

Contract No. 001-003
“Aquatic Habitat infrastructure Enhancement”
 Submitted by Ducks Unlimited
 Principal Investigator: Rick Warhurst
 Directives C, A, B & D

PARTICIPANTS

Sponsor	Cost Share	
Ducks Unlimited	<u>\$ 75,000</u>	
Subtotal Cash Cost Share		\$75,000
Ducks Unlimited	\$ 12,000 (in-kind)	
Ducks Unlimited	\$ 12,000 (in-direct)	
Subtotal in-kind and in-direct cost share		\$ 24,000
North Dakota Industrial Commission	<u>\$322,000</u>	
Total Project Cost		\$421,000

Project Schedule – 2 years
 Contract Date – 7/23/2014
 Start Date – 11/1/2014
 Completion Date – 6/30/2017*

Project Deliverables:
 Status Report: August 30, 2014 ✓
 Status Report: November 30, 2014 ✓
 Status Report: April 30, 2015 ✓
 Status Report: December 31, 2015* ✓
 Status Report: April 30, 2016* ✓
 Status Report: December 31, 2016* ✓
 Final Report: June 30, 2017* ✓

OBJECTIVE/STATEMENT OF WORK:

Restore, develop and enhance aquatic habitats located on privately and publicly owned and managed lands in North Dakota. Construction of dams, dikes, levies and emergency spillways, installation of water control structures and development of water conveyance systems. Three and possible one more site have been identified. If completed will enhance and restore at a minimum 80 acres of aquatic habitat. (The original application with full funding would have restored 549 acres.)

STATUS:

Original request was \$800,000. Amount awarded was \$322,000 with a stipulation that OHF funding cannot be used for the \$150,000 of professional fees identified in the budget. Contract 001-003 has been signed.

5/13/14 - Project changes as a result of partial funding: Although this is not final, it is anticipated that they will do fewer sites although the final sites have not been determined. The original request was for five sites

8/30/2014 - As a result of the reduced funding three projects have been identified to be done with the possibility for a fourth project if first three projects come in under budget. The three sites selected are: Jim Ehlert (12 acres) (private land in Mountrail County); Bowman Haley - Alkali Creek Impoundment (58 acres) (land owned by U.S. Army Corps of Engineers and managed by the North Dakota Game and Fish Department in Bowman County; and Long Lake National Wildlife Refuge - Unit G19 wetland (10 acres) (owned and managed by the U. S. Fish and Wildlife located in Kidder County). A Ducks Unlimited Civil Engineer began the engineering design plans for the 58-acre Alkali Creek Impoundment enhancement project. They expect to complete this project enhancement work this fall. The DU Civil Engineer and a

DU Biologist met with landowner Jim Ehlert. DU performed the topography survey of the project site and the DU engineer has begun developing the engineering design for repairing and enhancing this wetland impoundment.

11/30/2014 - Ducks Unlimited completed the engineering design for the repair and enhancement of the Bowman Haley-Alkali Creek Impoundment located in Bowman County this fall. Materials for the project have been ordered and it is anticipated that the project will be developed and completed this winter.

For the Jim Ehlert Dam project, Ducks Unlimited has completed 90% of the engineering design. The engineering plans and design report will be submitted to the North Dakota State Water Commission in December, 2014. We anticipate the State Water Commission permitting process to be complete in time to complete construction of this project in the summer of 2015.

Ducks Unlimited plans to perform the topography survey and complete the engineering design for the Long Lake National Wildlife Refuge - G19 Wetland Impoundment this winter. We plan to complete the construction in the summer of 2015.

Ducks Unlimited will coordinate with the U.S. Fish and Wildlife Service this winter to determine which section of the Unit II Marsh lake-front dike located on Long Lake National Wildlife Refuge will be repaired in late summer of 2015.

April 30, 2015 - Ducks Unlimited stated in their status report:

Jim Ehlert Dam: Ducks Unlimited completed the engineering design for the wetland impoundment restoration project. The Engineer Plan was submitted to the North Dakota State Water Commission as an "Application to Modify or Construct a Dam or Other Water Resource Facilities" permit (Dam Construction and Water Right Permits). The Dam Permit application process is expected to take two to three months for approval. The Water Rights permit process is expected to take one to two years for approval.

Alkali Creek: The engineering design for this dam repair project was completed and the Engineer Plan was submitted to the North Dakota State Water Commission for an "Application to Modify or Construct a Dam or Other Water Resource Facilities" permit. The permit will be a Dam Modification permit. The process should take two to three months for approval.

Long Lake National Wildlife Refuge - G19 Wetland Enhancement: The topography survey of the wetland impoundment was completed this spring. The engineering design will be completed this spring.

Long Lake National Wildlife Refuge - Unit II Marsh Dike: The survey of the Unit II Marsh lake-front dike will be completed this spring or early summer. The first three projects listed above will be completed and contracts paid prior to beginning work on the Unit II Marsh Dike repair. The balance of the OHF grant will be used to initiate repair work on the Unit II Marsh Dike.

Because of the time it will take to receive permits, a no-cost extension has been granted. The funding has been extended through December 31, 2016 with additional status reports required (* notes where changes have been made).

September 10, 2015 - Pay request update:

Jim Ehlert Dam: Ducks Unlimited completed the engineering design for the wetland impoundment restoration project. The Engineer Plan was submitted to the North Dakota State Water Commission as an "Application to Modify or Construct a Dam or Other Water Resource Facilities" permit (Dam Construction and Water Right Permits). The Dam Permit application process is expected to take several months for approval. The Water Rights permit process is expected to take one to two years for approval.

Alkali Creek: The Alkali Creek Wetland Impoundment dam repair project was competitively bid, a construction contract awarded and the project completed during the summer of 2015. Wave action in

the wetland had eroded a portion of the dam face and sediment had plugged the water control structure's inlet pipe. DU added rock rip-rap to the eroded portion of the earthen dam face and installed a new, slotted inlet pipe enveloped in engineered rock gradations to inhibit the inlet pipe from plugging in the future. The 58-acre Alkali Creek Wetland Impoundment is restored and functioning again in providing habitat for waterfowl, wading birds, shorebirds, marsh birds and other wetland wildlife species.

Long Lake National Wildlife Refuge - G19 Wetland Enhancement: The topography survey of the wetland impoundment was completed this summer. The engineering design will be completed early this fall and construction enhancement work possibly occurring later in the fall.

Long Lake National Wildlife Refuge - Unit II Marsh Dike: The survey of the Unit II Marsh lake-front dike will be completed later this fall. The first three projects listed above will be completed and contracts paid prior to beginning work on the Unit II Marsh Dike repair. The balance of the OHF grant will be used to initiate repair work on the Unit II Marsh Dike

12/31/2015 Status Report received. The Status Report states:

Jim Ehlert Dam: Ducks Unlimited completed the engineering design for the wetland impoundment restoration project approximately one year ago. The Engineer Plan was submitted to the North Dakota State Water Commission as an "Application to Modify or Construct a Dam or Other Water Resource Facilities" permit (Dam Construction and Water Right Permits). However, to date, the landowner, Jim Ehlert, has not signed the permit applications. No construction can occur until the permits are granted by the North Dakota State Water Commission. The Dam Permit application process is expected to take several months for approval. The Water Rights permit process can take one to two years for approval. Therefore, it is doubtful if this project will be developed by Ducks Unlimited as part of this OHF Contract.

Alkali Creek: The Alkali Creek Wetland Impoundment dam repair project was completed during the summer of 2015. The 58-acre Alkali Creek Wetland Impoundment is now restored and again functioning to provide wetland habitat for waterfowl, wading birds, shorebirds, marsh birds and other wetland wildlife species.

Long Lake National Wildlife Refuge - G19 Wetland Enhancement: The topography survey of the G-19 wetland impoundment was completed in the summer of 2015. The engineering design has been initiated and will be completed this winter. Project enhancement construction work will occur in early summer of 2016.

Long Lake National Wildlife Refuge - Unit II Marsh Dike: The topography survey of the Unit II Marsh lake-front dike was conducted during the fall of 2015. Construction work on repairing and enhancing the Unit II lake-front Unit II Marsh Dike will occur in the summer of 2016.

An amendment to the contract has been drafted and forwarded to the applicant to reflect a change in the Project Manager from Rick Warhurst to Jonas Davis.

The amendment has been fully executed.

4/26/16 - Status Report received. It states in part:

Alkali Creek: With the completion of the Alkali Creek Project in the summer of 2015, a new project sign highlighting the partners and the Outdoor Heritage Fund was ordered and will be erected in June. The restored 58-acre impoundment is now providing migration and breeding habitat for waterfowl and other wetland dependent species.

The remaining **Long Lake National Wildlife Refuge - G19 Wetland Enhancement and Unit II Marsh Dike** projects are nearing the construction phase. The design plans were completed and permitting was

processed in March. The next step is to procure a contractor to initiate the enhancement activities in the coming summer months with completion occurring in early fall 2016.

11/9/2016 - Ducks Unlimited requested a no-cost extension to June 30, 2017 to allow sufficient time to complete the last project - Long Lake Unit II. A large quantity of rock rip rap needs to be hauled on to the site and it needs to be done when the road is frozen to reduce erosion, avoid damage to the road and alleviate safety concerns. An amendment has been executed granting this request.

12/31/2016 - Status Report received. It states in part:

The Aquatic Habitat Infrastructure Enhancement grant is nearing completion with one remaining project to be completed. The second project, Long Lake Unit G-19 was completed this past summer, restoring 10 acres of wetland habitat that had been previously drained due to erosion of structure and embankment. The sheet piling was replaced and the embankment armored to withstand future high water events. The restoration now allows the shallow wetland to remain productive and available for migrating birds and other North Dakota wildlife.

During the reporting period, the Long Lake Unit II project went out to bid and the contract was awarded to a contractor. Just as work began in early December, multiple snow events and negative temperatures put progress on hold. They plan to begin removing snow and commencing with shaping the embankment and hauling rip-rap to the site when conditions allow. When complete, the project will repair, enhance, and protect 444 acres of critically important habitat types utilized by migratory and breeding waterfowl in perpetuity, maintain the diversity of wetland habitat types on the refuge, restore refuge manager's ability to manage water levels in the shallow wetlands, and provide optimal habitat and refuge for other wetland dependent species.

Photos are posted as part of the status report on the website

6/30/2017 - Final Report received. It states in part:

The Aquatic Habitat Infrastructure Enhancement project was developed to restore and enhance wetland habitats throughout the state on public and privately owned and managed land where aquatic resources have been degraded due to erosion, breached impoundments, direct drainage, or sedimentation. During the grant period, three wetland restoration projects were completed totaling 512 acres of functioning aquatic habitat benefiting both wildlife and the people that recreate on these improved public sites. In total, DU and its partners contributed over \$300,000 in match to the projects, further leveraging OHF funds that made the program possible.

The first project completion was the Alkali Creek wetland impoundment project in Bowman County. Managed by the North Dakota Game and Fish Department, the 58-acre wetland lost functionality to its water control structure reducing management ability causing high water to erode the embankment and threatening failure. DU cleared the obstructions in the structure and replaced the pipe in a way that sediment will no longer be able to plug the structure. The embankment was also repaired and armored to withstand future high water events so that the dam will not breach. The restoration has allowed for drawdowns to improve habitat conditions and function during high water as a spillway. The marsh now provides enhanced habitat for waterfowl, wading birds, shorebirds and other wetland-dependent wildlife species. Additionally, the project is open to the public for such activities as hunting, fishing, wildlife viewing, and other recreational opportunities. The restoration activities also improved goods and services such as flood attenuation, water quality benefits, and groundwater recharge. A permanent

sign has been erected on-site honoring and thanking OHF and other funding partners for their contribution to the project.

The G-19 wetland enhancement project in Burleigh County was completed in 2016. As part of the Long Lake National Wildlife Refuge, the G-19 unit is a 10-acre wetland that drains into Long Lake through a water control structure. With an unprecedented 20-year wet cycle, Long Lake experienced extremely high water over many years. That high water coupled with wave action to the levees, extensive erosion occurred and subsequent breach in the levee pushed lake water into G-19 making it much deeper and taking water level management away from refuge staff. No longer shallow and managed, the aquatic resources were reduced, vegetation became less diverse and available, and without repair, the erosion would continue to spread along the embankment. With the help of OHF and other conservation partners, the water control structure was replaced and the levee was repaired and armored with rip-rap to withstand future high water events. The unit is now functioning correctly and providing optimal habitat for breeding and migrating waterfowl and shorebirds.

The final project was the Unit II marsh dike enhancement south west of the G-19 unit along Long Lake. As with G-19, extensive erosion and multiple breaches in the levee occurred over the past 10 years. The lake water had inundated hundreds of acres of productive shallow marsh habitat slowly altering a diverse vegetative state to more monotypic stands of perennial species. After months of constructing through last winter and dealing with snow fall, the project was completed in April 2017. DU repaired and enhanced 444 acres of critically important habitat types utilized by migratory and breeding waterfowl in perpetuity by repairing the breaches and armoring 5,000 feet of embankment with rock rip-rap to ensure long-term sustainability. In addition to the excellent aquatic habitat Unit II provides, the repaired embankment was also raised and dressed with proper sized substrate for nesting federally endangered piping plovers that have utilized the site each year when not inundated by high water. Bird watching on the Unit II project had been revered as a top birding destination.

The completion of these projects under the OHF Aquatic Habitat Infrastructure project has helped facilitate proper management of these resources necessary to restore the functions and characteristics of productive wetland systems. The scale and size of the project would not have been possible without the assistance of the Outdoor Heritage Fund.

This contract is now closed.

Updated July 18, 2017