

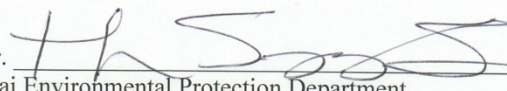
Tribal Wetland Program Plan For the Havasupai Reservation



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HAVASUPAI TRIBAL APPROVAL

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TABLE OF CONTENTS

	<u>Page</u>
HAVASUPAI TRIBAL APPROVAL	ii
1.0 PURPOSE	1
2.0 OVERALL GOAL STATEMENT AND TIME FRAME	2
2.1 Overall Goal Statement and Time Frame for Plan.....	2
2.2 Overview of the Havasupai Reservation.....	2
2.3 Past Tribal Work Related to Wetlands.....	4
3.0 ACTIONS AND STEPS	5
3.1 Year One (2014) Actions and Steps: Goals & Monitoring Plan.....	5
3.2 Year Two (2015) Actions and Steps: Monitoring & Assessments	6
3.3 Year Three (2016) Actions and Steps: Management & Protection	7
3.4 Year Four (2017) Actions and Steps: Wetland Projects	8
3.5 Year Five (2018) Actions and Steps: Wetland Regulations	9
4.0 PERSONNEL AND WPP FUNDING OPPORTUNITIES	10
4.1 Tribal WPP Personnel Responsible for Implementation	10
4.2 Funding Opportunities for WPP Implementation	11
5.0 REFERENCES	12

TABLES

1 Tribal WPP Personnel and Responsibilities	10
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FIGURES

1 Havasupai Reservation Map	3
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Cover Photograph: Aerial photograph taken from a helicopter of the riparian wetlands along Havasu Creek in Havasu Canyon on the Havasupai Reservation

1.0 PURPOSE

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

2.0 OVERALL GOAL STATEMENT AND TIME FRAME

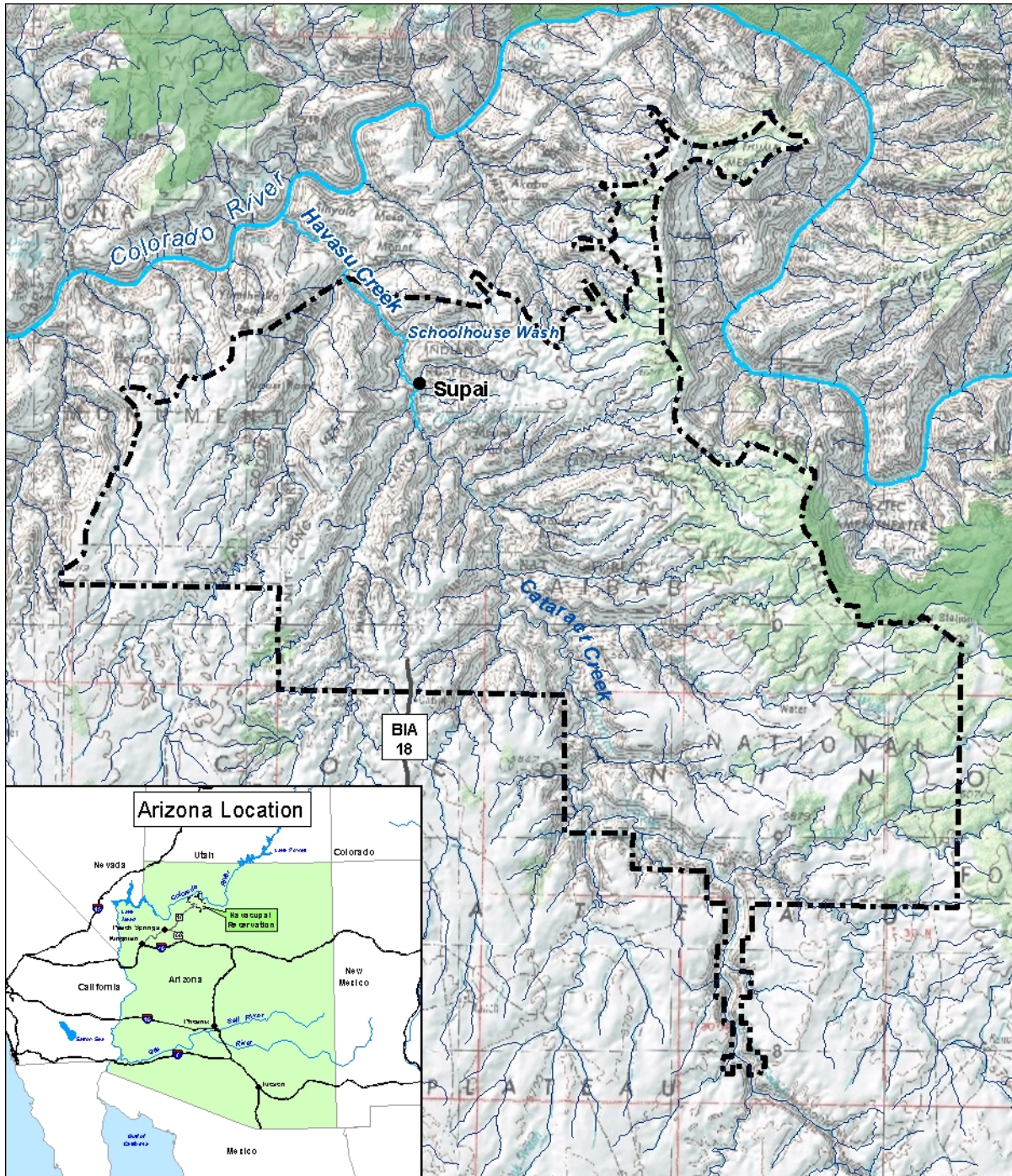
2.1 Overall Goal Statement and Time Frame for Plan



The Havasupai Environmental Protection Department will implement the enclosed Wetland Program Plan, over the next five years, from 2014 to 2018, to assess wetland resource conditions on the Havasupai Reservation and use this information for the development of prioritized restoration projects and for the protection and effective management of our valuable wetland resources.

2.2 Overview of Havasupai Reservation

The 185,000 acre Havasupai Reservation (*Figure 1*) contains a 6.4 mile reach of perennial stream called Havasu Creek, 132.4 miles of ephemeral streams, and 0.8 miles of canals. There are numerous springs and approximately 155 acres of freshwater wetlands on the Havasupai Reservation. The Havasupai people are called Havasu 'Baaja, which translates into People of the Blue-Green Water. Our name reflects the beautiful blue-green water from Havasu Springs that flows as Havasu Creek to the Village of Supai and down five waterfalls and off-reservation to become tributary to the Colorado River. The pools at the base of these beautiful waterfalls create waterbodies that are used for recreation by Tribal members and visitors. The only developed community on the Havasupai Reservation is the Village of Supai, which is located in a wide portion of Havasu Canyon. Two other areas of land uses are Hualapai Hilltop and Havasu Campground. Water pumped from domestic wells supplies the drinking water used on the Havasupai Reservation.

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-  Reservation Boundary
-  Grand Canyon National Park

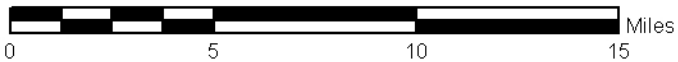
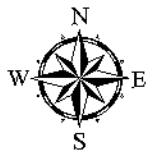


Figure 1
Havasupai
Reservation Map

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Path: P:\A224-Havasupai\WQEMXD\Figure 1 - Havasupai Reservation Map 12-2013.mxd

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Perennial surface waterbodies that contain wetlands on the Havasupai Reservation include Havasu Creek and pools at the base of Fiftyfoot Falls, Havasu Falls, and Mooney Falls. There are extensive ephemeral washes that convey flows during intense storm water runoff events. Schoolhouse Wash is an ephemeral wash located within the Village of Supai. Washes (ephemeral streams) within the extensive Cataract Canyon, and upstream of the Village of Supai, can convey the greatest storm water runoff contributing to periodic flooding in Havasu Creek. There are numerous backcountry springs that contain wetlands located throughout the Havasupai Reservation such as Moqui Spring, Topocoba Spring, and Hilltop Spring. Located within the Village of Supai are Havasu Springs, and Fern Springs. Havasu Springs is the largest spring on the Havasupai Reservation and it is the source of water for Havasu Creek that recharges the alluvial aquifer in Havasu Canyon and provides the water supply for the Supai domestic well field. Water from springs is used as untreated drinking water by both Tribal members and visitors. All waterbodies are important and protected by the Havasupai Tribe in the Tribal water quality standards, such as all creeks, natural pools, springs, seeps, washes, and wetlands.

2.3 Past Tribal Work Related to Wetlands

Major past Tribal work related to wetlands on the Havasupai Reservation includes the following actions.

1. Physical habitat characterization for stream riparian wetlands was included in the 2014 revised Quality Assurance Project Plan (QAPP) Water Quality Monitoring for the Havasupai Reservation (Havasupai EPD 2014) that is currently under EPA review as part of the Clean Water Act Section 106 Water Pollution Control Program
2. Restoration of the wetlands associated with degraded riparian habitat and natural springs is currently is currently being conducted as funded by a Clean Water Act Section 319 Nonpoint Source Management Program (Havasupai EPD 2013b)
3. Monitoring and assessments of Tribal wetland resources is summarized in annual Tribal water quality assessment reports that are submitted to EPA each year (Havasupai EPD 2012, 2013c)

3.0 ACTIONS AND STEPS

3.1 Year One (2014) Actions & Steps: Goals & Monitoring Plan

3.1.1 Action: Define Tribal wetlands protection goal and objectives

3.1.1 Steps: (Monitoring and Assessment Objective 1a)

a. Hold a series of coordination meetings with Tribal representatives to define a Tribal wetlands protection goal and objectives

b. Develop and secure Tribal approval of a wetlands protection goal

c. Determine objectives to meet the Tribally-approved wetlands protection goal

3.1.2 Action: Develop a wetlands monitoring plan

3.1.2 Steps: (Monitoring and Assessment Objective 1b, c, and d)

a. Identify wetlands data needs for the Havasupai Reservation

b. Develop a wetlands monitoring plan that incorporates scientifically-defensible wetlands monitoring indicators, sites, and monitoring frequencies

c. Incorporate the wetlands monitoring plan into our EPA-approved Quality Assurance Project Plan or QAPP using Section 106 WPCP funds

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3.2 Year Two (2015) Actions and Steps: Monitoring & Assessments

3.2.1 Action: Monitor Tribal wetlands resources on the Havasupai Reservation

3.2.1 Steps: (Monitoring and Assessment Objective 2b, d)

- a. Certify Havasupai Environmental Protection Department staff in wetlands identification and delineation

- b. Environmental Protection Department staff training in implementation of the wetlands monitoring plan

- c. Initiate implementation of the wetlands monitoring plan according to the QAPP

- d. Track wetlands monitoring data through hard-copy documents and electronically on CD and hard drive that are routinely updated and integrated with other environmental data that are already analyzed using Tribal goals and for temporal trends

3.2.2 Action: Annual assessment reporting of wetlands data and inform decision makers

3.2.2 Steps: (Monitoring and Assessment Objective 2e)

- a. Conduct annual assessments of wetlands data to determine extent (acreages and locations) and conditions (functions, values and any exceedances of Tribal goals)

- b. Document annual wetlands assessments in a written report for submittal to EPA and Tribal decision makers (Environmental Director and Havasupai Tribal Council)

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3.3 Year Three (2016) Actions and Steps: Management & Protection

3.3.1 Action: Improve the management of Tribal wetland resources

3.3.1 Steps: (Monitoring and Assessment, Objective 2e and 3c)

- a. Create a base map of all wetlands on the Havasupai Reservation using GPS and GIS technologies
- b. Define and characterize all wetlands according to the Cowardin system (Cowardin *et al.* 1979)
- c. Establish scientifically-derived benchmarks for wetlands restoration successes and associated required monitoring and analytical techniques (Objective 3c)

3.3.2 Action: Improve the protection of Tribal wetland resources

3.3.2 Steps: (Water Quality Standards for Wetlands and Regulation)

- a. Develop wetland water quality standards for insertion into the Water Quality Standards for the Havasupai Reservation (Havasupai EPD 2013a) (WQS 2d)
- b. Determine the most effective use of Clean Water Act Section 401 Water Quality Certification for the protection of tribal wetland resources (WQS 3b)
- c. Determine the most effective enforcement mechanism for the protection of Tribal wetland resources, including culturally-important wetlands (Regulation 1b)
- d. Incorporate wetlands protection and community understanding of wetlands functions, values, and cultural uses into our Public Education and Outreach programs (Regulation 1c and 3e)
- e. Develop a visual wetlands protection and beneficial use media for free distribution at the Havasupai Environmental Protection Department such as a brochure, poster, or informative signs (Regulation 3e)

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3.4 Year Four (2017) Actions and Steps: Wetland Projects

3.4.1 Action: Identify impaired wetlands and needed wetland restoration projects

3.4.1 Steps: (Voluntary Restoration and Protection Objective 1a, b, and c)

- a. Identify the locations of impaired wetland and specific impairment characteristics
- b. Determine the most impaired wetlands and most vulnerable wetlands
- c. Document specific needed wetland restoration projects and associated restoration methods for each wetland restoration project

3.4.2 Action: Prioritize wetland restoration projects and secure needed funding

3.4.2 Steps: (Voluntary Restoration and Protection Objective 3)

- a. Prioritize wetland restoration projects in coordination with the Tribal Council and Cultural Advisors
- b. Identify Tribal, Federal, and other funding sources (State and local) to cover the costs for wetlands restoration project implementation
- c. Obtain requests for proposals (RFPs) for each identified funding source and submit timely proposals to funding agencies
- d. Implement wetland restoration projects

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3.5 Year Five (2018) Actions and Steps: Wetland Regulations

3.5.1 Action: Incorporate wetland protection into Tribal regulations

3.5.1 Steps: Administer Regulatory Activities Efficiently and Consistently (Regulation Objective 2)

- a. Develop Tribal ordinances, resolutions, or codes designed to maintain the quality of un-impaired wetlands and to ensure that impaired wetlands functions and extent are not further degraded

- b. Incorporate wetland regulations into the policies and plans administered by the Natural Resources Department that is responsible for regulating natural resources on the Havasupai Reservation

- c. Designate the most effective method(s) of enforcement for Tribal wetland ordinances, resolutions, or codes

4.0 PERSONNEL AND WPP FUNDING OPPORTUNITIES

4.1 Tribal WPP Personnel Responsible for Implementation

Personnel responsible for the Havasupai Tribe’s Wetland Program Plan implementation are presented below in *Table 1*. This team approach to the Wetland Program Plan is used to ensure that responsibilities of all personnel are defined.

Table 1 Tribal WPP Personnel and Responsibilities

Personnel	Title	Responsibility
Thomas Siyuja, Sr.	Director, Havasupai Environmental Protection Department	Oversees all aspects of the Wetland Program Plan
Augustine Hanna	Environmental Technicians, Havasupai Environmental Protection Department	Responsible for field activities associated with implementing the Wetland Program Plan, such as delineations, assessments, and restoration project work
Theresa Yellowhorse “Tess”		
Travis Hamidreek	Director, Havasupai Natural Resources Department	Oversees all activities, regulations, and policies associated with the Natural Resources Department
Wendell Smith	EPA Region IX Project Officer for the Havasupai Tribe	Provides EPA’s role in advising and overseeing EPA’s portion of the Wetland Program Plan
Leana Rosetti	EPA Region IX Wetlands Program	Provides EPA’s role in reviewing and approving the Wetland Program Plan
Stephen Johnson, Ph.D.	Extension, Havasupai Environmental Protection Department	Responsible for technical expertise and training in wetland assessment and protection

Havasupai Environmental Protection Department

4.2 Funding Opportunities for WPP Implementation

The following programs provide funding opportunities for implementation of the Wetland Program Plan.

- CWA Section 106 Water Pollution Control Program (WPCP) grants provide federal financial assistance and are used for water quality monitoring, assessment, and protection that includes addressing wetlands as Waters of the U.S.
- CWA Section 104(b) (3) Wetlands grants provide federal financial assistance and are used for wetlands protection and management.
- Indian environmental General Assistance Program (GAP) grants are used for environmental program development and infrastructure for the environmental protection department that include wetland resources.
- CWA Section 518 specifies program authority for Tribes to administer the Section 303 Water Quality Standards Program and the Section 401 Water Quality Certification Program. These two programs do not specifically include financial assistance but can be used as tasks under the CWA Section 106 Water Pollution Control Program to provide wetland protection mechanisms.
- The Bureau of Indian Affairs (BIA) has trust responsibility on the Havasupai Reservation and can provide technical and financial (638 funds) assistance and resources when available that include addressing Tribal wetland resources.
- The Natural Resources Conservation Service (NRCS) can provide technical and financial assistance when available that include addressing Tribal wetland resources.
- The US Fish & Wildlife Service (USFWS) can provide technical assistance and competitively-awarded financial assistance through a Tribal Wildlife Program grant.

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