

Three Affiliated Tribes  
Environmental Division



# WETLAND PROGRAM PLAN

October 2022-December 2027

2/9/2022

## Introduction

The mission statement of the Three Affiliated Tribes Environmental Division is *to protect the health of our environment and our people*. Pursuant to this mission, this Wetland Program Plan (WPP) establishes the goals and specific actions of the TAT Environmental Division's Wetland Program.

The functions and benefits of wetlands are plentiful, aiding or facilitating water storage, streamflow maintenance, pollution control, habitat support, and flood mitigation, as well as holding distinct aesthetic and cultural value.

Prior to the construction of the Garrison Dam and the creation of Lake Sakakawea, the Mandan, Hidatsa and Arikara people occupied the floodplain of the upper Missouri River. The people here developed a deep relationship with the extensive wetland systems of the floodplain, utilizing the ecologically rich and hydrologically varied landscape for farming, hunting and trapping, as well as for cultural and ceremonial purposes. With the rising waters that formed Lake Sakakawea, ancestral lands were lost as people were relocated to upland environs, and many lost their traditional relationship with the wetlands that were lost.

Lake Sakakawea covers approximately 155,000 acres in the center of the Reservation. The lake provides municipal water for five communities on the Reservation – Mandaree, Parshall, White Shield, Four Bears and Twin Buttes. It is also a major source of recreational opportunities including swimming, fishing, boating, and water skiing. Industrial use of the lake resource is continuing to increase as energy development on the Reservation increases. Other water resources on the Reservation include ephemeral streams, wetlands, small man-made impoundments that are used for livestock watering and wildlife habitat, and groundwater.

Varied land uses on the Reservation have the potential to influence water quality of not only the deep water habitats and groundwater, but also of the wetland features as well. The dominant land uses on the Reservation include oil and gas production, agriculture, and cattle grazing. The Bakken Formation is one of the most intensive areas of energy development in the United States, with over 1,000 active wells throughout the Reservation with hydraulic fracturing occurring at most if not all wells. Agricultural land use is predominant on the east side of the Reservation and consists primarily of cereal crops with a small amount of row crops. Rangeland use for cattle grazing is the predominant land use on the west side of the Reservation.

The socioeconomic benefits of developing communities and expanding infrastructure can often lead to the importance of wetlands being overlooked or even ignored, resulting in degradation or loss of wetlands in an area. In turn, water quality may be degraded, hydrology interrupted, wildlife habitats disrupted, and aesthetic beauty tarnished. Conversely, protection and restoration of wetlands may improve water quality, ecological function, habitat support, and aesthetic beauty in an area. Secondly, protected or restored wetlands can deliver opportunities to educate the public on the importance and benefits of wetlands.

With the growing threat of climate change and its inevitable impacts on precipitation, drought, extreme weather events, water availability, habitat shifts, and numerous other environmental

factors, the proper monitoring, assessment, management and restoration of wetlands plays an increasingly integral role in mitigating future environmental and water resource issues on the Reservation. For example, wetlands can feed streams and provide water storage during drought events, mitigate the impacts of floods during high precipitation events, as well as increase climate resilience and serve as indicators of change in climatic conditions. Additionally, the Wetland Program Plan has the potential to contribute to environmental justice on the Reservation by attempting to maintain and revitalize the traditional cultural relationship of the Mandan, Hidatsa and Arikara people with wetlands.

The Three Affiliated Tribes Environmental Division will collaborate with the TAT GIS department, the US Environmental Protection Agency, and St. Mary's University of Minnesota Geospatial Services toward the goal of developing a tribal wetland monitoring and assessment program to protect, manage and restore wetlands on the Fort Berthold Reservation. In accordance with the EPA's Wetland Program Development Grant, the TAT Wetland Program Plan will incorporate the Core Elements Framework:

1. Monitoring and assessment
2. Voluntary restoration and protection
3. Regulatory approaches (including CWA 401 certification)
4. Wetland-specific water quality standards

At the current stage of development, the TAT WPP primarily addresses Core Elements 1 and 2 through the tribal wetlands monitoring and assessment program and the data produced during its development and implementation, which will aid in the identification of at-risk wetlands and their eventual restoration and protection. Once the monitoring and assessment program is developed and incorporated into the existing TAT Water Quality Program, Core Elements 3 and 4 will be addressed by eventually developing regulatory approaches and adding wetland-specific water quality standards into TAT Water Quality Standards.

## **Program Goals and Objectives**

The overarching goal of the Wetlands Program is to develop a comprehensive monitoring and assessment program to adequately protect, manage and restore wetlands. Once established, this wetland monitoring and assessment program will be incorporated into the Three Affiliated Tribes Water Quality Program, with regularly scheduled field visits occurring every year.

First, a baseline wetland and surface waters inventory will be created. This will serve as an index of biological integrity based on assessment of species, guild and vegetation data to determine habitat quality based on reference sites or desired future conditions, so that monitoring can be tailored to the wetland system type. The inventory will assist in the identification of ecological function and type, with specific functions enhanced, protected or restored based on those identified functions. High-quality, culturally significant, and degraded wetlands will also be identified and prioritized for enhancement, protection, and/or restoration.

Upon completion of the wetland and surface waters inventory, a rapid assessment method (RAM) will be developed. The RAM will consist of a series of questions to be answered during a field visit to a particular wetland which, upon completion, will assess the functions, benefits, and overall health of the wetland. This data will be stored within the wetland and surface waters inventory and eventually utilized to aid in wetland protection.

As implementation of the wetland monitoring and assessment program progresses, the goal of wetland protection will be applied. Based on data collected through the RAM, prioritized wetlands will be added to a protection list. The objectives will be to:

1. Return vegetation to native species
2. Protect culturally-significant species
3. Protect endangered species
4. Halt loss and improve quality of remaining wetlands via
  - a. Land-use and land-cover change analyses
  - b. Mitigate local/regional losses
  - c. Enhance (i.e., improve function beyond historic conditions) and create wetlands where feasible and where wetland functions can be most beneficial
  - d. Implement department policies that will notify oil and gas companies that have disrupted wetland environments

Integral to the RAM will be the development of cultural wetland functions, which will consist of functions that are relevant to the Three Affiliated Tribes' culture, history, and stated values. These functions will be gathered through communications with community members and research of historical knowledge and traditions.

With these goals and objectives in mind, TAT Environmental staff will continue to participate in conferences, workshops and trainings related to wetland monitoring and assessment and develop skills in wetland assessment methods through consultation with experienced wetlands scientists.

### **Wetland Monitoring and Assessment Strategy**

The TAT Wetland Program will operate under the Water Quality Program within the Environmental Division. Regular monitoring of prioritized wetlands will be conducted by Environmental Division staff through utilization of the Surface Water Inventory and the Rapid Assessment Method. The results of these monitoring events will be used to assess changes (i.e., improvement, degradation, loss, etc.) in wetland function over time.

The Surface Water Inventory provides function scores for all wetlands within the exterior boundaries of the Fort Berthold Reservation. These scores can be sorted by value, and further segmented into percentile ranks. Initially, wetlands in the 90<sup>th</sup> percentile and above will be considered priority wetlands and will serve as the first pool of wetlands added to the monitoring and assessment annual rotation.

Prior to sampling season in FY23, TAT Environmental staff will determine the number of sites assessed annually as well as frequency of site assessment. Currently, there are 47 wetlands with function scores in the 90<sup>th</sup> percentile. Data collected from wetland site assessments will be stored on the dedicated Water Quality hard drive, and temporal trends in wetland data will be analyzed as assessments continue.

## **Wetland Program Plan History**

### **Year One (FY2019)**

- i. **Action** (Develop framework for WPP, develop wetland and surface hydrography inventory, develop specific knowledge about wetlands)
- ii. **Activities**
  - 1. Took preliminary steps toward developing Wetland Protection Plan in accordance with the Core Elements Framework (CE 1)
  - 2. Research wetland ecosystems that are specific to North Dakota
  - 3. Worked with SMUM to develop wetland and surface water inventory (CE 1)

### **Year Two (FY2020)**

- i. **Action** Continue developing wetland and surface hydrography and improving wetland specific knowledge, provide wetland science support, and develop wetland communication tools, develop WPP
- ii. **Activities**
  - 1. Continue work with SMUM on developing WPP and Story Map
  - 2. Work with TAT GIS and other departments to develop Story Map and collaborate to find suitable hosting location (i.e., TAT Environmental website, Nueta Hidatsa Sahnish College site)

### **Year Three (FY2021)**

- i. **Action** Continue developing wetland specific knowledge and wetland program plan, and developing relationships with stakeholders
- ii. **Activities**
  - 1. Develop skills in the North Dakota Rapid Assessment Method, IBI, and other assessment methods through consultation with experienced wetland scientist(s)
  - 2. Define cultural functions of wetlands relevant to MHA Nation, based on communications with community members, historical knowledge and traditions; incorporate into TAT RAM

### **Year Four (FY2022)**

- i. **Action** Continue developing wetland specific knowledge, wetland program plan, and developing relationships with stakeholder
- ii. **Activities**
  - 1. Finalize TAT RAM; utilize field sites to calibrate & modify RAM as needed

2. Host Story Map on NHSC website
3. Select sites for regular monitoring and assessment

#### **Year Five (FY2023)**

- i. **Action** Continue developing wetland specific knowledge, wetland program plan, and developing relationships with stakeholder
- ii. **Activities**
  1. Finalize TAT RAM; utilize field sites to calibrate & modify RAM as needed
  2. Host Story Map on NHSC website
  3. Apply for new Wetland Program Development Grant
  4. Select sites for regular monitoring and assessment; determine annual assessment rotation (frequency, number of sites assessed annually, etc.)
  5. Collect wetlands field data for monitoring and assessment
  6. Enter all data from this year's fieldwork into database at the TAT Environmental Office.

#### **Year Six (FY2024)**

- i. **Action** Continue developing wetland program plan with emphasis on monitoring and assessment, voluntary restoration and protection
- ii. **Activities**
  1. Collect wetlands field data for monitoring and assessment
  2. Identify rare, vulnerable, or important wetlands for restoration and/or protection.
  3. Update Wetlands QAPP if necessary.
  4. Select candidate sites for community outreach/education
  5. Enter all data from this year's fieldwork into database at the TAT Environmental Office.

#### **Year Seven (FY2025)**

- i. **Action** Continue developing wetland program plan; begin utilizing data to establish regulatory activities and define parameters for incorporation into Tribal Water Quality Standards
- ii. **Activities**
  1. Collect wetlands field data for monitoring and assessment
  2. Identify rare, vulnerable, or important wetlands for restoration and/or protection.
  3. Select candidate sites for community outreach/education
  4. Research and develop wetland-specific water quality standards that reflect potential impacts associated with land use activities
  5. Enter all data from this year's fieldwork into database at the TAT Environmental Office.

#### **Year Eight (FY2026)**

- i. **Action** Continue developing wetland program plan; establish regulatory activities and define wetland-specific parameters for incorporation into Tribal Water Quality Standards
- ii. **Activities**
  - 1. Collect wetlands field data for monitoring and assessment
  - 2. Identify rare, vulnerable, or important wetlands for restoration and/or protection.
  - 3. Apply for new Wetland Program Development Grant
  - 4. Finalize site location for community outreach/education site
  - 5. Enter all data from this year's fieldwork into database at the TAT Environmental Office.
  - 6. Develop wetland-specific water quality standards that reflect potential impacts associated with land use activities

**Year Nine (FY2027)**

- i. **Action** Continue developing wetland program plan; establish regulatory activities and incorporate wetland parameters into Tribal Water Quality Standards
- ii. **Activities**
  - 1. Collect wetlands field data for monitoring and assessment
  - 2. Finalize sites for restoration and/or protection
  - 3. Develop community outreach/education site
  - 4. Enter all data from this year's fieldwork into database at the TAT Environmental Office.
  - 5. Finalize wetland parameters in Tribal Water Quality Standards and present to Council