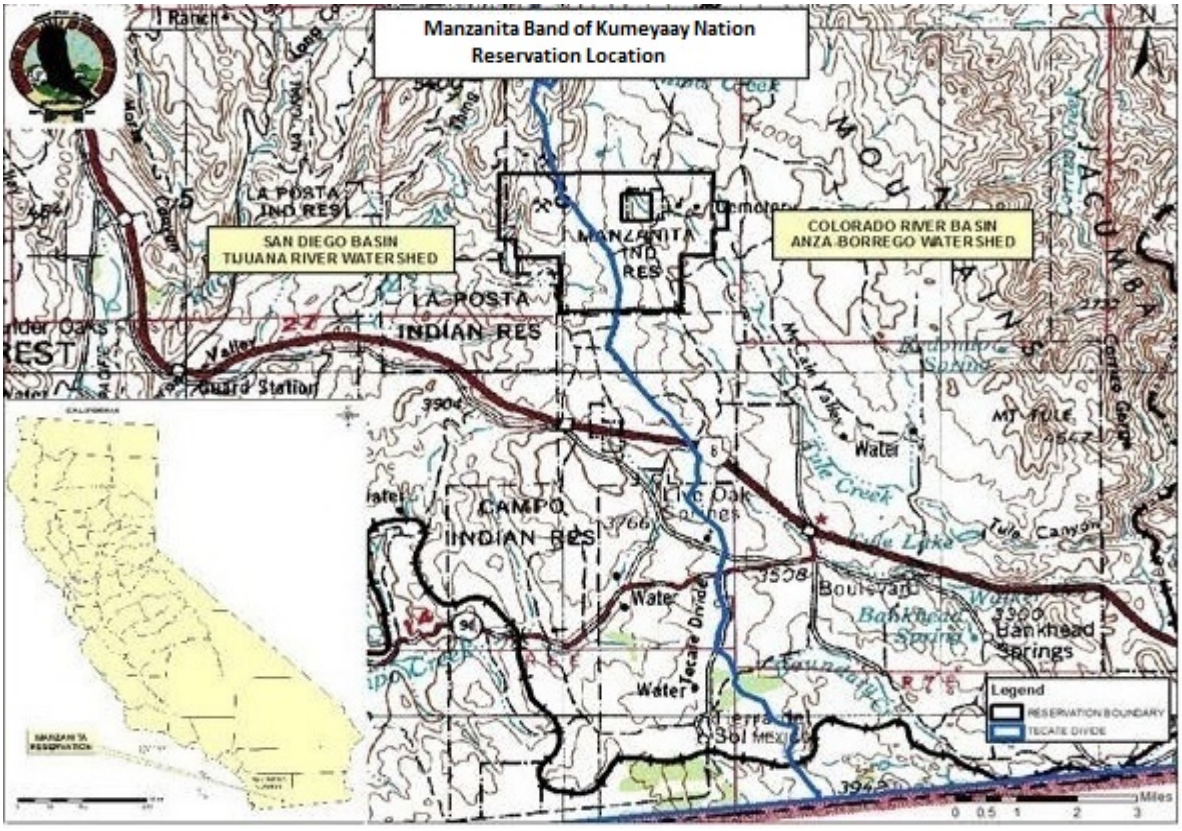

Figure 1 — Manzanita Reservation Location

SURFACE WATER RESOURCES

The Reservation is situated at the headwaters of two regional basins. Their boundary, known as the Tecate Divide, runs directly through the central portion of the Reservation, as indicated on *Figure 2, Manzanita Reservation Watersheds*.

Water resources include 13.4 miles of perennial and intermittent streams, 20.3 acres of wetlands as identified in the National Wetlands Inventory, lakes, springs, and groundwater wells, as indicated on *Figure 3, Manzanita Reservation Water Resources*. The major stream feature is Tule Spring Creek, which is perennial in some reaches due to spring discharge. The wetlands are generally associated with Tule Creek. Springs occur naturally along the lineaments in fractured bedrock throughout the Reservation. Discharge from these springs accounts for the perennial flow in reaches of Tule Creek and La Posta Creek.

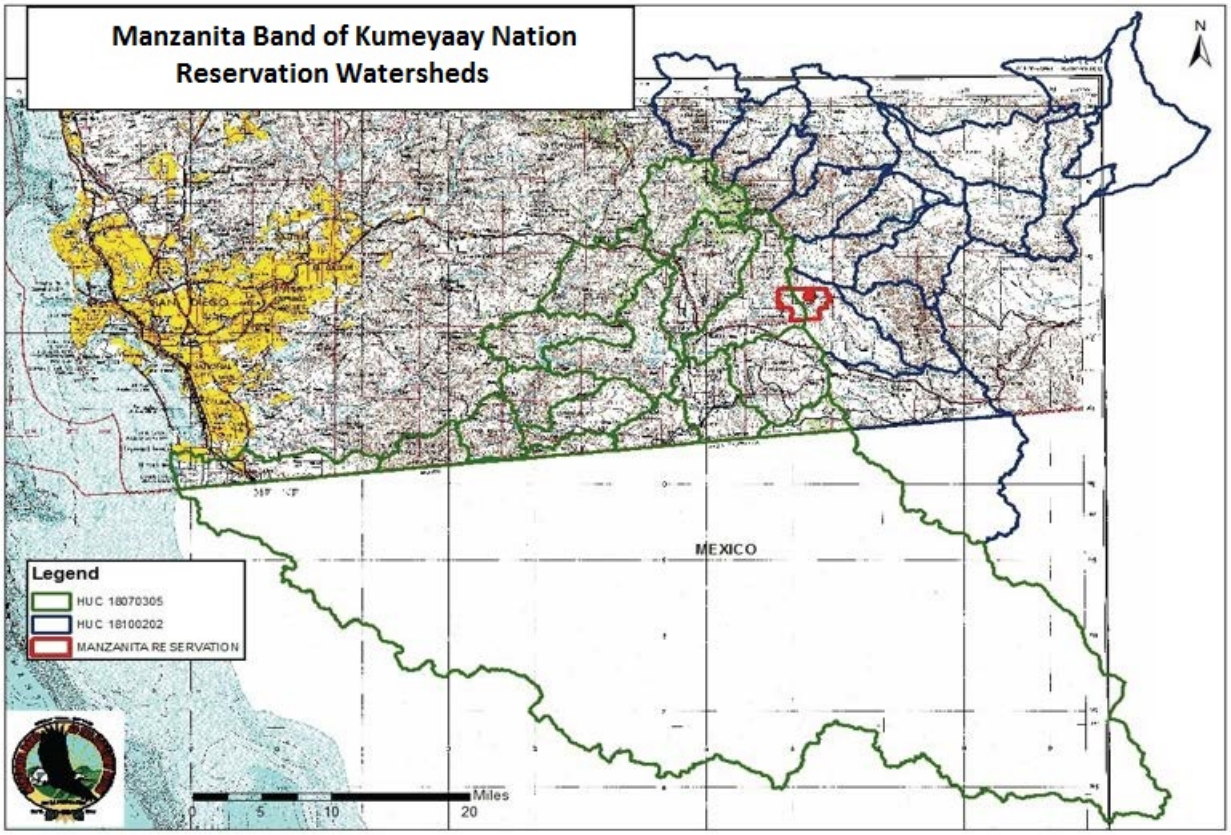

Figure 2 — Manzanita Reservation Watersheds

Flows on the west side of the Divide drain to La Posta Creek in the Tijuana River watershed, which drains to the Pacific Ocean at the Tijuana River Estuary. Groundwater has interaction with surface water such as Tule Creek, which gains or loses as it flows downstream depending on whether it recharges aquifers or receives spring discharge. In intermittent reaches, creek flow only occurs after rainfall events and rapidly percolates or flows downstream.

Manzanita Lake, a reservoir of approximately 1.2 acres supplied by Tule Creek, was formed with the construction of a masonry dam in 1939 by the Civilian Conservation Corps. At an average depth of 15 feet, the lake's volume is approximately 16.5 acre-feet. Tribal members have reported that bass, sunfish, catfish, minnows, and crappie used to occupy Manzanita Lake.

The Manzanita Band of the Kumeyaay Nation has adopted surface water quality objectives consistent with those of the San Diego Basin because of the pristine nature of the resource. Because of eutrophication issues in the San Diego Basin, regional and Tribal water quality objectives for nutrients are at very low concentrations.

The beneficial uses of Tule Creek and other surface waters including secondary contact, aquatic life, wildlife habitat, and preservation of rare and endangered species are threatened by nutrient concentrations. In addition, concentrations of *E. coli* and turbidity pose concerns for the beneficial recreational use of horses, wildlife, and septic systems.

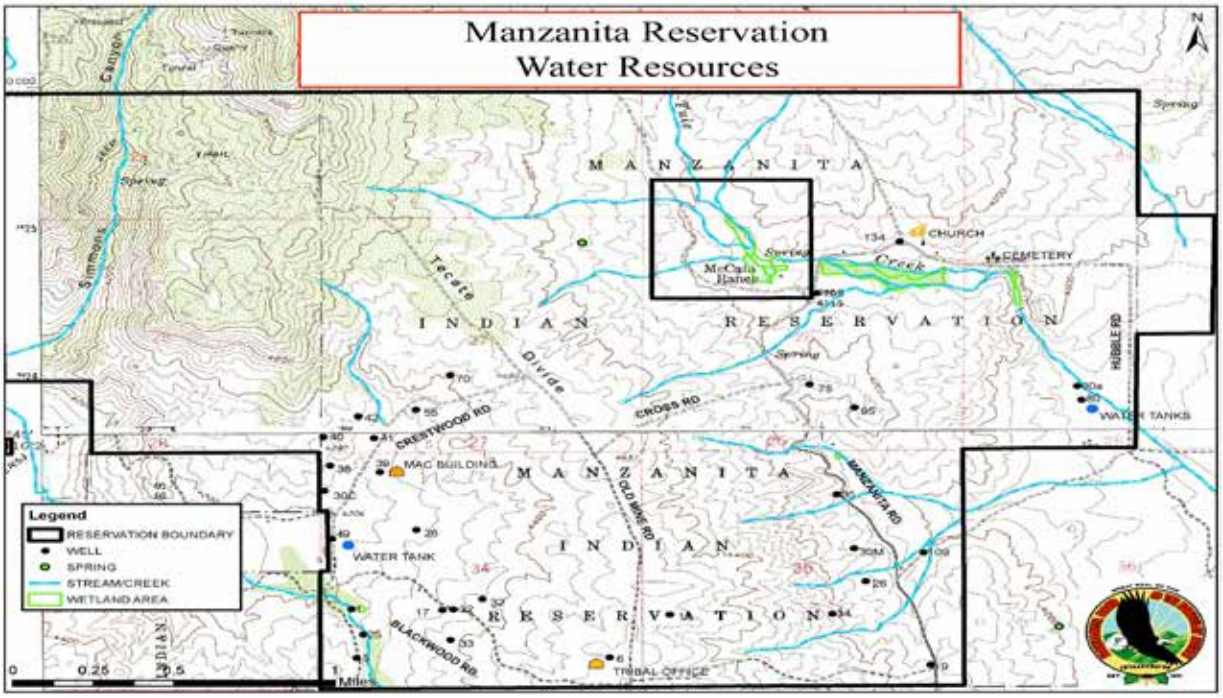

Figure 3 — Manzanita Reservation Water Resources

MANZANITA WETLAND PROGRAM GOALS

The Manzanita Band is developing a Wetland Program Plan with the goals of monitoring, protecting, restoring, and managing Manzanita wetland resources for the benefit of the Manzanita Community and the environment. Over the next five years (2017-2022), Manzanita will implement the Manzanita Wetland Program Plan described below, as funding levels allow. Specifically, Manzanita has chosen activities to regulate wetland resources, document and track changes in wetland conditions and size; increase wetlands quality; and provide protection for these important resources. Throughout these activities, we will provide education and outreach to build awareness and support. We will coordinate with relevant resource agencies and identify potential partners for projects to leverage resources and maintain support.

MANZANITA WETLAND PROGRAM ACTIVITIES

The four core elements of the Manzanita Wetland Program are regulation, monitoring and assessment, voluntary restoration and protection, and education and outreach. The following are the activities we propose to achieve the Manzanita Wetland Program goals.

Project: Finalize Manzanita Wetland Restoration Plan

Objective: Finalize the Manzanita Wetland Resoration Plan based on the FY 2016 Draft Manzanita Wetland Restoration Plan. and submit it to the General Council for approval.

Activities: The final restoration plan will build on the 2016 Manzanita Wetland Resoration Plan. Results from a topographic survey and full hydraulic analysis will be used to prepare engineering grading plans. The final restoration plan will include all necessary technical details for a successful 404 permit application and complete implementation of the restoration project.

Core Element: Monitoring and Assessment
Timeline: 2017 (depending on available funding)

Project: Manzanita Wetland Protection Ordinance

Objective: Develop a wetland protection ordinance and submit it to the General Council for approval.

Activities: Work with legal assistance to write an ordinance protecting the wetlands on the Manzanita Indian Reservation. The ordinance will specify requirements based on existing and approved ordinances elsewhere, as well as best management practices to be implemented for projects in the vicinity of the wetlands.

Core Element: Regulation
Timeline: 2017 (depending on available funding)

Project: Manzanita Wetland Resources Monitoring

Objective: Monitor Manzanita wetland resources to identify gains and/or losses in habitat as well as health and quality of the wetlands.

Activities: After the Manzanita wetland monitoring QAPP is approved, we will utilize the methods set forth in the document *Manzanita Wetland Monitoring Strategy* (September 2016), using the California Rapid Assessment Methodology (CRAM) to assess the health and quality of the wetlands on the Manzanita Reservation.

Core Element: Monitoring and Assessment
Timeline: 2017-2022 (depending on available funding)

Project: Monitoring Data Management

Objective: Synthesize and/or analyze Manzanita wetland monitoring data

Activities: Each year's monitoring data will be used to track wetland conditions and update the Wetland Program Plan as necessary. The CRAM data will be input into an Excel spreadsheet to compare multiple years of data. Depending on timing and funding, we will compare the polygon sizes for multiple years' mapping data in GIS. Analyzing multiple years' data will give us an idea of trends in both amount of wetland habitat, and quality or health of that habitat so that we can make recommendations to Manzanita General Council on potential policy changes and/or update our QAPP to collect additional data.

Core Element: Monitoring and Assessment
Timeline: 2017-2022 (depending on available funding)

Project: Manzanita Wetland Management, Protection, and Restoration Plans

Objective: Develop and/or update Manzanita Wetland Management, Protection, and Restoration Plans.

Activities: Priortize potential manangement, protection, and restoration project planning needs, research funding opportunities, secure funding for priorities, and develop and/or update appropriate plans when funded.

Core Element: Voluntary Restoration and Protection
Timeline: 2019 - 2022 (depending on available funding)

Project: Public Education and Outreach

Objective: Conduct Public Education and Outreach to Manzanita Community Members.

Activities: Public education and outreach are integral components of the Manzanita EPA's activities for a successful program. Depending on the activities completed during the year, we will conduct ongoing outreach to disseminate information on general wetland importance as well as the work that the Manzanita EPA has completed.

Core Element: Education and Outreach
Timeline: 2017 - 2022 (depending on available funding)

Project: Update the Manzanita Wetland Program Plan

Objective: Update the Manzanita Wetland Program Plan for next 5-year period
Activities: After identifying the priorities of Manzanita Community Members for the Manzanita Wetlands, we will update the Manzanita Wetland Program Plan for 2022-2027 with approval of Manzanita Council and the U.S. EPA.

Core Element: Education and Outreach
Timeline: 2022 (depending on available funding)

Table 1. - Manzanita Wetland Program Plan Activities

Project	Objective	Timeline (depending on available funding)
Manzanita Wetland Restoration Plan	Finalize the Manzanita Wetland Resoration Plan based on the FY 2016 *Conceptual Wetland Restoration Plan* and submit it to the General Council for approval.	2017
Manzanita Wetland Protection Ordinance	Develop a wetland protection ordinance and submit it to the General Council for approval.	2017
Manzanita Wetland Resources Monitoring	Monitor Manzanita wetland resources to identify gains and/or losses in habitat as well as health and quality of the wetlands.	2017-2022
Monitoring Data Management	Synthesize and/or analyze Manzanita wetland monitoring data.	2017-2022
Manzanita Wetland Management, Protection, and Restoration Plans	Develop and/or update Manzanita Wetland Management, Protection, and Restoration Plans.	2019 - 2022
Public Education and Outreach	Conduct Public Education and Outreach to Manzanita Community Members.	2017 - 2022
Update the Manzanita Wetland Program Plan	Update the Manzanita Wetland Program Plan for next 5-year period.	2022

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