FORT PECK TRIBES’ MANNING LAKE WETLAND COMPLEX AND TRIBAL WILDLIFE REFUGE

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Complex consists of:

Emergent wetland: 7,035 ac
Open water: 452 ac
Cropland: 1,200 ac
Grasslands: 12,517 ac
Total: 21,204 acres
Wetland Complex Provides:
reproduction and stopover sites for thousands of waterfowl, migratory birds, songbirds, and other species of conservation concern
1. Designation of Tribal Wildlife Refuge

2. Development of water quality monitoring methods

3. Determine hydrologic functionality

4. Development of habitat and wildlife species monitoring strategies

→ Provide baseline information to help monitor condition and health of the ecosystem

→ Link between WQ and health of habitat and inhabitants
1. DESIGNATION of REFUGE:

All Tribal land within 4,882 acre boundary
Refuge Ownership

- Fee: 640 acres
- Tribal: 1285 acres
- Allotted: 1760 acres
2. WATER QUALITY MONITORING

Temperature
pH
Dissolved oxygen
Conductivity
Salinity
Depth
Invertebrates

Nitrates
3. DETERMINING HYDROLOGIC FUNCTIONALITY

- Establish evaporation rate-class A evaporation pan
- Determine surface and ground water interactions-
  shallow 2” observation wells, piezometers, surface water monitoring locations

- Establish precipitation rates-tipping bucket rain gauge next to the evaporation pan
4. DEVELOPMENT OF HABITAT AND WILDLIFE SPECIES MONITORING STRATEGIES

Map vegetation communities/associations

One site will be randomly selected per each vegetation community and 5 points will be surveyed within a 100 meter radius of this point.

Percent primary cover type
Vertical vegetation density
Average height of both live and dead vegetation- determines nesting/cover habitat
“Patty” counts-presence/absence of livestock
Breeding birds: 5 points per vegetation community, 6 minute survey of activity within 100 m radius

Colonial nesting birds: estimated nest count survey before fledge

Amphibians: auditory and visual survey
Small mammal diversity

Not much is known about ne Montana small mammal populations, especially in wetland communities.

Quantitative data is virtually lacking from most EPA regions as well.
1-100 meter transect consisting of 10 stations

3 transects each in main habitat types of mixed grass prairie, foxtail barley, and needle and thread grass

1 each in alkali bulrush, hardstem bulrush, and tufted hair grass
14 transects:
Mice: 39
Voles: 37
Shrews: 6
Least weasel: 1
13-lined ground squirrel: 1

Birds: 9 marsh wrens, 2 chicks
Herps: leopard frogs, tiger salamander
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<tr>
<th>Habitat</th>
<th># Transects</th>
<th>Mice</th>
<th>Vole</th>
<th>Shrews</th>
<th>Tiger salamanders</th>
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PARTNERS INCLUDE:
US Fish & Wildlife Service
Environmental Protection Agency
MT Audubon
Natural Resource Conservation Service
University of Montana
Philip L. Wright Zoological Museum
MT Natural Heritage Program
MT Fish, Wildlife, & Parks
Medicine Lake NWR
Red Rock Lakes NWR
Bureau of Land Management
Glasgow Chamber of Commerce
Army Corps of Engineers
Native Plant Society
QUESTIONS?