

WETLAND PROGRAM PLAN
FOR THE
MOAPA RIVER INDIAN RESERVATION

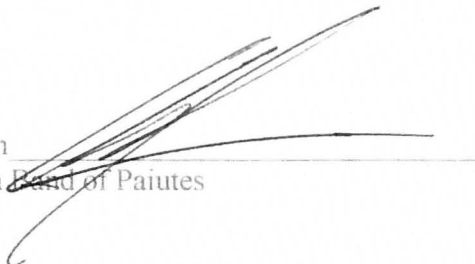
Moapa Band of Paiutes

Department of Environmental Protection
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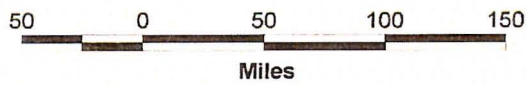
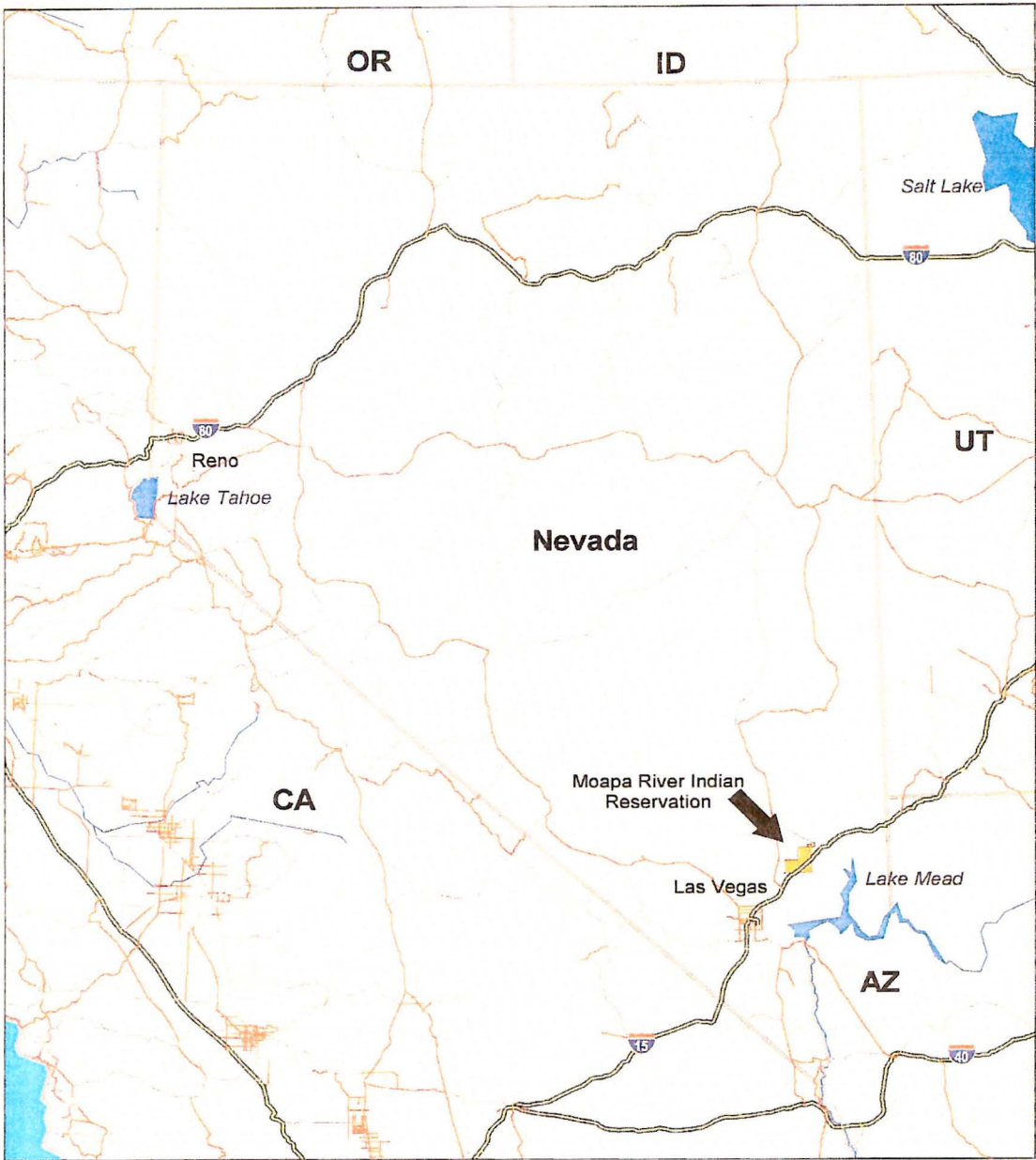
2013

MOAPA BAND OF PAIUTES APPROVAL

William Anderson
Chairman, Moapa Band of Paiutes

A handwritten signature in black ink, consisting of several overlapping, sweeping strokes that form a stylized representation of the name 'William Anderson'. The signature is written over a horizontal line.

Date 4-24-13



Water Quality Technology, Inc.

**Moapa River Indian
Reservation Location Map**

1.0 Purpose

The purpose of this Wetland Program Plan is to develop strategies and mechanisms that can be utilized to identify and assess wetland resources on the Moapa River Indian Reservation. This information can then be used to develop plans to protect, restore and enhance Tribal wetland resources.

2.0 Background Information

The Moapa Band of Paiutes consists of approximately 287 members, of which 180 presently reside on the Moapa River Indian Reservation. The Moapa Band of Paiutes or Nuwuvi are part of the Southern Paiute Nation whose traditional lands covered an area which is known as Southern Nevada. The Moapa River Indian Reservation is located in the southeast Nevada, approximately 50 miles northeast of Las Vegas (Figure 1). The 71,954 acres of Reservation land lies in Moapa Valley which is the prehistoric floodplain of the Muddy River. Dry washes and rounded hills characterize Moapa Valley.

Historically, the Moapa people were a culturally well adapted people who combined farming with hunting and gathering and used the resources of the land with great ingenuity. Wetland and riparian vegetation had significant cultural importance. Willows, cottonwoods, and sedges and rushes were used in the construction of sweat lodges as well as in the creation of intricately designed basketry, including water jars, winnowing and parching trays, cradle boards, cooking baskets and seed beaters. Knowledge of the nutritional and medicinal uses of plants was extensive.

2.1 Wetlands Significance:

The primary causes of wetland loss along Muddy River are riparian area degradation from historical dredging for agricultural use, Tamarisk encroachment and stream bank erosion. Riparian habitat loss and cultural plant loss is evident in all riparian areas along the Muddy River.

Areas of concern and their sources include:

- Loss of critical fisheries habitat from dredging (channelization) of the Muddy River
- Loss of critical riparian habitat from dredging (channelization) of the Muddy River
- Unstable stream bank conditions and increased sedimentation from dredging
- Habitat loss from Tamarisk encroachment
- Increased salinity from Tamarisk growths
- Lowering of the water table from Tamarisk growths

Historically the Muddy River ecosystem contained low lying wetland areas and associated willow and cottonwood riparian areas. Approximately 40 years ago, the river was dredged (two separate times) to allow for lowering of the water table and the development of agricultural farmland. Farming activities were conducted up to the river edge resulting in the removal of most of the riparian habitat. Currently the Muddy River on the Moapa Indian Reservation contains steep riverbanks that are susceptible to slumping and erosion and an increase in sedimentation in the river. Thick stands of Tamarisk are crowding out the remaining native stands of riparian and

wetland vegetation providing generally lower wildlife habitat throughout the riparian area. In addition, stream bank degradation is also occurring due to livestock grazing and trampling.

2.1 Wildlife Significance

The Muddy River ecosystem on the reservation currently contains populations, two endemic minnows (Species of Special Concern). The Virgin River chub (*Gila seminuda*), Moapa speckled dace (*Rhinichthys osculus moapae*), and possibly the Moapa White River springfish (*Crenichthys baileyi moapae*) The area is also a potential nesting site for the endangered Willow Fly-catcher and Yellow billed cuckoo. (Source: personal contact with Shawn Goodchild, U.S. Fish and Wildlife Service, Southern Nevada Field Office by Josh DeGayner, Water Quality Technician, Moapa Band of Paiutes, 2007)

2.3 Related Tribal Projects

The Moapa Band of Paiutes have been working for the past three years in clearing Tamarisk from along the banks of the Muddy River in selected areas and constructing livestock exclusion fencing. Funding for this work has been through an EPA grant (CWA Section 319, Nonpoint Source), NRCS WHIP funding and an existing Tribal Wildlife Grant. Future Nonpoint Source grants will be utilized to create wetlands along Muddy River. The Moapa are also in the process of identifying all wetlands on the reservation and have developed a Wetland Conservation Plan through funding from a Clean Water Act (CWA) Section 104(b)(3) Wetlands grant. In addition, through a grant from the NRCS the Band has installed fencing to restrict livestock encroachment and grazing within a portion of the Muddy River Riparian Corridor.

3.0 Overall Goal and Timeframe for the WPP

The Moapa Band will implement the Wetland Program Plan described below over the next four years (2014 -2017). The overall goal of the Moapa Wetland Program Plan is to develop a comprehensive program that will assess wetland and riparian resource conditions on the Moapa River Reservation and develop mechanisms to sustain, protect and enhance unimpaired wetlands and restore impaired wetland areas utilizing effective restoration techniques.

Upon EPA approval of the WPP, the Moapa will complete year one tasks utilizing Tribal resources. Implementation of future year tasks will be dependent on funding from Wetland Program Development Grants or other funding sources.

4.0 Actions and Activities for the Wetland Program Plan

4.1 Year 1 – 2014

Objective: Monitoring Strategy and Design

Core Element: Monitoring and Assessment

Action: Identify Program Decisions and Long-term Environmental Outcomes

(Core Element: Monitoring and Assessment Objective 1.a.)

- b. The Moapa DEP will define other Tribal entities and outside partners who will participate in the WPP development process
- a. All associated Tribal personnel and outside partners develop and document the long-term environmental goals of the WPP

Action: Define Wetlands Monitoring Objectives and Strategies

(CE: M&A Obj. 1.b.)

Activities:

- a. The Moapa DEP will define and document WPP data needs and uses
- b. Moapa personnel associated with the WPP will meet with cooperating agencies in the process of developing monitoring objectives and strategies
- c. The Moapa DEP will define and document wetlands monitoring objectives and strategies

Action: Develop Monitoring Design

(CE: M&A Obj. 1.c.)

Activities:

- a. The Moapa DEP will develop a monitoring site selection process and monitoring frequency
- b. An appropriate wetland classification scheme will be developed
- c. The Moapa DEP will develop a process to incorporate the WPP monitoring plan into Moapa's Water Pollution Control Program (WPCP) Monitoring Strategy and the EPA approved Quality Assurance Project Plan utilizing WPCP funds

4.2 Year 2 – 2015

Objective, Monitoring Strategy and Design

Core Element: Monitoring and Assessment

Action: Select a Core Set of Monitoring Indicators

(CE: M&A Obj. 1.d.)

Activities

- a. Tribal participants and outside partners will identify scientifically defensible monitoring indicators that are relevant for the monitoring objectives
- b. Develop/refine field methods to be used in the monitoring plan

Action: Monitor Wetland Resources

(CE: M&A Obj. 2.b.)

Activity

- a. Train participating Moapa staff and outside partners in wetlands identification, delineation and selected indicator monitoring

Action: Establish Reference Condition

(CE: M&A Obj. 2.c.)

Activity

- a. Base line monitoring will be conducted to define reference conditions and establish reference sites (unimpaired to impaired)

Action: Reporting

(CE: M&A Obj. 2.e.)

Activity:

- a. Prepare annual summary report for Moapa decision makers and for submittal to EPA

4.3 Year 3 – 2016

Objective, Monitoring Strategy and Design

Core Element: Monitoring and Assessment

Action: Monitor Wetland Resources

(CE: M&A Obj. 2.b.)

Activities:

- a. The Moapa DEP will revise/modify the Wetlands Monitoring Plan based on baseline studies and reference sites
- a. Implement the Moapa WPP Wetlands Monitoring Plan
- b. The Moapa DEP will track site monitoring information utilizing described field methods and selected reference sites

Action: Track Monitoring Data

(CE: M&A Obj. 2.d.)

Activities:

- a. Utilizing GPS and GIS tools, the Moapa DEP will geo-reference monitoring data
- b. Develop a monitoring site location map which incorporates the geo-reference data
- b. The Moapa DEP will incorporate monitoring data into an electronic data base that is compatible with the WPCP WQX data base
- c. The Moapa DEP will identify monitoring sites that can be used to develop trend analysis

Action: Evaluate Monitoring Program

(CE: M&A Obj. 3.a.)

Activity:

- a. The Moapa DEP will a review of the monitoring program and make changes or modify if needed.

Action: Analyze Monitoring Data

(CE: M&A Obj. 2.e.)

Activities:

- a. The Moapa participating personnel and outside partners will determine baseline wetland conditions (functions and values)
- b. The Moapa DEP will prepare and Annual Wetlands Assessment Report for submittal to EPA and Moapa decision makers

4.4 Year 4 – 2017

Objective, Monitoring Strategy and Design, Management and Protection

Core Element: Monitoring and Assessment

Action: Monitor Wetland Resources (continued)

(CE: M&A Obj. 2.b.)

Activities:

- a. The Moapa DEP will revise/modify the Wetlands Monitoring Plan based on previous monitoring and observations and continue to implement monitoring
- b. The Moapa DEP will continue to track site monitoring information utilizing described field methods, data system and selected reference sites

Core Elements: Monitoring and Assessment, and Restoration and Protection

Action: Develop Wetland Management, Protection and Restoration Plans

(CE: M&A Obj. 2.e., 3.d. and CE Restoration and Protection Obj. 1.b.)

Activities:

- a. Moapa participating personnel and outside partners will identify impaired wetland resources and document causes of impairment
- b. The Moapa DEP will develop restoration activities for impaired wetlands based on documented causes of impairment
- c. Moapa participating personnel and outside partners will prioritize restoration projects base on functions and values associated with each impaired wetland resource
- d. The Moapa DEP will prepare and Annual Wetlands Assessment Report for submittal to EPA and Moapa decision makers