



DEPARTMENT OF THE ARMY  
ST. PAUL DISTRICT, CORPS OF ENGINEERS  
180 FIFTH STREET EAST, SUITE 700  
ST. PAUL, MN 55101-1678

REPLY TO  
ATTENTION OF

Regional Planning and Environment Division North

### FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act, the St. Paul District, Corps of Engineers, has assessed the environmental impacts of the following project:

**Drayton Dam Fish Passage Mitigation Project  
Pembina County, North Dakota, and Kittson County, Minnesota**

The purpose of this project is to improve fish passage at Drayton Dam on the Red River, Pembina County, North Dakota, and Kittson County, Minnesota. The proposed project involves constructing a new rock ramp fishway upstream of the existing dam, followed by removal of the existing dam.

This finding of no significant impact is based on the following factors: The project would have temporary minor adverse impacts on noise levels, recreational opportunities, public health and safety, air quality, and surface water quality and long term minor adverse impacts on aesthetic values, terrestrial habitat, and wetlands. The project would have a minor beneficial impact on public health and safety, aquatic habitat, and biological productivity, and a substantial beneficial impact on habitat diversity. The project would have no impact on the cultural environment.

For the reasons stated above, the proposed action does not constitute a major Federal action significantly affecting the environment. Therefore, an environmental impact statement will not be prepared.

23 JAN 2013

Date

Michael J. Price  
Colonel, Corps of Engineers  
District Engineer

## MEMORANDUM FOR: CEMVP-DE

SUBJECT: Finding of No Significant Impact (FONSI) and Section 404(b)(1), Drayton Dam Fish Passage on the Red River of the North, Pembina County, ND; and Kittson County, MN.

1. Enclosed for your signature are the Finding of No Significant Impact (FONSI) and the Final 404(b)(1) Evaluation for the subject project.
2. The project would consist of implementing a rock rapids fish passage structure at the existing low head dam on the Red River near Drayton, ND. This project would be an environmental mitigation feature for the Fargo-Moorhead Flood Risk Reduction project.
3. Only six sets of comments were received during the public review period. The comments were extremely minor and have been addressed through revisions to the EA and 404. There are no significant issues for the action.
4. Both the State and federal resource agencies support the project. Water Quality Certification has been provided by the North Dakota Department of Health and has been included in the Comments Exhibit for the Final EA.
5. The Minnesota Pollution Control Agency commented that the project doesn't appear to have any outstanding issues and they would likely be able to issue a 401, provided appropriate BMPs are required during construction. This will be considered by PCA following review of the final set of Plans and Specifications. Water Quality Certification will be requested from the State of Minnesota at that time and will be obtained prior to awarding a construction contract.
6. The required 30-day public review period expired on 7 January, 2013. There are no unresolved substantive issues that would preclude us from signing this FONSI and Section 404(b)(1) Evaluation.



Encl

Terry J. Birkenstock  
Deputy Chief, Regional Planning and  
Environment Division North

Stefanik PD-P CS  
Devendorf PD-P RSB  
Birkenstock PD DS  
Crump PD AC  
DeZellar PM-A AS  
Willging OC AM  
DesHarnais DPM AD  
Bergmann DDE AS  
Price DE MP

**FINAL ENVIRONMENTAL ASSESSMENT**

**Drayton Dam Fish Passage Mitigation Project  
Pembina County, North Dakota, and Kittson County, Minnesota**

**January 18, 2013**

# ENVIRONMENTAL ASSESSMENT

## Drayton Dam Fish Passage Mitigation Project Pembina County, North Dakota, and Kittson County, Minnesota

January 18, 2013

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## **ENVIRONMENTAL ASSESSMENT**

### **Drayton Dam Fish Passage Mitigation Project Pembina County, North Dakota, and Kittson County, Minnesota**

**January 18, 2013**

#### **1. SUMMARY**

The St. Paul District, Corps of Engineers, has prepared this assessment of the environmental effects that may result from the proposed construction of fish passage and dam removal at Drayton Dam on the Red River, Pembina County, North Dakota, and Kittson County, Minnesota. This assessment of the Corps of Engineers proposal is required by the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality Regulations (40 CFR 1500-1508), and the Corps of Engineers Procedures for Implementing NEPA (33 CFR Part 230).

This Environmental Assessment provides information to the St. Paul District Commander on the potential environmental effects of the proposed action and various alternatives for determining whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact (FONSI) for the proposed action. This assessment includes the following:

- a. A discussion of the need for the proposed action.
- b. Identification of alternatives, including the proposed action.
- c. An assessment of the environmental impacts of the proposed action and alternatives.
- d. Coordination activities.

The project involves the placement of fill in waters of the United States; therefore, a Clean Water Act Section 404(b)(1) evaluation has been prepared.

#### **2. RELATIONSHIP TO ENVIRONMENTAL LAWS AND REGULATIONS**

The proposed action would comply with Federal environmental laws, executive orders, and policies, including the Clean Air Act, as amended; the Clean Water Act of 1977, as amended; the Endangered Species Act of 1973, as amended; the National Environmental Policy Act of 1969, as amended; the Land and Water Conservation Fund Act of 1965, as amended; the National Historic Preservation Act of 1966, as amended; the Fish and Wildlife Coordination Act of 1958, as amended; Executive Order 11988, Floodplain Management; and Executive Order 11990, Protection of Wetlands. The project would not result in the conversion of agricultural lands to nonagricultural purposes. Therefore, the provisions of the Farmland Protection Policy Act of 1981 do not apply.

### **3. AUTHORITY**

The Red River Reconnaissance Study was authorized by a September 30, 1974 Resolution of the Senate Committee on Public Works. The Fargo-Moorhead metropolitan area was included in the Red River Basin Reconnaissance Study approved on September 19, 2002, but the level of detail in that report was insufficient to recommend a feasibility study specifically for measures in Fargo, North Dakota, and Moorhead, Minnesota. A supplemental Reconnaissance Study for Fargo-Moorhead was approved by the Mississippi Valley Division on April 8, 2008.

Based on the recommendations contained in the Reconnaissance Report, the city of Fargo, the city of Moorhead and the federal government entered into a Feasibility Cost Share Agreement on September 22, 2008. Purpose of study was flood risk management for the Fargo-Moorhead metropolitan area. The Corps of Engineers (COE) issued a notice of intent to prepare an environmental impact statement in the Federal Register on May 5, 2009. The Draft Feasibility Report and Environmental Impact Statement (DEIS) was published in the Federal Register for a 45 day public review period on June 11, 2010. The review period closed on August 9, 2010 after being extended by 14 days. In response to comments and to more fully study upstream and downstream impacts, the Corps made the decision to prepare a Supplemental DEIS. The notice of intent to prepare a Supplemental DEIS was published in the Federal Register on December 27, 2010. The Final Feasibility Report and Environmental Impact Statement was published in July, 2011 (USACE 2011) and the Record of Decision was signed on April 3, 2012. The action proposed here would function as a mitigation action under this broader flood risk management study.

### **4. LOCATION, PURPOSE AND NEED**

The proposed action would be at Drayton Dam, located on the Red River of the North approximately 2 miles north of Drayton, North Dakota. Drayton Dam is located in Pembina County, North Dakota, and Kittson County, Minnesota (Figure 1).

The proposed action would partially offset potentially significant environmental impacts identified in the Final Feasibility Report and Environmental Impact Statement published in July, 2011 (USACE 2011). The Final EIS identified potentially significant impacts to biotic connectivity, or the ability for fish and other biota to swim freely through the Red River in the Fargo-Moorhead area. Several dams on the Red River of the North have already been modified to improve the ability for free fish movement (Figure 2). Drayton Dam is the last dam on the Red River mainstem that has not been improved for fish passage. It remains a barrier to fish during periods when the dam is not "washed out" by high water, which occurs a large portion of the time during key months for fish migration. As such, it is an excellent candidate to serve as mitigation for impacts to fish passage on the Red River resulting from the broader flood risk management project for the Fargo-Moorhead area.

This environmental assessment discloses environmental conditions and potential effects specific to this proposed mitigation project. Impacts due to the broader flood risk management project have been discussed in the Final EIS, July 2011 (USACE 2011).

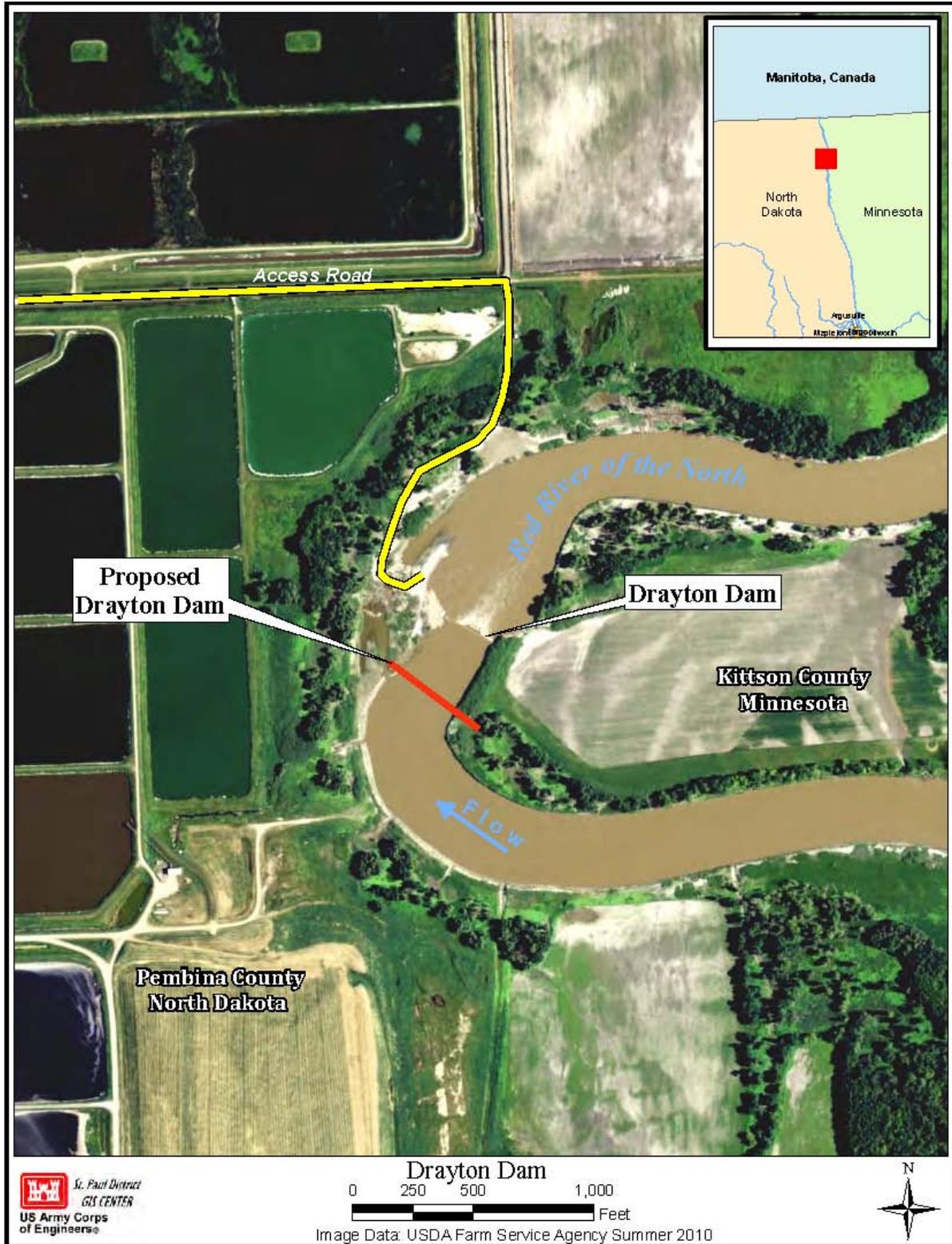


Figure 1. Location of the Drayton Dam mitigation project near Drayton, ND.



Figure 2. Example of a Red River fish passage project at Riverside Dam, Grand Forks, ND. Proposed project would generally look similar to this example.

## 5. ALTERNATIVES

### 5.1 No Action Alternative

The no-action alternative, or future without-project condition, depicts existing conditions in the area, and assumes the continuation of existing trends (Figure 3). For Drayton Dam, this continuation would be expected to include little to no fish passage when the dam is not inundated by high flows. This would occur the majority of the time. While Drayton Dam may be passable 60-70% of the time during April, it is likely passable less than 50% of the time during all other months, including the important migratory months of May and June. Reduced connectivity could be limiting fish populations, and other biota, from reaching their maximum potential for diversity and abundance.

The existing Drayton Dam was constructed in 1964 for water supply associated with municipal and agricultural interests. It is a concrete weir structure with a spillway length of 255 feet. Its crest elevation is about 12 feet above the natural channel bottom.

Drayton Dam operates solely as a run-of-the-river structure, offering no flood control capabilities or low-flow augmentation releases. The dam creates a pool of water within the channel which facilitates extraction of raw water through shoreline water supply intake structures. The City of Drayton receives all of its drinking water supply via these intake

structures. The pool created by the dam may also assist the City of Grafton (ND) with its municipal water supply. The existing pool also enhances slope stability on the riverbanks.



Figure 3. Drayton Dam on the Red River of the North, just north of Drayton, ND. Photo from September 18<sup>th</sup>, 2008 at a river discharge of approximately 6,400 cfs.

## 5.2 Proposed Alternative

The proposed alternative includes construction of a new rock ramp dam approximately 300 feet upstream of the existing dam, with the existing dam subsequently removed. The proposed new dam is a rock ramp fishway with a sheetpile cutoff. The rock ramp proposed is similar to other rock riffle fish passages constructed by the Corps on the Red River.

The proposed alternative was selected collaboratively by the Corps, natural resource agencies, project sponsors, and the local dam owner. This option allows for implementation with the fewest issues for available real estate, and avoids concerns with social impacts. A cursory cost comparison suggests that construction costs would generally be similar amongst alternatives.

The proposed alternative was recommended for the following reasons:

- Meets the project mitigation objectives of improving fish passage on the Red River of the North to help offset potential biotic connectivity (fish passage) impacts of the Fargo-Moorhead Metropolitan Area Flood Risk Management (FMM FRM) project.
- Maintains the existing reliable water supply source for the City of Drayton, and also ensures that no impacts result to the City of Grafton's municipal water diversion capability.

- Best minimizes social impacts to the project site, particularly encroachment on the public use area along the North Dakota bank.
- Minimizes construction within the tailwater blown-out area downstream of the dam, and avoids fill of the downstream scour hole, which will benefit the local fishery.
- Construction cost is similar to the other alternatives evaluated.

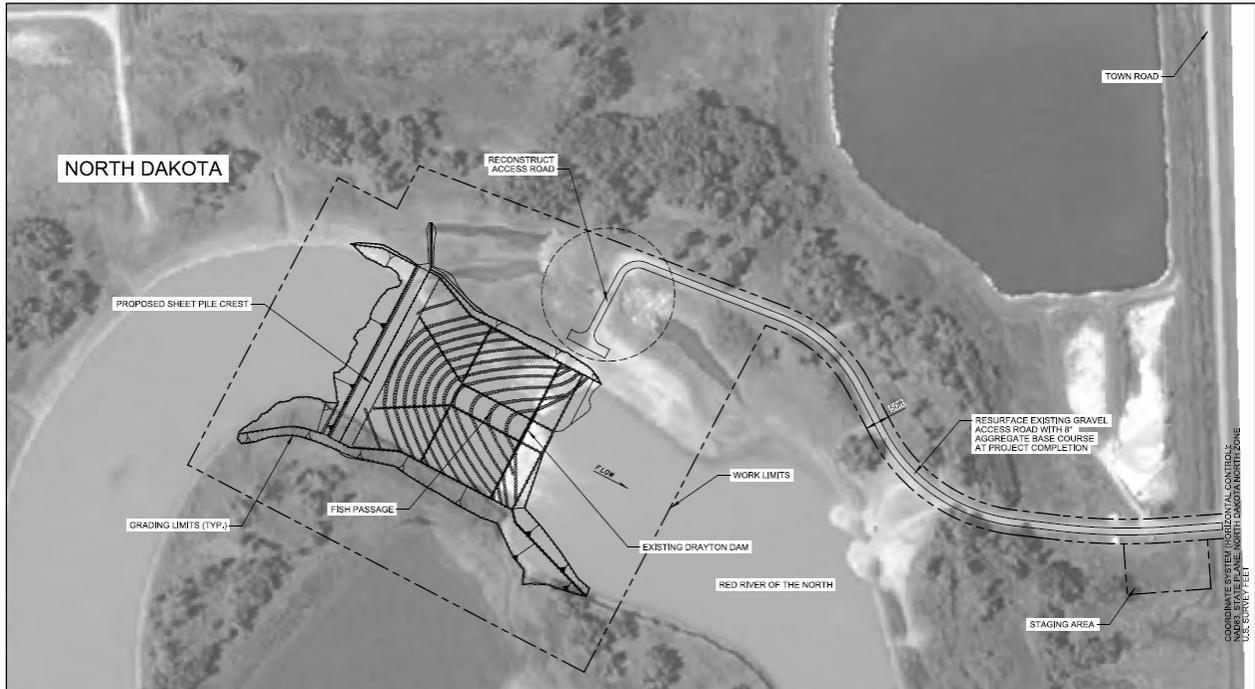


Figure 4. Proposed Drayton Dam fish passage alternative on the Red River of the North. Design and aerial photo are rotated so that the “west” direction is straight up; “north” is directly right.

Detailed design of the structure is described in Appendix E Civil Site of the Drayton Dam Fish Passage Mitigation Project Design Documentation Report. The design is shown in Figure 4. The structure consists of a ramp of base rock (riprap) that rises to the sides to allow for faster, deeper flow down the center of the rock ramp, and slower, shallower flow on each side. Boulder weirs with up to 5 ft diameter boulders are embedded within the base rock. Large boulders are more expensive but may add additional resistance to movement if impacted by ice and floating and semi-floating trees moving down the river. The flanks of the weirs are angled at 30 degrees with the centerline. The boulder weirs have continuous slope along the entire weir from the center (1 ft above base rock) to outer terminus (at 3 ft above the base rock).

The upper portions of the ramp drops along the centerline of the structure at a slope of 30H:1V. The lower part of the structure flattens to about 60H:1V (also along the centerline). The slope perpendicular to the centerline is generally 20H:1V. Individual boulder weirs drop water elevations approximately 0.8 ft from one pool to the next along the centerline.

Sheet piling is used along the upper crest of the structure (extending into the river bottom) to insure that low flow pool elevations are maintained and to reduce currents within the rock voids. The elevation of the new dam would generally be the same as that of the existing

dam. The goal of the design is to maintain upstream water elevations at levels observed under existing conditions.

The fish passage structure would be constructed upstream of the existing dam, with the downstream extent of the boulder weirs terminating at the location of the existing dam. This new fish passage structure would function to maintain upstream water elevations. With construction of the fish passage structure, the existing Drayton Dam would be removed. In terms of sequencing, rock and sheetpile would first be placed upstream of the existing dam to an elevation that would maintain the existing upstream pool. Once adequate material has been placed to ensure the pool would be maintained, the existing dam would be removed. With the small pool drained between the existing dam and the new fish passage structure, the remainder of the rock rapids would be constructed. Portions of the existing Drayton Dam would be removed down to the river bed. Pilings and other structural features buried in the river bottom would be left.

Access for construction activity would occur via an existing public road, with on-site lands owned by the City of Drayton (Figure 1 and 3). Additional access may be sought on the Minnesota side of the river. An existing access easement does exist on the opposite bank for the City of Drayton. However, the Corps has yet to determine if use of the existing access easement is beneficial, or if additional temporary access may be needed. Project staging would be accomplished adjacent to the structure and access road on the North Dakota bank. A staging area also has been identified just north of the project site adjacent to the access road. It is possible that additional staging could be needed on the Minnesota side due to construction logistics. However, the need for this additional staging will not be determined until final designs are completed. It is estimated that construction could be completed in less than a year, although additional time may be needed given site conditions and construction logistics (e.g., river conditions).

### **5.3 Other Alternatives Considered**

Dam removal was considered as a method to directly remove the impediment to fish passage. Dam removal would be less costly than other alternatives considered. However, there are several issues that render this alternative undesirable. First, dam removal would dramatically lower upstream water elevations, which would impact water diversion capabilities for the City of Drayton, and potentially the City of Grafton. Reducing water elevations also could adversely affect bank stability. This includes two known upstream bank failures that would likely be exacerbated if water elevations were dropped with dam removal. These bank failures are very difficult and costly to address. Dam removal also is strongly opposed by the City of Drayton. Drayton would not participate in the project if dam removal was the proposed alternative. In light of these considerations, dam removal is not carried forward for further consideration.

Additional project designs similar to the proposed alternative also were considered. One option considered was constructing a rock ramp over the top of the existing dam, similar to that done on other Red River dams (example at Figure 2). This option was extremely similar to the proposed alternative, and would be the second choice of the project sponsors, natural resource agencies and the City of Drayton should substantial issues preclude implementation of the proposed alternative. This traditional rock ramp alternative has a few minor social effects, which could include minor infringement on the adjacent recreational area, and potentially altered flow conditions around the downstream boat ramp. This option could be slightly more costly than the

proposed alternative. There also would be minor differences with project effects that would occur with the different footprint location. The traditional rock ramp was not selected as it is not the preferred option by local constituents. However, its potential environmental effects would be very similar to those for the proposed alternative.

Another option considered was constructing a rock ramp structure downstream of the existing dam. This would function to maintain upstream water elevations and provide fish passage in the same manner as the proposed alternative. However, the downstream alternative could result in new disturbance with regard to bank erosion at the tailwater of the new rock ramp. This is avoided with the proposed alternative. Downstream scour protection could be extensive, and would likely drive up the costs for the downstream alternative. The downstream alternative would likely be as costly, or more costly than the proposed alternative. Building the new structure downstream also would inundate areas between the new structure and the existing dam, which would substantially impact an existing recreational use area adjacent to the existing dam. It also would isolate the existing boat ramp to the upstream side of the new structure. This would be undesirable from social and safety perspectives. While a new recreational area and boat ramp could be constructed downstream, real estate is not immediately available for the downstream alternative, and it is unclear whether or not enough real estate could be purchased to cover project needs. The downstream alternative also is strongly opposed by the City of Drayton, and would likely have limited, if any, agency support. For these reasons, the downstream alternative is dropped from consideration.

Finally, an alternative was considered at the existing dam that would return river flows around the western side of the dam. Drayton Dam was built "in the dry" on the inside of a river bend. Upon completion, the river bend was filled and flow was pushed over the new dam (Figure 1). An alternative was considered that involved constructing a rock rapids structure that would pass low to moderate flows around the west side of the dam. However, this option would likely cost considerably more than the proposed alternative. It also would have substantial social effects to the recreational area and boat ramp downstream of the existing dam. This recreational area would be lost, which is strongly opposed by the City of Drayton. For these reasons, a western flow and rock rapids alternative was dropped from consideration.

## **6. AFFECTED ENVIRONMENT**

A description of the Red River Basin and the characteristics of the Red River is included in the Final Feasibility Report and Environmental Impact Statement published in July, 2011. The discussion below will emphasize site-specific conditions.

### **6.1 Aquatic Habitats and Biota**

The fishery of the Red River consists primarily of warmwater species. Aadland et al (2005) reported 57 fish species were identified in the Red River mainstem for surveys conducted from 1962 through 2000. The Red River is known as perhaps the best trophy channel catfish fishery in the world. Other important sportfish include walleye and sauger. Goldeye are abundant in the Red River and appear to be an important forage base for channel catfish and potentially other species. Species common to the Red River include members of the Cyprinid (minnow) and Catastomid (sucker) families. There is also a major effort underway to re-establish lake sturgeon to the Red River basin.

Extensive work has been done to improve connectivity and fish passage on the Red River mainstem. Of the eight dams on the Red River mainstem within the U.S., seven have implemented rock-riffle structures to facilitate fish passage. Resource agency biologists believe these projects are effective at providing the opportunity for free migration to most species most of the time.

Aquatic vegetation is extremely limited in the Red River due to high turbidity levels.

Minnesota Pollution Control Agency (MPCA) has listed the Red River from existing Drayton Dam extending downstream as impaired for Mercury in Fish Tissue; PCB in Fish Tissue. These impairments affect Aquatic Consumption. MPCA has listed the Red River above the existing Drayton Dam as impaired for Mercury in Fish Tissue; Mercury in Water Column; PCB in Fish Tissue; and Turbidity. These impairments affect Aquatic Consumption and Aquatic Life. North Dakota Department of Health (2010) lists this section of the Red River as not supporting fish consumption due to contamination of fish tissue by methylmercury. A basin-wide Total Maximum Daily Load (TMDL) assessment is underway in Minnesota to address basin-wide turbidity issues. No other TMDLs have been completed or are in progress.

## 6.2 Terrestrial Habitats and Biota

Riparian and nearby forest composition consists of mixed floodplain trees, grasses and exposed mud. Areas immediately adjacent to Drayton dam are often disturbed by flooding. This is particularly the case on the North Dakota side where flooding in recent years has limited new vegetation growth. Terrestrial wildlife in the area includes white-tailed deer, foxes, raccoons, squirrels, rabbits, and a variety of songbirds.

## 6.3 Threatened Or Endangered Species

The U.S. Fish and Wildlife Service's (USFWS) Threatened and Endangered Species Database System was reviewed to identify the potential presence of listed species in the project area. The species identified for Pembina County (ND) was the Whooping crane (*Grus Americana*; Endangered). Sprague's pipit (*Anthus spragueii*) also was identified as a Candidate species in Pembina County. For Kittson County (MN), the database identified the western prairie fringed orchid (*Platanthera praeclara*; Threatened). Dakota skipper (*Hesperia dacotae*; Candidate) and gray wolf (*Canis lupus*; Recovery) were also identified in the database for Kittson County.

Whooping cranes inhabit shallow wetlands that are characterized by cattails, bulrushes and sedges. They can also be found in upland areas, especially during migration. The historical breeding range of the whooping crane extended from Illinois, northwest through North Dakota, and up to the Northwest Territories. The last nesting record for North Dakota was in McHenry County in 1915. The birds historically wintered along the Gulf of Mexico (USGS 2009). In the 1940s, there were an estimated 21 whooping cranes left in the world. Most were from a flock that wintered at the Aransas National Wildlife Refuge on the coast of Texas. These birds are known to breed in the Wood Buffalo National Park (Alberta, Canada). Today, there are approximately 145 whooping cranes in the wild. About 132 birds are in the Aransas-Wood Buffalo flock. The Aransas-Wood Buffalo population migrates through North Dakota. The fall migration occurs from late September to mid-October and the spring migration occurs from late

April to mid-June. Although the bird can show up in all parts of North Dakota, most sightings occur in the western 2/3 of the state (USGS 2009). No sightings have been listed for the study area in either the North Dakota or Minnesota Natural Heritage databases.

Sprague's pipits are strongly tied to native prairie throughout their life cycle. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 145 ha (358.3 ac). They were not observed in areas smaller than 29 ha (71.6 acres) (USFWS 2011). They are rarely observed in cropland or land in the Conservation Reserve Program. Sprague's pipits appear to avoid non-grassland features in the landscape, including roads, trails, oil wells, croplands, woody vegetation, and wetlands. Since Sprague's pipits have been shown to avoid edges (Linnen 2008, in USFWS 2011), grassland areas with a low edge-to-area ratio provide optimal habitat (USFWS 2011). These habitat requirements are lacking at the project site. No sightings have been listed for the study area in either the North Dakota or Minnesota Natural Heritage databases.

The western prairie fringed orchid is perennial and distinguished by large, white flowers that come from a single stem. The western prairie fringed orchid occurs most often in remnant native prairies and meadows, but has also been observed at disturbed sites. In the southern parts of its range it is more likely to be found in mesic upland prairies and in the north more frequently in wet prairies and sedge meadow. In Minnesota, there are two populations known: one in the Pipestone National Monument and one in the Pembina Trail Preserve Scientific and Natural Area (Minnesota Seasons 2009). No sightings have been listed for the study area in either the North Dakota or Minnesota Natural Heritage databases. It is unlikely any western prairie fringed orchids are in the immediate study area.

The Dakota skipper is a candidate for listing under the Endangered Species Act. It is a small to medium-sized butterfly with a 1-inch wingspan. The butterfly inhabits wet lowland prairie dominated by bluestem grasses, and dry upland prairie dominated by mixed bluestem grasses and needle stem grasses (USFWS 2011b). The Dakota Skipper was once widely distributed throughout the northern tallgrass, Dakota mixed grass and a portion of the central tallgrass prairie ecoregions. Its distribution once included tallgrass and mixed grass prairies of Illinois, Iowa, Minnesota, South Dakota, North Dakota, Manitoba and Saskatchewan. The distribution is now largely centered in western Minnesota, northeastern South Dakota and the eastern half of North Dakota. No sightings have been listed for the study area in either the North Dakota or Minnesota Natural Heritage databases.

The gray wolf was listed as endangered by USFWS on March 11, 1967. It was subsequently delisted in May 2011. There are an estimated 7,000 to 9,000 wolves in Alaska and more than 3,500 in the lower 48 states, although none are reported in the immediate study area. The main threats to the survival of the gray wolf were hunting and trapping because it was thought of as a nuisance, and habitat loss due to human encroachment into wolf territories. No sightings have been listed for the study area in either the North Dakota or Minnesota Natural Heritage databases.

The Minnesota and North Dakota Natural Heritage Databases were checked for the presence of other rare species. Two rare species listed in Minnesota near the dam include black sandshell mussel (*Ligumia recta*) and lake sturgeon (*Acipenser fulvescens*). North Dakota listed mapleleaf mussel (*Quadrula quadrula*) and Wabash pigtoe mussel (*Fusconaia flava*) as occurring within a couple miles of the project.

Two other species observed near the project area in Minnesota include bald eagle (*Haliaeetus leucocephalus*, active nest observed in 2007) and northern pocket gopher (*Thomomys talpoides*). The closest observations of these species both occurred approximately 0.9 miles from the proposed structure.

#### **6.4 Wetland Resources**

The project site includes the Red River and adjacent floodplain. Review of the National Wetlands Inventory suggests that low lying floodplain areas adjacent to the river would likely be considered wetlands.

#### **6.5 Cultural Resources**

The project area lies within the Glacial Lake Agassiz basin where the meandering Red River of the North has incised into lacustrine deposits and formed a series of Holocene terraces adjacent to the channel. Typically, these terraces harbor a sequence of buried soils while the near surface sediments are capped by historic alluvium of various depths. Distal areas from stream channels on the glacial lake plain normally lack buried soils and the veneer of historic alluvium. Within the project area, the potential for surface or near surface archaeological deposits is low due to the veneer of historic alluvium. However, the potential for deeply buried cultural deposits is high (e.g., Hudak et al 2002; Monaghan and Egan-Bruhy 2011; USDA 2012).

The Corps identified the Area of Potential Effect (APE) as the existing dam plus the area within the construction work limits for the new fish passage structure as well as any project-related access roads, staging areas, borrow areas, and disposal areas. As of February 8, 2012, the North Dakota State Historic Preservation Office (SHPO) stated that no previously recorded or reported sites were identified in the project area, and no archeological/architectural surveys had been completed. The Minnesota SHPO provided a list of survey reports on February 8, 2012, and these reports documented that no archeological surveys had been performed in the project area. No cultural resources have been recorded within the Project area or within one mile of the Project.

By letter dated April 25, 2012, the Corps contacted the SHPOs of both Minnesota and North Dakota and 25 other Interested and Consulting parties (Exhibit B) describing the Project Area of Potential Effect (APE) and recommending a Phase I archeological and architectural survey in compliance with the National Historic Preservation Act and its implementing regulations 36 CFR Part 800: "Protection of Historic Properties." In July 2012 a Phase I cultural resources survey was conducted along the North Dakota portion of the APE (Benn et al 2012). Although a series of deeply buried soil horizons were detected, no precontact archaeological sites were identified. The July 2012 investigations identified the Drayton Dam (32PB224) as a historic structure that is potentially eligible for listing on the National Register of Historic Places (NRHP). Drayton Dam and its appurtenant features were built in 1964, and therefore the site is not currently eligible for listing on the NRHP because it is less the 50 years of age. Drayton Dam is a concrete weir "low head" dam, which is common throughout the Midwest. Although the Dam may not be significant for engineering or construction, it may be significant for its association with the region's water development history (Benn et al 2012:15-16).

Although access for construction of the fish passage is anticipated to take place along

the North Dakota side of the river, a staging area and access road may be needed along the Minnesota side of the river. On October 4, 2012, a Corps Archaeologist completed a pedestrian survey of the staging area and access road areas. No cultural resources were identified (Exhibit B).

## 6.6 Social and Economic Resources

The Drayton Dam is located approximately two miles north of the town of Drayton, North Dakota. The project site is near the borders of Walsh and Pembina Counties in North Dakota and Marshall and Kittson Counties in Minnesota. These counties are rural in nature and the major industry in the local economy is agriculture.

**Population:** The local population has followed the decades-long national trend of declining numbers in rural areas. The trend since 1990 is illustrated in Table 1. It shows that county populations have decreased significantly while the overall populations of Minnesota and North Dakota have grown.

**Employment:** Table 2 displays employment data by industry for the counties and, for comparison purposes, the states. Percentages are of the employed labor force 16 years of age and older. Notable differences between county and state data are the higher relative employment levels for the counties in the agriculture and manufacturing industries and the lower employment levels for the professional/scientific/management industry and the arts/entertainment/recreation and hospitality industry. Recent unemployment rates (2011 average) are also displayed in Table 3. The county unemployment rates are generally higher than the state averages but are lower than the national rate.

**Farm numbers and farm size:** As rural populations have declined over the past decades, so have farm numbers. And as farm numbers have decreased, average farm size has increased. Table 4 shows this trend from 1959 to 2007. During this time, farm size in the counties has increased at a rate greater than their respective states. Pembina County has realized especially large decreases in farm numbers and increases in farm size.

**Income:** Per capita income (2006-2010 average) for the area is generally lower than state averages except for Pembina County (Table 5). This may be due to Pembina's larger farms. Poverty levels are lower than state and national averages.

<u>County / State</u>	<u>1990</u>	<u>2010</u>	<u>% Change</u>
Walsh County	13,840	11,119	-19.7%
Pembina County	9,238	7,413	-19.8%
North Dakota	638,800	672,591	5.3%
Kittson County	5,767	4,552	-21.1%
Marshall County	10,993	9,439	-14.1%
Minnesota	4,375,099	5,303,925	21.2%

INDUSTRY	Pembina Co.	Walsh Co.	North Dakota	Kittson Co.	Marshall Co.	Minnesota
Agriculture, forestry, fishing and hunting, and mining	16.7%	14.9%	8.6%	13.8%	10.9%	2.4%
Construction	5.3%	7.1%	6.9%	4.6%	9.0%	6.1%
Manufacturing	12.0%	10.2%	7.5%	16.4%	18.1%	14.1%
Wholesale trade	3.8%	3.3%	3.3%	4.2%	6.0%	3.2%
Retail trade	11.0%	8.9%	12.1%	12.5%	9.9%	11.5%
Transportation and warehousing, and utilities	7.3%	4.8%	5.3%	4.9%	4.3%	4.6%
Information	0.7%	1.8%	1.8%	0.8%	0.8%	2.2%
Finance insurance, and real estate and rental and leasing	6.7%	3.6%	5.9%	3.4%	4.4%	7.4%
Prof, scientific, and mgmt, and admin and waste mgmt services	3.6%	3.5%	6.6%	3.6%	3.0%	9.3%
Educational services, and health care and social assistance	18.5%	27.6%	24.2%	22.5%	21.9%	23.6%
Arts, entertainment, and recreation, and hospitality	3.7%	4.3%	8.3%	1.8%	4.0%	8.0%
Other services, except public admin	3.9%	5.2%	4.4%	4.1%	3.2%	4.4%
Public administration	7.0%	4.8%	5.0%	7.4%	4.5%	3.3%

Note: Percentages are of civilian employed labor force 16 years of age and older

Pembina Co.	Walsh Co.	North Dakota	Kittson Co.	Marshall Co.	Minnesota	U.S.
7.1%	5.5%	3.5%	6.4%	8.1%	6.4%	8.9%

County / State	Number of Farms			Average Farm Size (acres)		
	1959	2007	% Change	1959	2007	% Change
Walsh County	1,812	968	-46.6%	451	822	82.3%
Pembina County	1,373	521	-62.1%	503	1,246	147.7%
North Dakota			-41.8%			64.4%

	54,928	31,970		755	1,241	
Kittson County	1,036	677	-34.7%	495	801	61.8%
Marshall County	2,067	1,405	-32.0%	387	648	67.4%
Minnesota	145,662	81,000	-44.4%	211	332	57.3%
Source: Census of Agriculture						

Area	Per Capita Income	Poverty Rate
Walsh County	\$23,829	9.9%
Pembina County	27,019	8.0%
North Dakota	25,803	12.3%
Kittson County	25,030	6.4%
Marshall County	24,552	8.4%
Minnesota	29,582	10.6%
United States	27,334	13.8%

## 6.7 Recreational Resources

The project site is heavily used for recreational fishing and camping. Use occurs immediately downstream of the existing dam on the North Dakota side of the river. A boat launch and parking area is located at the project site. Use of this area is extremely important to local stakeholders, including the City of Drayton. The season of primary use is May through September.

## 7. ENVIRONMENTAL CONSEQUENCES

An environmental analysis has been conducted for the proposed action; a discussion of the impacts follows and is summarized in Table 6. No significant adverse impacts would result from construction of the proposed project. In accordance with the Clean Water Act, a Section 404(b)(1) evaluation is included with this report. The Corps has been coordinating with the North Dakota Department of Health and the Minnesota Pollution Control Agency regarding the Section 401 state water quality certifications. Coordination will continue during the development of final plans and specifications for the project, which will address construction methods, sequencing and best management practices to avoid and minimize any water quality issues. Section 401 certification will be obtained prior to awarding the construction contract.

Table 6. Environmental Assessment Matrix.

PARAMETER	No Action Alternative							Proposed Alternative						
	BENEFICIAL			NO EFFECT	ADVERSE			BENEFICIAL			NO EFFECT	ADVERSE		
	SIGNIFICANT	SUBSTANTIAL	MINOR		MINOR	SUBSTANTIAL	SIGNIFICANT	SIGNIFICANT	SUBSTANTIAL	MINOR		MINOR	SUBSTANTIAL	SIGNIFICANT
<b>A. SOCIAL EFFECTS</b>				X							X			
1. Noise Levels				X									T	
2. Aesthetic Values				X									X	
3. Recreational Opportunities				X									T	
4. Transportation				X							X			
5. Public Health and Safety					X					X			T	
6. Community Cohesion (Sense of Unity)				X							X			
7. Community Growth and Development				X							X			
8. Business and Home Relocations				X							X			
9. Existing/Potential Land Use				X							X			
10. Controversy				X							X			
<b>B. ECONOMIC EFFECTS</b>														
1. Property Values				X							X			
2. Tax Revenue				X							X			
3. Public Facilities and Services				X									T	
4. Regional Growth				X							X			
5. Employment				X							X			
6. Business Activity				X							X			
7. Farmland/Food Supply				X							X			
8. Commercial Navigation				X							X			
9. Flooding Effects				X							X			
10. Energy Needs and Resources				X							X			
<b>C. NATURAL RESOURCE EFFECTS</b>														
1. Air Quality				X									T	
2. Terrestrial Habitat				X									X	
3. Wetlands				X									X	
4. Aquatic Habitat					X					X				
5. Habitat Diversity and Interspersion						X			X					
6. Biological Productivity					X					X				
7. Surface Water Quality				X									T	
8. Water Supply				X							X			
9. Groundwater				X							X			
10. Soils				X							X			
11. Threatened or Endangered Species				X							X			
<b>D. CULTURAL RESOURCE EFFECTS</b>														
1. Historic Architectural Values				X							X			
2. Prehistoric & Historic Archeological Values				X							X			

T: Temporary Effect

## **7.1 Natural Resource Effects**

### **7.1.1 Air Quality**

The operation of construction equipment may result in a short-term localized reduction in air quality. Adverse effects would be limited and short-term because they are associated only with construction. It is estimated that construction could take less than one year, though additional time may be needed given site conditions and construction logistics.

### **7.1.2 Surface Water Quality**

The proposed action would have no effect on long-term water quality of the Red River. Water quality, especially water clarity, may be briefly reduced during construction. Any reduction in clarity would fade immediately following construction.

As outlined above the States of North Dakota and Minnesota cumulatively have identified existing water quality impairments for the Red River, in the project area, for Mercury in Fish Tissue; Mercury in Water Column, PCB in Fish Tissue, and Turbidity. These impairments affect Aquatic Consumption and/or Aquatic Life. A basin-wide TMDL is underway in Minnesota to address basin-wide turbidity issues. No other TMDLs have been completed or are in progress

Short-term changes in turbidity levels could occur as the result of construction activities. Placement of rock, riprap and grading actions could result in short-term increases in turbidity as a result of disturbing river bottom sediments and bank soils. To minimize this impact, construction activities will include use of best management practices (BMPs) and potentially other measures to minimize short-term impacts. The specific construction methods, including identification of specific BMPs, have not yet been identified. These will be further specified during the final phase of project design. Potential BMPs may include construction during low-flow periods, use of silt curtains, vegetation plans to minimize vegetation clearing, minimizing the time period of exposed soils, control of stormwater flow from any upland areas disturbed during construction, and other methods. Given the Corps' prior experience with similar fish passage projects, as well as recent bank stabilization projects, and its success in controlling short-term turbidity impacts from construction of those projects, it is reasonable to assume that no substantial impacts would occur to water quality. BMPs have traditionally been successfully used to minimize short-term impacts associated with projects that focus on grading and rock along streams and rivers. Further, the Section 401 water quality certification may be conditioned on implementation of measures designed to reduce water quality impacts and the Corps will ensure any such measures are implemented.

Erosion at riprap boundaries would be minimized with careful design and construction. The riprap/weir boundaries will be designed to blend back into the bank, minimizing turbulence at the riprap/bank interface that could result in long-term erosion. Similar Red River fish passage projects have performed well over 10-15 years following construction, remaining stable with minimal bank erosion at the project site.

Construction activities will not contribute to mercury or PCB contamination to the river. Impacts to fish and invertebrates are discussed further below, but would not be expected to be significant.

### **7.1.3 Aquatic Habitat and Biota**

The proposed action would result in the placement of riprap and boulders within the Red River, with rock extending up onto the banks of the river (Figure 3). The areal footprint extent of the proposed placement within the water is estimated at approximately 2.3 to 2.4 acres. This acreage would be at typical summer low flows. At flood flows the entire structure would be inundated. Almost all of this placement would be below water and typically inundated to provide aquatic habitat (e.g., areas below the ordinary high water mark, or approximately a 50% chance annual exceedence discharge event).

Invertebrates would be crushed by placement of the riprap and removal of the existing dam, but they would quickly recolonize the new rock substrate. Fish would avoid the area during construction but would return upon completion. The new rock may attract fish and provide habitat value. The project would improve the ability for fish to migrate past the new dam structure and optimally select habitats that improve their ability for reproduction and survival, thus providing long-term benefits to the Red River and its tributaries. No long-term adverse impacts would be anticipated to aquatic habitat or biota. The project would not contribute toward the long-term water quality impairments.

The proposed action would not significantly impact long-term stream erosion or stream stability at and downstream of the project site. Both an ADH and a HEC-RAS hydraulic model were developed to analyze the potential changes to area flows associated with the proposed structure. While flow conditions will change, they would do so in a way to help enhance biological connectivity. The structure is designed to direct high flows toward the middle of the channel and away from the bank. This combined with riprap along the banks will minimize potential for stream bank erosion. In fact, the project would potentially be an improvement over existing conditions where bank erosion has and continues to occur at the tailwater of the existing dam.

The proposed action will be constructed to maintain upstream water elevations to those observed under existing conditions. This should help ensure that the project does not substantially reduce bank stability for areas upstream of the dam. It is possible that over a long period of time (e.g., many years) the structure could settle due to the weight of the rock and underlying weak soils. The structure could potentially sink up to approximately 12". The long term maintenance plan for the dam will likely include provisions to modify the dam in the future if such settlement is observed. This will help further minimize any minor effects to bank stability, or other resources, that could be influenced by the structure sill settling up to a foot.

The proposed action would provide strong, meaningful benefits to the aquatic environment through improved connectivity. The project will greatly help different aquatic species meet seasonal habitat requirements by reconnecting a pathway between habitat types that are interspersed throughout the watershed. This is compared to the no-action alternative which limits connectivity and limits the ability for biota to reach interspersed habitats. The proposed action also will provide some localized benefits to habitat quality and productivity, compared to the no-action alternative which may have minor adverse effects.

### **7.1.4 Terrestrial Habitat and Biota**

The aerial footprint extent of the proposed project is largely within water. Access would

primarily be sought through existing roads and river access on the North Dakota side. However, access may also be sought for the Minnesota side of the river, which could include temporary clearing of understory vegetation. Tree clearing would be minimized to the extent possible. Access from the Minnesota side will only be pursued if construction logistics require.

Construction staging also would likely be focused on the North Dakota side adjacent to the existing dam. This area is void of trees and has minimal understory vegetation. A staging area also has been identified immediately north of the proposed project, adjacent to the existing access road. This area is approximately 0.5 acres in size and void of any trees. Staging could also be required on the Minnesota side if dictated by construction logistics. However, should staging be needed on the Minnesota side, this would most likely occur outside areas requiring extensive tree clearing or other invasive actions.

The proposed action would result in the clearing of trees and understory vegetation where the proposed structure would tie in to shore. Rock weirs would tie into shore, with additional rock placement on the banks to minimize potential erosion. The area with the majority of clearing would be on the Minnesota bank, where about 0.5 acre of land would be permanently altered (Figure 3). While there would also be disturbance on the North Dakota bank, this area is disturbed with no clearing required for mature trees, and minimal to no understory vegetation.

The proposed action also will include some grading on the bank of the inside river bend (Minnesota river bank) immediately above the new fish passage structure (Figure 4). This will include shaping to reduce bank elevation and improve flow conveyance for river discharges that approach a bank-full condition. Bank elevations will remain above the waterline for most lower flow conditions, and only be inundated as flows approach bankfull. This area for grading would be approximately 0.2 acre. This would include clearing of trees within the footprint and understory vegetation. The graded area would then be replanted to stabilize soils and minimize potential erosion. Material removed during grading would be placed in an approved placement site. If an approved placement site is not utilized, the potential placement site will be coordinated with appropriate State and federal agencies to ensure that material placement would not result in any significant, adverse impacts.

Otherwise, long-term effects of the project would be minimal. The effects identified above are acceptable given the great value that will be gained through improved fish passage and biotic connectivity. Wildlife may temporarily avoid the project area during construction, but would return following completion of the project. No long-term adverse impacts would be anticipated to terrestrial habitat or biota due to the project.

#### **7.1.5 Threatened or Endangered Species**

As part of this analysis, it has been concluded that the project would have no adverse effects on any federally listed endangered or threatened species. This is based on the habitat needs outlined above for the identified listed species, the fact that these habitats are lacking at the project site and/or that the species has not been observed in the immediate area, and the fact that the project is minimally invasive for both short-term and long-term impacts.

The black sandshell mussel (*Ligumia recta*), mapleleaf mussel (*Quadrula quadrula*) and Wabash pigtoe mussel (*Fusconaia flava*) could potentially be buried by project construction, and lake sturgeon (*Acipenser fulvescens*) could temporarily avoid the area during construction.

However, both fish and mussels would likely experience long term benefit from the project. Construction from the proposed action is primarily in the water and would not be expected to substantially affect populations of bald eagles or northern pocket gopher.

#### **7.1.6 Wetland Resources**

The majority of project work will occur directly in the river. This habitat would not be considered wetland. However, the project site does include small areas of adjacent floodplain and these low lying floodplain areas could be considered wetlands.

The USFWS National Wetland Inventory data was reviewed to provide context on the potential for wetland impacts. Most of the wetland areas within the project footprint are along the Minnesota bank. The 0.5 ac area along the Minnesota bank where erosion protection and weir placement would occur would likely be considered wetland. This footprint area would be permanently changed to facilitate the project. The grading area on the Minnesota bank just upstream of the proposed structure also may include wetland. This area would be disturbed through grading but would be revegetated. Its form may change slightly. However, it is small (approximately 0.2 acres) and would remain as river floodplain.

Wetland impacts will be minimized to the extent practical. Any remaining impacts would be small and worth the trade off of environmental benefit gained through fish passage and improved connectivity.

#### **7.2 Cultural Resource Effects**

Following the July 2012 investigations Phase I survey along the North Dakota portion of the project, the Corps made a finding that no historic properties would be affected by the proposed project. The North Dakota SHPO concurred with the finding of no effect, but requested re-evaluation of the Drayton Dam architectural site 32PB224 in 2014 when the dam reaches 50 years old, if the Project proceeds after that date (see Exhibit B). The Minnesota SHPO concurred that Drayton Dam is not eligible for listing on the NRHP and that no other above-ground historic resources would be affected by the proposed project (see Exhibit B). Following receipt of the Phase I survey, the Minnesota SHPO also concurred with the finding that no historic properties would be affected by the proposed project (see Exhibit B).

By letter dated November 5, 2012, the Mille Lacs Band of the Ojibwe stated they do not have any known recorded sites of religious or cultural importance within the APE (see Exhibit B). Also, a voice message dated November 20, 2012 from the archaeologist/environmental specialist for the Red Lake Band of Chippewa Indians stated that the Project is outside their area of interest and they have no knowledge of cultural resources in the area and are not interested in further consultation.

Based on the October 2012 pedestrian survey, and the Corps determined the staging area and access roads, which are restricted to surface and near-surface activities, the proposed project would have no effect to historic properties (See Exhibit B). Coordination of this determination with the SHPOs and Interested and Consulting parties is ongoing.

Additional investigations for a dredged material placement site may be necessary, pending a review of final construction plans. Deep site testing along the Minnesota portion of

the Project remains to be completed. Field work for these additional investigations will occur in 2013 along with subsequent SHPO coordination and consultation with interested parties.

### **7.3 Social and Economic Effects**

#### **7.3.1 Noise**

Heavy equipment used for construction will generate noise. However, this impact will be short-term and relatively minor. No residences are in the immediate project area.

#### **7.3.2 Aesthetics**

Site preparation and the placement of materials for the proposed alternative will result in a minor intrusion on the visual aesthetic environment. Construction activities will be short-term and relatively minor. The permanent placement of rock and removal of the existing dam will be a permanent change. However, the area of placement would be a relatively short stretch of river, and the overall impact will be minor. Some may even consider the new structure to be more aesthetically pleasing than the existing dam.

#### **7.3.3 Recreation**

Use of the recreational area adjacent to the dam, including the downstream boat ramp, would be inconvenienced during construction. Construction activities may necessitate complete closure of the area during construction. Complete closure will be avoided to the extent possible. Construction of similar rock ramp fish passage projects has been accomplished during the low flows during winter. If construction can be accomplished during winter then most recreational impacts can be avoided. It is unknown at this point whether construction can be limited to only the winter. Given logistical challenges of construction, maximum flexibility may be needed with regard to seasonal timing and river conditions.

Once construction is completed, any recreational effects from the project would cease. The proposed project will have no permanent, long-term adverse impacts on the recreational environment. This addresses concerns expressed by the North Dakota Parks and Recreation Department, which had expressed concerns for potential recreational impacts due to the project.

#### **7.3.4 Safety**

During construction, there would be an increase in heavy equipment traffic at and leading to the project site. To maintain safety, the project site could be temporarily closed to public access during construction. To minimize safety risks for areas around the project site, appropriate construction and safety signage, detours, or other safety measures may be implemented. These effects would be short lived and terminate when construction is complete.

The proposed action will not have long-term adverse effects on public safety at the site. In fact, the project will improve safety by eliminating the dangerous hydraulic roller that has resulted in several drowning deaths at Drayton Dam.

### **7.3.5 Economy and Employment**

The proposed project will have negligible impacts on the socioeconomic environment of Pembina or Kittson County. It is possible that construction activity could result in a minor short-term infusion of income into the local economy due to purchase of materials from local vendors or employment of persons from the local area, particularly if the construction work is awarded to a local contractor.

### **7.3.6 Environmental Justice**

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," provides that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The Executive Order makes clear that its provisions apply fully to programs involving Native Americans.

The proposed project will not have a disproportionately high adverse effect on minority or low income populations and is in compliance with EO 12898. The project is located in a rural area with few residents nearby. The project would generally have beneficial social and economic effects and would generally affect all persons equally.

### **7.3.7 Public Facilities and Services**

Traffic flow leading to the project site, particularly on the North Dakota side, could be temporarily disrupted during construction, due to heavy equipment flow. This will include many loads of riprap and boulders that will need to be brought in by truck to construct the proposed project. This additional traffic could be a temporary inconvenience to local residences. Effects to traffic corridors would be attenuated through the appropriate signage and detour routes, if appropriate. Any detour routes would be determined during more detailed construction planning and will be avoided to the extent practical. These effects would be short lived and terminate when construction is complete. It is estimated that construction could take less than one construction season, though additional time may be needed given site conditions and construction logistics.

The proposed fill activities would have little, if any effect on river hydrologic regimes. Hydraulic modeling predicts a change to the 1% annual chance flood stage elevation of less than 0.01 ft both upstream and downstream of the project site. The structure also would not increase upstream water storage when Red River flows are at zero discharge (no river flow).

One concern identified during planning for this effort relates to the drinking water supply for the City of Drayton and City of Grafton. The City of Drayton currently obtains its water supply from the Red River. This is the City's only water supply. Grafton has identified similar concerns with their ability to obtain water from the River. Reductions in water elevations upstream of the dam could hinder the water intakes for water supply. Given this concern, the proposed project was designed to maintain upstream water elevations. However, there is the potential that the proposed rock ramp dam could settle up to approximately 12" over very long periods of time. The exact timeframe for settlement is uncertain, but it would almost certainly be very slow, likely taking many years (e.g., potentially 50-100 years) before approaching

maximum settlement. Under existing conditions the City of Drayton has over 10 feet of water above their surface water intake during significant drought conditions. As such, settlement of 12" would not likely hinder their ability to divert water. In addition, features will be included within the Operation and Maintenance manual for this project to modify the project in the future to account for this settlement to ensure concerns for water supply are minimized. The exact method will be identified within the final design for the project. However, there appear to be several options available to modify the crest elevation of the proposed action to avoid or minimize settlement of about 12".

The proposed action will not have long-term substantial adverse effects public facilities or services, including municipal water supplies.

#### **7.4 Cumulative Impacts**

Cumulative impacts on the environment are the result of the incremental impacts of past actions, the proposed project and reasonably foreseeable future actions. Significant changes to the environment were made through dam construction at the project site, and throughout the Red River Basin. The proposed project is intended to provide long-term improvement to the environment through improved fish passage and connectivity. The proposed project also would improve long-term safety at the project site, and address local concerns with stability and longevity of the dam. Effects of the proposed project would be minimal and mostly positive in maintaining the quality of the human environment. The proposed action will help protect and improve the biological integrity of the Red River. Construction of fish passage at Drayton Dam would modify the last low head dam that serves as an impediment to fish passage on the mainstem of the Red River. It is anticipated that the proposed action will help reduce habitat fragmentation on the Red River and improve biodiversity in this reach of the river. The project would not contribute to the long term water quality impairments (303d listing) for the Red River.

### **8.0 COORDINATION**

As required by the Fish and Wildlife Coordination Act, this project was coordinated with the U.S. Fish and Wildlife Service (Appendix B). The effort was also coordinated extensively with other agencies, including the Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, North Dakota Game and Fish, North Dakota Department of Health, and North Dakota State Water Commission. This process has been on-going for several years, and has been increased as the proposed project has been identified as a mitigation component of the Fargo-Moorhead Flood Risk Management Project. This process has included the refinement of the proposed plan during the planning process to minimize any adverse effects and maximize benefits. Coordination will continue in the future through project construction and project monitoring and adaptive management. No special concerns with the proposed plan were identified by the U.S. Fish and Wildlife Service or the State resource agencies. This project has received strong support for the potential environmental benefits that it would provide.

Pursuant to Section 106 of the National Historic Preservation Act, consultation letters and reports have been sent to the Minnesota and North Dakota State Historic Preservation Officers for review. Other consulting parties include:

City of Drayton, City Office,  
Spirit Lake Sioux Tribe,  
Three Affiliated Tribes, Mandan Hidatsa and Arikara Nation,  
Lower Sioux Indian Community,  
Turtle Mountain Band of Chippewa,  
Fort Peck Dakota & Assiniboine Tribes,  
Standing Rock Sioux Tribe,  
Sisseton/Wahpeton Oyate,  
Tribal Historical Preservation Officer,  
Apsaalooke (Crow Tribe),  
Tribal Historic Preservation Officer, and  
Northern Cheyenne Tribe.

Copies of this assessment were distributed to the public and other State and Federal agencies for review and comment. A distribution list is included at Appendix C.

State 401 Water Quality Certification will be pursued from the North Dakota Department of Health, and MPCA once final project designs are completed.

The public review period for this EA and attached 404(b)(1) report ended on January 7, 2013. During the public review period, six sets of comments were received. Copies of the comments are provided at Exhibit D, with summaries included below.

Minnesota DNR had no concerns with the project. DNR stated they believed no long-term adverse impacts would be anticipated to aquatic habitat or biota. The DNR Division of Fisheries supports this project and the preferred design. The DNR also commented that the broader Fargo-Moorhead project is undergoing a State of Minnesota environmental review, and this review should be completed prior to initiation of construction activities.

Minnesota PCA had no concerns with the project. Minnesota PCA did provide a preliminary indication that 401 water quality certification would be granted. Further coordination will occur with PCA prior to issuance of a 401 certification.

Minnesota SHPO did not have any concerns and agreed with the conclusions of the EA that no historic properties would be affected.

North Dakota Department of Health had no concerns with the project, and provided their State 401 water quality certification.

Standing Rock Sioux Tribe commented their only concern would be if source rock was obtained from the countryside, as opposed to the river bed. If rock is obtained from outside the river, the tribe requested further coordination to address potential impacts. USACE's response to this comment is that rock for construction likely won't come from the river, but would likely be obtained through existing sources or quarries. Contractors would be required to ensure compliance with all relevant cultural resource laws and regulations when obtaining rock or other construction materials. This would include obtaining rock from already-approved quarries or similar sources.

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**EXHIBIT A - Section 404(b)(1) Evaluation**

**PRELIMINARY SECTION 404(b)(1) EVALUATION  
Drayton Dam Fish Passage Mitigation Project  
Pembina County, North Dakota, and Kittson County, Minnesota**

**January 18, 2013**

**1. PROJECT DESCRIPTION**

**a. Location**

The proposed fill activity would take place in the Red River in Pembina County North Dakota, and Kittson County, Minnesota, near the City of Drayton, ND, (Environmental Assessment (EA) Figures 1 and 4).

**b. Authority and Purpose**

Federal authority for the proposed project is provided through the Red River Reconnaissance Study which was authorized by a September 30, 1974 Resolution of the Senate Committee on Public Works. The purpose of the project is environmental mitigation for the broader Fargo-Moorhead Area Flood Risk Management Project. The project would allow for greater fish passage and connectivity at Drayton Dam.

**c. General Project Description**

This evaluation addresses the impacts resulting from the placement of fill material in waters of the United States in compliance with Section 404 of the Clean Water Act, as amended. The proposed fill activities would consist of the construction of a sheetpile sill and the placement of material to create a series of rock rapids to facilitate fish passage. The design elevation of the top of the structure would be the same as the existing Drayton Dam. A similar rock rapids fishway is shown in Figure 2, and the general design presented in Figure 4, of the Environmental Assessment.

**d. General Description of Dredged and Fill Material**

**(1) General Characteristics of Material**

(a) Riprap - Riprap would be field stone or quarry rock with gradations of R270 and R20. The project would also use 4' to 5' boulders to construct the rock weirs. Boulders and riprap would be clean and reasonably free from soil and fines and contain no refuse.

(b) Base - The project also would use crushed aggregate base material.

(c) Additional – The project would include sheetpile driven into the stream bed to render the rock rapids impermeable to subsurface flow. Sheetpile would be PZ27.

**(2) Quantity of Material** – Current plans use approximately 31,000 cy of R270 riprap, and 4,600 cy of R20 riprap. Approximately 4,200 cy of 4' and 5' boulders would be used. Approximately 800 cy of crushed aggregate base would be used. Approximately 11,000 square feet of sheetpile would be involved.

**(3) Sources of Material** - The stone for the riprap, boulders and bedding would be obtained from a regional commercial quarry or similar outlet.

#### **e. Description of Proposed Fill Placement Sites**

Material placement would extend across the river channel and up and into the bank. The majority of material placement would occur below the water. Specifics on the placement include:

**(1) Location** - The proposed fill activities would take place in the Red River, downstream of Drayton, ND (EA Figures 1).

**(2) Size** - The areal footprint extent of the proposed placement within the water is estimated at approximately 2.3 to 2.4 acres (for typical low summer flows) (EA Figure 4).

**(3) Type of Site** - The fill activities would take place immediately upstream of the existing Drayton Dam. The downstream extent of the new fish passage structure would terminate at the existing dam. The site is river bottom and river bank immediately upstream of an existing lowhead dam.

**(4) Types of Habitat** - The habitat is river, riverbank, riparian areas and river floodplain. Floodplain areas adjacent to the project would likely be considered wetlands habitat.

**(5) Timing and Duration** - Subject to approval, construction could begin in calendar year 2014, although this is optimistic. It is estimated that construction could take less than one construction season, although additional time may be needed given site conditions and construction logistics. The seasonal timing and duration of construction will be further identified during the final project design.

#### **f. Description of Fill Placement Method**

Clearing of trees and understory vegetation would be necessary within the footprint area. Grading would be performed to accommodate proper slopes and placement of rock both above and below the water surface. Rock and sheetpile would first be placed upstream of the existing dam to an elevation that would maintain the existing upstream pool. Once adequate material has been placed to ensure the pool would be maintained, the existing dam would be removed. With the small pool drained between the existing dam and the new structure, the remainder of the rock rapids fish way can be constructed.

Riprap placed under water would be positioned in a systematic manner to ensure a continuous uniform stone layer. Equipment would be capable of reaching the placed material to monitor the water depth and surface coverage.

Construction actions will include use of BMPs to minimize short-term impacts. The specific construction methods, including identification of specific BMPs, have not yet been identified. These will be further specified during preparation of the final plans and specifications. Potential BMPs include construction during low-flow periods, use of silt curtains, vegetation plans to minimize the effects of vegetation clearing, minimizing the time period for exposed soils, and control of stormwater flow from any upland areas disturbed during construction.

## 2. FACTUAL DETERMINATIONS

### a. Physical Substrate Determinations

(1) **Substrate Elevation and Slope** - The existing dam is constructed to a sill elevation of approximately 765.6 ft. The new structure will be built with the sheetpile elevation the same as the existing dam (EA Figure 3). Following grading and rock placement, the constructed project would generally have a grade down the centerline of 3% on the upstream end, and 2% on the lower end. Individual boulder weirs would extend up and tie into the top of bank.

(2) **Sediment Type** - River sediment in the proposed fill area is primarily finer silt. Bank soil at the site also is generally silt material.

(3) **Dredged/Fill Material Movement** - Rock would be placed directly in the river with grading to achieve desired slopes. Boulders would be partially buried with boulders in the center of the structure about half exposed or less to river flows. No significant movement of boulders or riprap would be expected. Previously built fish passage projects at dams on the Red River had had similar observations.

### b. Water Circulation, Fluctuation, and Salinity Determinations

#### (1) Water

(a) **Salinity** - The fill activities would not affect salinity. The project would not contribute to the long-term water quality impairments for chloride.

(b) **Water Chemistry** - The use of clean fill material and mechanical placement procedures would preclude any significant impacts on water chemistry.

(c) **Clarity** - Some minor, short-term decreases in clarity are expected from the proposed fill activities during construction. No long-term impacts to water clarity would be expected.

(d) **Color** - The proposed fill activities should have no impact on water color.

(e) **Odor** - The proposed fill activities should have no impact on water odor.

(f) **Taste** - The proposed fill activities should have no impact on water taste.

(g) **Dissolved Gas Levels** - The proposed fill activities should have no impact on dissolved gas levels in the water.

(h) **Nutrients** - The proposed fill activities should have no impact on nutrient levels in the water.

(i) **Eutrophication** - The proposed fill activities should have no impact on the level or rate of eutrophication of the water.

(j) **Temperature** - The proposed fill activities would have little impact on water temperature.

## **(2) Current Patterns and Circulation**

(a) Current Patterns and Flow - Flow patterns in the project area would change as a result of the proposed project. Project designs will direct flow into the center of the channel, which should help to minimize bank erosion. Bank erosion with the project would likely be less than that observed under existing conditions.

(b) Velocity - Velocity fields within the proposed structure would be very complex, with higher velocities over individual boulder weirs, and lower velocity areas in pools between the weirs. Velocity patterns also would vary by river discharge. However, the proposed fill activities would target current velocities more favorable for fish migration compared to existing conditions.

(c) Stratification - The proposed fill activities would have no effect on the development of stratified conditions in the river.

(d) Hydrologic Regime - The proposed fill activities would not have substantial impacts on river hydrologic regimes. Hydraulic modeling predicts a change to the 1% chance flood stage elevation of less than 0.01 ft upstream or downstream of the structure. The structure also would not increase upstream water storage when Red River flows are at zero discharge (no river flow). River stages could increase minimally (e.g., less than 0.2 ft) for low flows (e.g., flows of 1,000 to 10,000 cfs). Ultimately, these modeled increases are extremely small and the project would not be expected to result in any substantial increase in flood risks or changes to river elevations under lower flows.

**(3) Normal Water Level Fluctuations** – As outlined above under Hydrologic Regime, the proposed fill activities would have no substantial effect on normal water level fluctuations.

**(4) Salinity Gradient** - The fill activities would have no effect on the salinity gradient.

## **c. Suspended Particulate/Turbidity Determination**

**(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Placement Site** - Although minor temporary increases in suspended particulates and turbidity would occur during project construction, the project would have no long-term adverse effects to suspended solids or turbidity. Construction activities would follow water quality requirements stipulated in the Section 401 Water Quality Certifications from Minnesota and North Dakota and any additional permits obtained for this project. The project would not contribute to the long-term water quality impairments (303d listings) for the Red River.

To address short-term water quality impairments, project construction will include use of BMPs and potentially other measures to minimize short-term impacts. The specific construction methods, including identification of specific BMPs, have not yet been identified. Potential BMPs include construction during low-flow periods, use of silt curtains, vegetation plans to minimize vegetation clear, and other methods. However, it is reasonable to assume that no substantial impacts would occur to water quality. BMPs have traditionally been used to minimize short-term impacts associated with projects that focus on grading and rock along streams and rivers.

Although the project site presents some unique challenges, BMPs can be implemented to facilitate construction of a project that will not result in undesirable sediment loading to the Red River.

## **(2) Effects on Chemical and Physical Properties of the Water Column**

(a) Light Penetration - Light penetration in adjacent waters would be reduced temporarily during construction but would quickly return to background levels.

(b) Dissolved Oxygen - This project is not expected to affect dissolved oxygen concentrations. Short-term oxygen levels would not be expected to change substantially during construction.

(c) Toxic Metals and Organics - This project is not expected to release any toxic metals or organics. The project would not contribute toward the mercury impairments for the Red River.

(d) Pathogens - This project is not expected to release pathogens to the water column. Only clean fill materials would be placed during construction.

(e) Aesthetics - This project would change the aesthetics as a result of dam removal and implementing the rock rapids structure. This would not be considered a substantial impact, and may be even preferred by those in the area.

**(3) Effects on Biota** - Effects on primary production and photosynthesis in the water column would be temporary and minor because of the small amount of material resuspended during construction. The structure should have a long-term benefit to fish and mussel species as a result of improved connectivity.

### **d. Contaminant Determinations**

Clean riprap and rock would be used. No contaminant issues would be expected. The project would not contribute toward any long-term mercury impairments.

### **e. Aquatic Ecosystem and Organism Determinations**

**(1) Effects on Plankton** - Effects on plankton would be minor and temporary. Construction operations that increase turbidity levels would reduce light penetration.

**(2) Effects on Benthos** - Effects on benthic organisms would be minor and temporary. While the initial construction would cover benthic organisms, they would quickly recolonize. Additionally, riprap would provide substrate for such organisms as well as cover and refugia.

**(3) Effects on Nekton** - This project would have no effects on nekton.

**(4) Effects on Aquatic Food Web** - This project would have no substantial effects on the aquatic food web.

## **(5) Effects on Special Aquatic Sites**

(a) Sanctuaries and Refuges - No sanctuaries or refuges would be affected by this project.

(b) Wetlands and Vegetated Shallows – The project site does include wetlands in adjacent floodplain areas. A small amount of wetland area may be permanently impacted as a result of this effort. However, these losses would generally be small (e.g., less than an acre) and are necessary to implement a project that would have substantial benefits to the aquatic environment. No substantial losses of aquatic vegetation would be anticipated.

(c) Mud Flats and Coral Reefs - Mud flats and coral reefs would not be affected by this project.

(d) Riffle and Pool Complexes – Project construction would specifically create a series of riffles and pools to facilitate upstream fish migration. Twelve boulder weirs will be placed downstream of the fish passage crest to create a series of riffles that will be inundated at various river discharges. The creation of these riffles also would serve as aquatic habitat for fish.

**(6) Threatened or Endangered Species** - The proposed project would not adversely affect any federally listed species.

## **f. Proposed Placement Site Determinations**

**(1) Proposed Mixing Zone Determination** - The proposed fill activity would have a substantial mixing zone. The mixing zone would extend from the upstream fish passage crest to the downstream toe of the structure (approximately 300 ft). This is not considered to be a significant problem. Existing conditions include a sizeable mixing zone due to turbulence created at the dam. No liquid material would be discharged during construction. For these reasons, the mixing zone was not analyzed further.

**(2) Determination of Compliance with Applicable Water Quality Standards** - The nature of the fill material and the type of construction should avoid violation of State water quality standards by project-related activities. Construction activities would follow water quality requirements stipulated in the Section 401 Water Quality Certifications obtained from Minnesota and North Dakota for this project. The Corps has already begun coordination with the States of North Dakota and Minnesota on additional requirements that may be necessary as a condition of State Water Quality Certification given this construction will occur in an identified impaired waterbody (303d listing). The long-term adverse environmental or water quality effects of the placement of fill material would be minimal to non-existent.

## **(3) Potential Effects on Human Use Characteristics**

(a) Municipal and Private Water Supply - No municipal supplies would be affected by this project. Actions will be taken to ensure that any future settlement of the fish

passage structure will not drop water elevations to levels that impair domestic water supplies.

(b) Recreational and Commercial Fisheries – Recreational fishing may be briefly interrupted during construction, but would not be impacted long-term. No long-term adverse effects on recreational activities would be expected. No commercial fishing is known to occur in the project area.

(c) Water-Related Recreation - This project could have a temporary impairment to recreational use of the area during construction. However, no long-term impacts to recreation would occur.

(d) Aesthetics - The rock rapids will have different aesthetic properties than the existing dam and would be a permanent change. However, this would not be a substantial adverse effect, and may even be preferred by those in the project area.

(e) Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites and Similar Preserves - This project could interrupt access to the Drayton Dam public use area, including the boat ramp. The interruptions would be temporary, and are necessary to safely construct the project.

#### **g. Determination of Cumulative Effects on the Aquatic Ecosystem**

Cumulative impacts on the environment are the result of the incremental impacts of past actions, the proposed project and reasonable foreseeable future actions. Significant changes to the environment were made through construction of several dams on the Red River mainstem. This project is intended to provide long-term improvement to fish passage at this location. Effects of the construction would be minimal and mostly positive in maintaining the quality of the human environment. The proposed action would help meet the mitigation needs of the Fargo-Moorhead Flood Risk Management project which could potentially affect connectivity. Construction of fish passage at Drayton Dam would modify the last low head dam that serves as an impediment to fish passage on the mainstem of the Red River. It is anticipated that the proposed action will help reduce habitat fragmentation on the Red River and improve biodiversity in this reach of the river. The project would not contribute to the long term water quality impairments (303d listing) for the Red River.

#### **h. Determination of Secondary Effects**

No significant secondary effects on the aquatic ecosystem would be expected from the proposed action.

#### **i. Actions Taken to Minimize Impacts**

To the extent possible, the proposed project was designed to minimize footprint impacts on the aquatic environment while maximizing the potential to improve fish passage and connectivity. For the proposed project, BMPs would be implemented during all construction phases, including water quality management practices to control, prevent, and minimize surface water degradation.

The specific construction methods, including identification of specific BMPs, have not yet been identified. These will be further specified during the development of final plans and specifications. Potential BMPs include construction during low-flow periods, minimizing the period of time exposed for soils, use of silt curtains, vegetation plans to minimize vegetation clear, and other methods. However, it is reasonable to assume that no substantial impacts would occur to water quality. BMPs have traditionally been used to minimize short-term impacts associated with projects that focus on grading and rock placement in and along streams and rivers. Although the project site presents some unique challenges, BMPs can be implemented to facilitate construction of a project that will improve the long-term environment of the Red River.

### 3. FINDING OF COMPLIANCE FOR CROW RIVER STABILIZATION ACTIVITES

The proposed project complies with the Section 404(b)(1) guidelines of the Clean Water Act.

Alternatives considered were the no action alternative, the proposed alternative, variations of the proposed action, and dam removal. Variations of the proposed action and dam removal were not considered practicable for the reasons outlined in paragraph 5.3 of the EA. No significant adaptations of the guidelines were made for this evaluation. The placement of fill is required to provide the desired benefits. Moreover, the overall placement of fill is relatively minor. Thus, this action is the least environmentally damaging practicable alternative.

The proposed construction is not expected to exceed water quality standards for turbidity set by the States of Minnesota or North Dakota. The Corps expects water quality standards for other contaminants to be met as well. The Corps has determined the project would not have significant water quality impacts and will obtain 401 water quality certification prior to awarding the construction contract. The project complies with Section 307 of the Clean Water Act and with the Endangered Species Act of 1973, as amended. The proposed activity would have no adverse impacts on human health or welfare, including municipal and private water supplies, recreation, and commercial fishing.

On the basis of this evaluation, I find that the proposed discharge complies with the Clean Water Act Section 404(b)(1) requirements for the discharge of dredged or fill material.

23 JAN 2013  
Date

  
\_\_\_\_\_  
Michael J. Price  
Colonel, Corps of Engineers  
District Engineer

## **EXHIBIT B - Coordination**

## Stefanik, Elliott L MVP

---

**From:** Stefanik, Elliott L MVP  
**Sent:** Wednesday, August 01, 2012 12:55 PM  
**To:** 'Richard Davis@fws.gov'  
**Cc:** Sobiech, Jonathan J MVP  
**Subject:** USFWS Coordination - Proposed Drayton Dam Fish Passage Mitigation Project (UNCLASSIFIED)  
**Attachments:** Drayton Dam Mitigation Project Overview for FWS.pptx

Classification: UNCLASSIFIED  
Caveats: NONE

Rich:

By way of this e-mail, I am coordinating our proposed Drayton Dam fish passage mitigation project by the St. Paul District, U.S. Army Corps of Engineers. Project is near Drayton, ND, and would serve as mitigation for the Fargo-Moorhead Flood Damage Reduction Project. I have attached a brief PowerPoint summary of the proposed action. Please forward to anyone in your office that needs to be advised. I can also forward more design information if you or others would like to see it. The following email will assist with coordination and documentation pursuant to the Fish and Wildlife Coordination Act, and the Endangered Species Act. This is in preparation for release of a draft EA.

The proposed action would be located on the Red River in Pembina County, ND; and Kittson County, MN. Drayton Dam is the last dam on Red River mainstem (in the US) to be retrofitted for fish passage. The dam is also toward the bottom of the watershed. Providing fish passage at this location will provide strong environmental benefits through improved connectivity.

The District proposes to implement a rock-rapids style fishway similar to those at other Red River dams. One difference is that the fishway will be constructed just upstream of the existing dam, with the downstream end of the rock ramp terminating at the existing dam. Once the structure is completed to a level that will maintain upstream water elevations, the existing dam would be removed. The remainder of the fish passage structure would then be completed. Our design has been coordinated extensively with all agencies, including Luther Aadland of MNDNR. Our basic design includes a shallower slope down the centerline of the structure (maximum slope of 30:1), compared to other Red River projects. Individual weir drops are targeted for approximately 0.8ft, compared to 1ft at other Red River structures. These changes are in attempt to make the structure more passable compared to similar projects.

The proposed project includes a footprint area of approximately 2.3 to 2.4 acres of in-water placement (at typical summer flows). Approximately 36,000 cubic yards of riprap and 4,200 cubic yards of boulders would be used for construction. Additional grading and filling at the project site would be required. This includes an area of approximately 0.2 acres upstream of the proposed structure, on the inside bend (MN bank) where sloping of the bank would be done to improve flow conveyance for discharges approaching a bankfull event (this is needed to maintain hydraulic conditions). The project would require some tree clearing, primarily on the MN side, to allow for erosion protection and tying the weirs into shore. The footprint area on the MN side that would involve existing tree cover would be about 0.5 acres. Footprint areas would include some potential wetland areas. We will minimize these to the extent possible. Some minor wetland loss would be needed to support the project, but these losses would likely be small (less than an acre) and be worth the great benefits we would achieve from implementing fish passage.

Site access would occur across existing roads on the ND side of the river. Similarly, staging would also occur on the ND side adjacent to the project within disturbed areas. However, USACE and the sponsor may also need to pursue access and staging from the MN side if required for construction logistics. Aerial photos of this area suggest farmland beyond the riparian corridor, so it's unlikely that access or staging from the MN side would result in meaningful additional impacts. A final decision on needed access would come with the final project design.

A search of USFWS on-line records identified five species with some sort of T&E designation occurring in either Pembina or Kittson counties. These include whooping crane (Endangered), spragues pipit (candidate), western prairie fringed orchid (Threatened), Dakota Skipper (Candidate) and Gray Wolf (now delisted). Given the habitat requirements of the listed species, and the habitat at the project site, there doesn't appear to be potential for impacts to listed species. The district has determined that the proposed action would have no effect on federally threatened or endangered species.

We are currently doing modeling to assess any potential for an increase in flood heights due to the project (non anticipated)

This project has a long history that has included extensive coordination with our agency partners. We have coordinated the design with USFWS; Minnesota DNR and PCA; North Dakota Game and Fish, Dept. of Health, and State Water Commission. All agencies are comfortable with our proposed action to date and support this as a mitigation project. We will obtain necessary permits from the States of MN and ND.

We are writing an EA to address this action. This EA will be released for public review in the near future; likely in September or October.

Let me know if you have any comments or concerns on this proposed action as it relates to either the Endangered Species Act or the Fish and Wildlife Coordination Act. Please provide any comments back to me by Friday, August 17th. A response will help confirm coordination and compliance.

Please call me if you have any further questions, or would like to discuss further. Thanks.

Elliott L. Stefanik  
Biologist/Regional Technical Specialist  
St. Paul District, Corps of Engineers  
Office Phone: (651) 290-5260  
Cell Phone: (651) 707-4078  
Fax: (651) 290-5805  
email: Elliott.L.Stefanik@usace.army.mil

**From:** [Richard\\_Davis@fws.gov](mailto:Richard_Davis@fws.gov)  
**To:** [Stefanik, Elliott L MVP](mailto:Stefanik, Elliott L MVP)  
**Cc:** [Sobiech, Jonathan J MVP](mailto:Sobiech, Jonathan J MVP)  
**Subject:** Re: USFWS Coordination - Proposed Drayton Dam Fish Passage Mitigation Project (UNCLASSIFIED)  
**Date:** Friday, September 07, 2012 3:05:47 PM  
**Attachments:** [Drayton Dam Mitigation Project Overview for FWS.pptx](#)

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Hi Elliott,

At this time the Service does not have any concerns with the proposed Drayton Dam Fish Passage Mitigation Project, We will remain involved with project conference calls, site visits, and review of the Environmental Assessment (EA) once completed, and we will provide our comments and concerns as appropriate. The Service will issue a letter specific to the Fish and Wildlife Coordination Act once the EA review has been completed.

Thank you,  
Rich

Richard Davis  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
Twin Cities Field Office  
4101 American Blvd. E.  
Bloomington, MN 55425  
(612)725-3548 ext. 2214  
Inactive hide details for "Stefanik, Elliott L MVP" <Elliott.L.Stefanik@usace.army.mil>"Stefanik, Elliott L MVP" <Elliott.L.Stefanik@usace.army.mil>

"Stefanik, Elliott L MVP" <Elliott.L.Stefanik@usace.army.mil>

08/01/2012 01:01 PM

To

"Richard\_Davis@fws.gov" <Richard\_Davis@fws.gov>

cc

"Sobiech, Jonathan J MVP" <Jonathan.J.Sobiech@usace.army.mil>

Subject

USFWS Coordination - Proposed Drayton Dam Fish Passage Mitigation Project (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Rich:

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The District proposes to implement a rock-rapids style fishway similar to those at other Red River dams. One difference is that the fishway will be constructed just upstream of the existing dam, with the downstream end of the rock ramp terminating at the existing dam. Once the structure is completed to a level that will maintain upstream water elevations, the existing dam would be removed. The remainder of the fish passage structure would then be completed. Our design has been coordinated extensively with all agencies, including Luther Aadland of MnDNR. Our basic design includes a shallower slope down the centerline of the structure (maximum slope of 30:1), compared to other Red River projects. Individual weir drops are targeted for approximately 0.8ft, compared to 1ft at other Red River structures. These changes are in attempt to make the structure more passable compared to similar projects.

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Site access would occur across existing roads on the ND side of the river. Similarly, staging would also occur on the ND side adjacent to the project within disturbed areas. However, USACE and the sponsor may also need to pursue access and staging from the MN side if required for construction logistics. Aerial photos of this area suggest farmland beyond the riparian corridor, so it's unlikely that access or staging from the MN side would result in meaningful additional impacts. A final decision on needed access would come with the final project design.

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We are writing an EA to address this action. This EA will be released for public review in the near future; likely in September or October.

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Please call me if you have any further questions, or would like to discuss further. Thanks.

Elliott L. Stefanik  
Biologist/Regional Technical Specialist  
St. Paul District, Corps of Engineers  
Office Phone: (651) 290-5260  
Cell Phone: (651) 707-4078  
Fax: (651) 290-5805  
email: Elliott.L.Stefanik@usace.army.mil

Classification: UNCLASSIFIED  
Caveats: NONE

(See attached file: Drayton Dam Mitigation Project Overview for FWS.pptx)



Jack Dalrymple, Governor  
Mark A. Zimmerman, Director

1600 East Century Avenue, Suite 3  
Bismarck, ND 58503-0649  
Phone 701-328-5357  
Fax 701-328-5363  
E-mail [parkrec@nd.gov](mailto:parkrec@nd.gov)  
[www.parkrec.nd.gov](http://www.parkrec.nd.gov)

May 22, 2012

Kenneth A. Barr  
Department of the Army  
COE – Rock Island District  
Clock Tower Building PO Box 20004  
Rock Island, Illinois 61204-2004

Re: Drayton Dam Fish Passage Mitigation Project

Dear Mr. Barr:

The North Dakota Parks and Recreation Department (the Department) has reviewed the above referenced proposed Drayton Dam fish mitigation project in Kittson County, Minnesota and Pembina County, North Dakota.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage but may affect state Land and Water Conservation Fund (LWCF) project sites that we manage.

We have concerns regarding a Land and Water Conservation Fund(LWCF) site near the project area. The Drayton Recreation Dam (#38-00983) received assistance from the federal Land and Water Conservation Fund and is under protection of section 6(f) of the LWCF Act. Any property taken from within the 6f boundary of this site for non-recreational use must be replaced with property of equal market value. Should any public or private utilities need to be added or relocated on the LWCF recreational lands, the NDPRD must be consulted prior to any action taken. Please contact Jessica Riepl (701-328-5364 or [jriep1@nd.gov](mailto:jriep1@nd.gov)) if additional LWCF information is needed.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any current or historical plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, several animal species of concern (bivalves) have been identified within or adjacent to the project areas. Please see the attached spreadsheet and maps for more specific information on these species. We defer further comments regarding animal species to the North Dakota Game and Fish Department and the United States Fish and Wildlife Service.

Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. The Department recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact me at (701-328-5370 or [kgduttonhefner@nd.gov](mailto:kgduttonhefner@nd.gov)) of our staff. Thank you for the opportunity to comment on this proposed project.

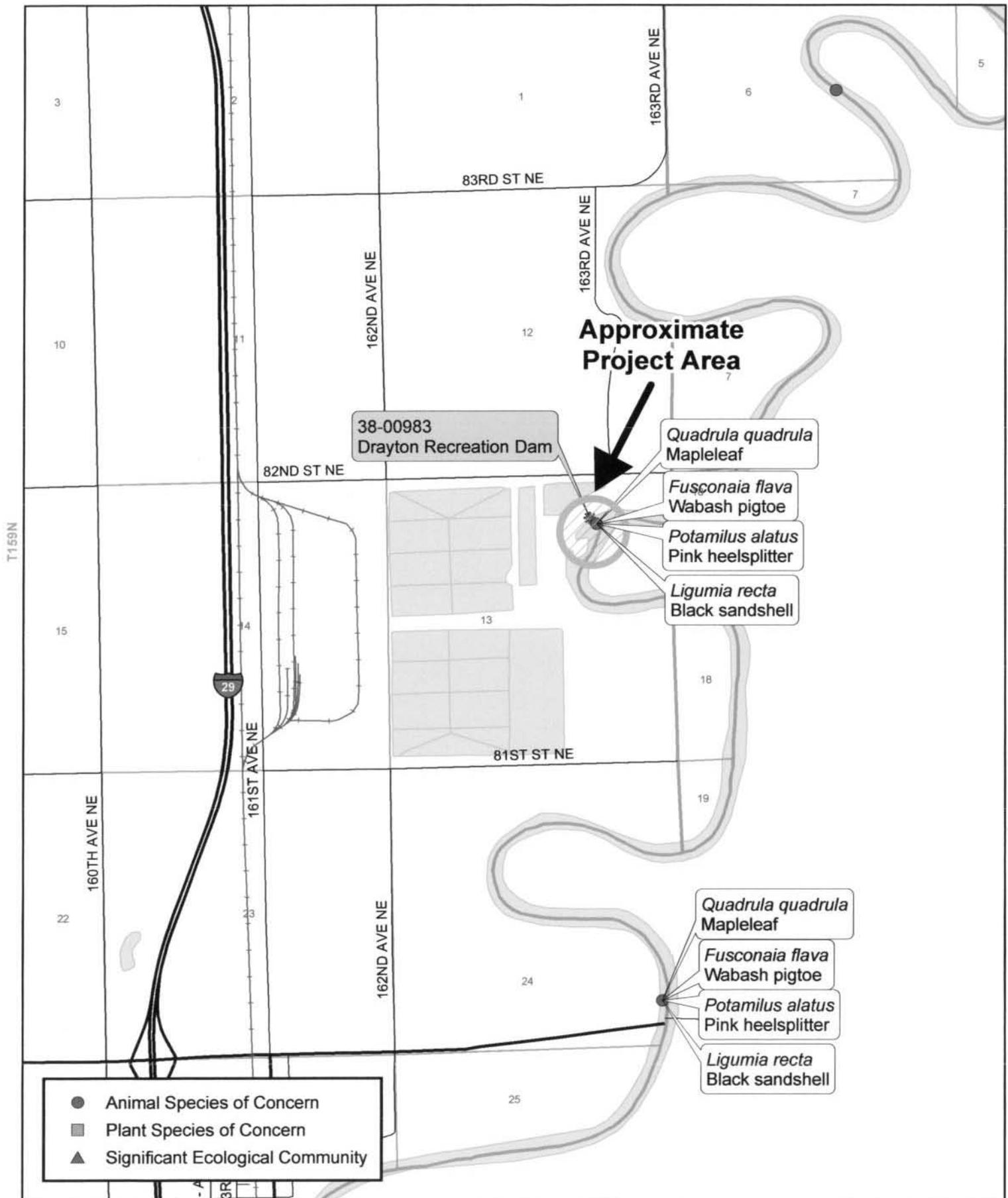
Sincerely,

  
Kathy Duttonhefner, Coordinator  
Natural Resources Division

R.USNDNHI\*2012\_122 KD5/22/2012DL5.25.2012

.....  
*Play in our backyard!*

# North Dakota Parks and Recreation Department North Dakota Natural Heritage Inventory



North Dakota Natural Heritage Inventory  
Rare Animal and Plant Species and Significant Ecological Communities

State Scientific Name	State Common Name	State Rank	Global Rank	Federal Status	Township Range Section	County	Last Observation	Estimated Representation Accuracy	Precision
<i>Fusconaia flava</i>	Wabash Pigtoe	S4	G5		159N051W - 13	Pembina	1966		S
<i>Ligumia recta</i>	Black Sandshell	S4	G5		159N051W - 13	Pembina	1966		S
<i>Potamilus alatus</i>	Pink Heelsplitter	S4	G5		159N051W - 13	Pembina	1965		S
<i>Quadrula quadrula</i>	Mapleleaf	S3	G5		159N051W - 13	Pembina	1966		S
<i>Fusconaia flava</i>	Wabash Pigtoe	S4	G5		159N051W - 24	Pembina	1965		S
<i>Ligumia recta</i>	Black Sandshell	S4	G5		159N051W - 24	Pembina	1965		S
<i>Potamilus alatus</i>	Pink Heelsplitter	S4	G5		159N051W - 24	Pembina	1965		S
<i>Quadrula quadrula</i>	Mapleleaf	S3	G5		159N051W - 24	Pembina	1966		S

### **North Dakota Natural Heritage Inventory Biological and Conservation Data Disclaimer**

The quantity and quality of data collected by the North Dakota Natural Heritage Inventory are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in North Dakota have never been thoroughly surveyed, and new species are still being discovered. For these reasons, the Natural Heritage Inventory cannot provide a definite statement on the presence, absence, or condition of biological elements in any part of North Dakota. Natural Heritage data summarize the existing information known at the time of the request. Our data are continually upgraded and information is continually being added to the database. This data should never be regarded as final statements on the elements or areas that are being considered, nor should they be substituted for on-site surveys.

### **Estimated Representation Accuracy**

Value that indicates the approximate percentage of the Element Occurrence Representation (EO Rep) that was observed to be occupied by the species or community (versus buffer area added for locational uncertainty). Use of estimated representation accuracy provides a common index for the consistent comparison of EO reps, thus helping to ensure that aggregated data are correctly analyzed and interpreted.

Very high (>95%)

High (>80%, <= 95%)

Medium (>20%, <= 80%)

Low (>0%, <= 20%)

Unknown

(null) - Not assessed

### **Precision**

A single-letter code for the precision used to map the Element Occurrence (EO) on a U.S. Geological Survey (USGS) 7.5' (or 15') topographic quadrangle map, based on the previous Heritage methodology in which EOs were located on paper maps using dots.

S - Seconds: accuracy of locality mappable within a three-second radius; 100 meters from the centerpoint

M - Minute: accuracy of locality mappable within a one-minute radius; 2 km from the centerpoint

G - General: accuracy of locality mappable to map or place name precision only; 8 km from centerpoint

U - Unmappable



**STATE  
HISTORICAL  
SOCIETY  
OF NORTH DAKOTA**

Jack Dalrymple  
Governor of North Dakota

North Dakota  
State Historical Board

Gerold Gemtholz  
Valley City - President

Calvin Grinnell  
New Town - Vice President

A. Ruric Todd III  
Jamestown - Secretary

Albert I. Berger  
Grand Forks

Diane K. Larson  
Bismarck

Chester E. Nelson, Jr.  
Bismarck

Margaret Puetz  
Bismarck

Sara Otte Coleman  
Director  
Tourism Division

Kelly Schmidt  
State Treasurer

Alvin A. Jaeger  
Secretary of State

Mark Zimmerman  
Director  
Parks and Recreation  
Department

Francis Ziegler  
Director  
Department of Transportation

Merlan E. Paaverud, Jr.  
Director

Accredited by the  
American Association  
of Museums since 1986

May 2, 2012

Mr. Kenneth A Barr  
Attn: Mr. Ron Diess  
Regional Planning and Environmental Division North  
US Army Corps of Engineers Rock Island District  
Clock Tower Building  
PO Box 2204  
Rock Island IL 61204-2004

ND SHPO Ref.: 12-0622 COE Drayton Dam Fish Passage Mitigation Project  
in Kittson County, MN and portions of [T159N R51W Section 13 NE 1/4]  
Pembina County, North Dakota

Dear Mr. Diess,

We reviewed ND SHPO Ref.: 12-0622 COE Drayton Dam Fish Passage Mitigation Project in Kittson County, MN and portions of [T159N R51W Section 13 NE 1/4] Pembina County, North Dakota, and request that a Class III (pedestrian) Cultural Resource Survey for the entire project Area of Potential Effect be completed for archaeological concerns and that a site form on the existing Drayton Dam be completed and described in the report, including any historic engineering information that may be available.

Thank you for the opportunity to review this project to date. We look forward to review of the cultural resource survey. Please include the ND SHPO Reference number listed above in further correspondence for this specific project. If you have any questions please contact Susan Quinnell, Review and Compliance Coordinator at (701) 328-3576, e-mail [squinnell@nd.gov](mailto:squinnell@nd.gov)

Sincerely,

Merlan E. Paaverud, Jr.  
State Historic Preservation Officer  
(North Dakota)



**STATE HISTORIC PRESERVATION OFFICE**

May 23, 2012

Kenneth Barr, Chief  
Economic and Environmental Analysis Branch  
US Army Corps of Engineers – Rock Island District  
PO Box 2004  
Rock Island LI 61204-2004

RE: Drayton Dam Fish Passage Mitigation Project  
Red River, Kittson County  
SHPO Number: 2012-1761

Dear Mr. Barr:

Thank you for the opportunity to comment on the above project. It has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the Advisory Council on Historic Preservation (36CFR800).

Based on the information you provided, we agree that the Drayton Dam is not eligible for listing in the National Register of Historic Places; and that no other above ground historic resources will be affected by the proposed project.

Regarding archaeological investigations, we have reviewed the proposed Area of Potential Effect, the archaeological survey scope, and proposed survey methods. We agree that all are appropriate.

We look forward to reviewing the survey results when available. Meanwhile, please contact our Compliance Section at (651) 259-3456 if you have any questions on our review of this project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mary Ann Heidemann'.

Mary Ann Heidemann, Manager  
Government Programs and Compliance



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS – ROCK ISLAND DISTRICT  
CLOCK TOWER BUILDING - PO BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

April 25, 2012

T:\HANCKS FILES\DEISS\2012 LETTERS\26APR2012\Drayton Dam\mer/5185

Regional Planning and Environmental  
Division North (RPEDN)

SEE DISTRIBUTION LIST

The US Army Corps of Engineers (Corps), Rock Island District (District), is currently proposing the Drayton Dam Fish Passage Mitigation Project (Project) in Kittson County, Minnesota and Pembina County, North Dakota, near the community of Dayton, North Dakota. This Project is located in Township 159 North, Range 51 West of Northeast  $\frac{1}{4}$  of section 13 using the 1983 7.5' *Drayton* USGS. topographical map. Surrounding Project lands are owned by the City of Drayton, North Dakota (Enclosure 1). This correspondence is promulgated under the National Historic Preservation Act (NHPA), as amended, and its implementing regulations 36CFR Part 800: "Protection of Historic Properties." The goal of this study is to evaluate the existing Drayton Dam for potential removal/modification to facilitate fish passage. Alternatives being study include a fish ramp.

By e-mail dated February 8, 2012 the Review and Compliance Coordinator of the North Dakota State Historic Preservation Office (SHPO) states that no previously recorded or report sites or archeological/architectural surveys have been completed within the Project area (Enclosure 2). By e-mail dated February 8, 2012, the Minnesota SHPO provided a list of survey reports and these reports documented that no archeological surveys were performed in the Project area. Area photographic interpretation indicates the roads, undisturbed lands, the Red River of the North, and Drayton Dam constructed in 1964 for water supply associated with the municipal and agricultural interested.

The District has defined the Project Area of Potential Effect (APE) and recommends a Phase I archeological survey with hand methods of deep testing along the shoreline, roads and staging areas (Enclosure 3). The area potentially exhibits meander belts with undifferentiated floodplain and alluvial fan deposits with moderate potential for surface or near surface archeological deposits, with low potential for deeply buried archeological deposits. It is the District's opinion that this small segment of the Red River of the North and Drayton Dam has no potential to contain historic properties. The Dam is a concrete weir structure with a spillway length of 255 feet (Enclosure 4). Its crest elevation is about 12 feet above the natural channel bottom. It is the District's opinion that Drayton Dam, built in 1964, is ineligible to the National Register of Historic Places using the National Register criteria for evaluation in 36 CFR part 60.4, being less the 50 years of age. Although the Drayton Dam will be 50 years of age in 2 years, no engineering, historic, or other information has surfaced to identify any historic significance. It is common knowledge that this type of concrete weir "low head" dam has a prevailing occurrence throughout the Midwest and it is the opinion of the District that this dam structure will not attain any historic significance immediately prior to its proposed removal.

Pursuant to Section 800.3 of the Council's regulations and to meet the responsibilities under the NEPA of 1969, the District has developed a preliminary Interested and Consulting Parties List comprised of government organizations or agencies, Tribes or tribal members, and other interested parties (Enclosure 5). The District will comply with any requests to be removed from or added to the Interested and Consulting Parties List. The development and maintenance of the Interested and Consulting Parties List allows agencies, tribes, individuals, organizations, and other interested parties an opportunity to provide views on any effects of this undertaking on historic properties resulting from the Project and to participate in the review process.

The NHPA recognizes that properties of traditional religious and cultural importance to a tribe may be determined eligible for inclusion on the NRHP. In order to preserve, conserve, and encourage the continuation of the diverse traditional prehistoric, historic, ethnic, and folk cultural traditions within the Red River watershed, the Drayton Dam Project will be implemented in compliance with Executive Order No. 13007, specifically:

**Section 1. Accommodation of Sacred Sites.** (a) In managing Federal lands, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.

The Secretary of the Interior's *Standards and Guidelines for Federal Agency Historic Preservation Programs* pursuant to the NHPA states that a:

*Traditional Cultural Property* is defined as a property that is associated with cultural practices or beliefs of a living community that (1) are rooted in that community's history, and (2) are important in maintaining the continuing cultural identity of the community.

Allowing for tribal review and comment contributes to fulfilling our obligations as set forth in the NHPA (Public Law [PL] 89-665), as amended; the NEPA of 1969 (PL 91-190); Executive Order (EO) 11593 for the "Protection and Enhancement of the Cultural Environment"

(Federal Register, May 13, 1971); the Archaeological and Historical Preservation Act of 1974 (PL 93-291); the Advisory Council on Historic Preservation "Regulations for the Protection of Historic and Cultural Properties" (36 CFR, Part 800); and the applicable National Park Service and Corps regulations and guidance.

The District is concerned about impacts to those traditional cultural properties and sacred sites recognized by Native Americans, tribes, ethnic and religious organizations, communities, and other groups as potentially affected by the Project. Presently, the District is unaware of any traditional cultural properties or sacred sites within the Red River watershed. If there are concerns or potential effects known or identified, please contact the undersigned. This information will remain confidential.

To facilitate tribal coordination, the District asks those on the Consulting Parties Lists to refer to the National Park Service, NRHP Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, available for internet viewing at <http://www.cr.nps.gov/nr/publications/bulletins.htm>. Locations of traditional cultural properties or sacred sites, consisting of architecture, landscapes, objects, or surface or buried archaeological sites, identified in this coordination effort can be considered to be sensitive information, pursuant to Section 304 of the NHPA. Upon request from any consulting parties not to disclose the locations of traditional cultural properties, the District will secure this information from the general public.

The specific locations of historic and archaeological properties are subject to protection through nondisclosure under Section 304 of the National Historic Preservation Act. All maps subject to public review/access shall not contain any information on archeological sites. This information is not to be released in order to protect the resources at the sites.

The District requests comment or concurrence on our findings and with our proposal to conducted a Phase I archeological survey with hand methods of deep testing on land surfaces within the Project APE within 30 days, or we will assume that your agency concur without comment. No further work or coordination would be required for either the designated section of Red River of the North or Drayton Dam APE. If you have questions concerning the Drayton Dam Project or the District's proposal to conduct a Phase I archeological survey for significant historic properties, please call Mr. Ron Deiss of our Environmental Analysis Branch, telephone 309/794-5185, or write to our address above, ATTN: Regional Planning and Environmental Division North (Ron Deiss).

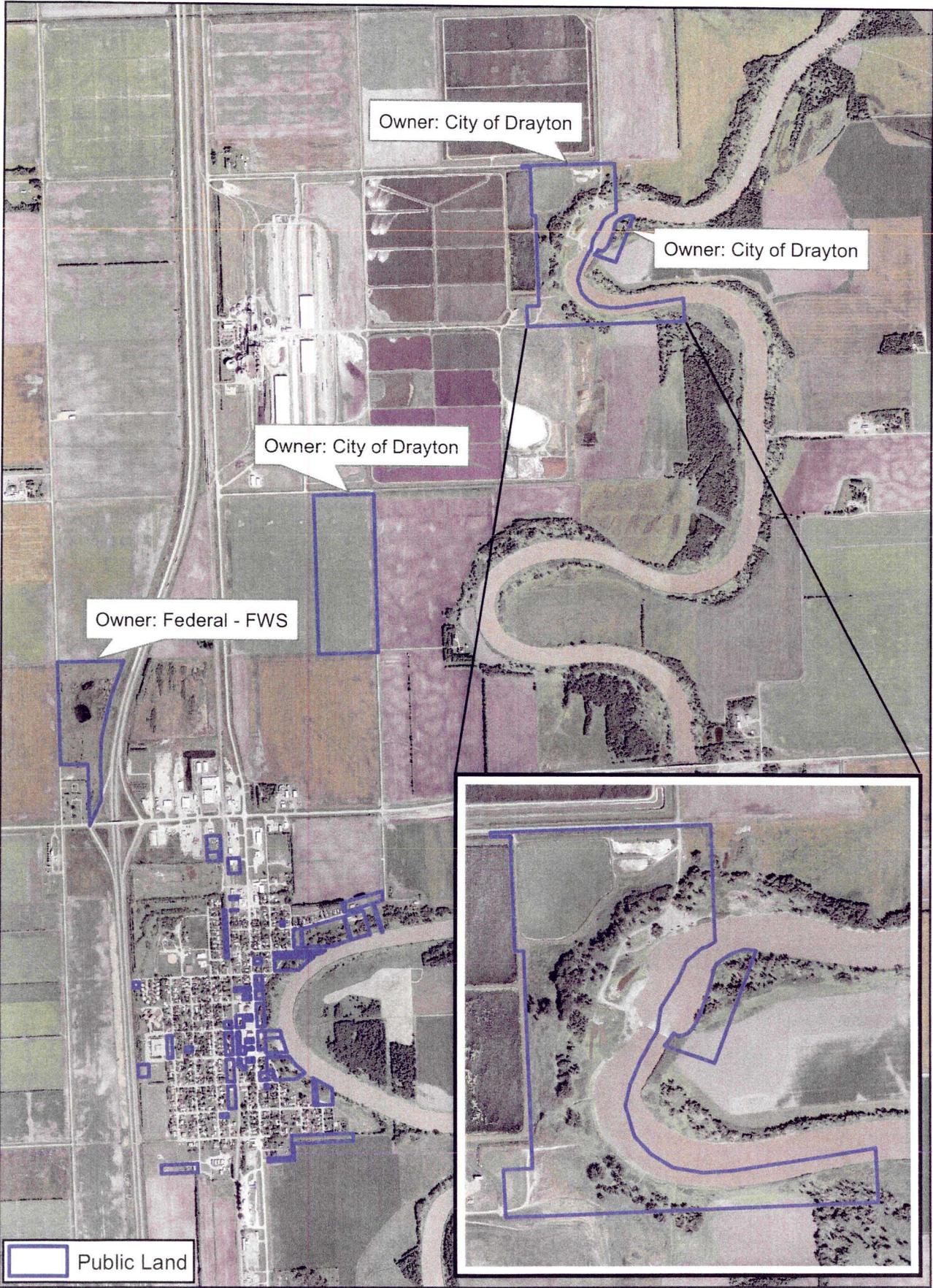
Sincerely,

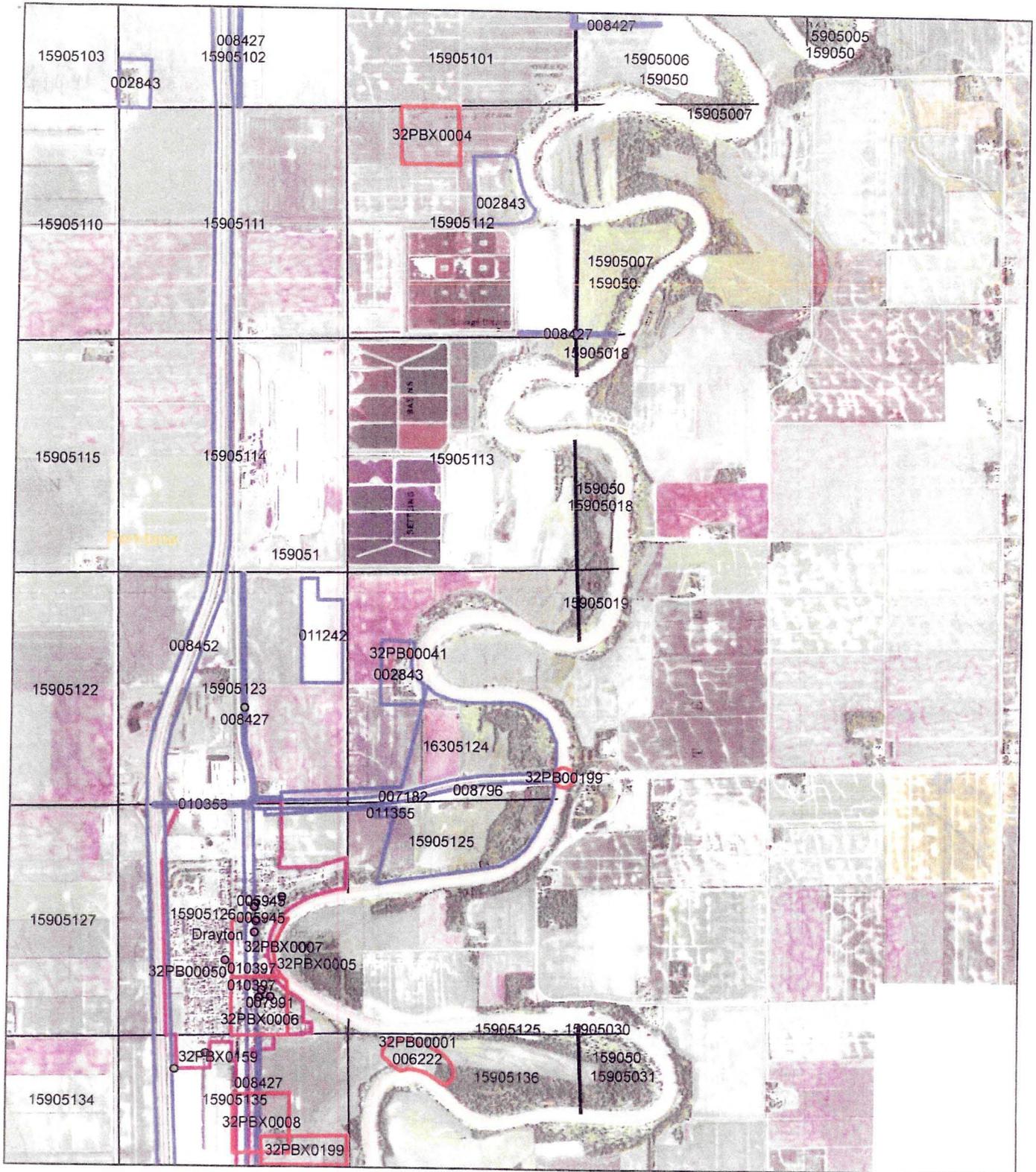
**ORIGINAL SIGNED BY**

Kenneth A. Barr  
Chief, Economic and Environmental  
Analysis Branch

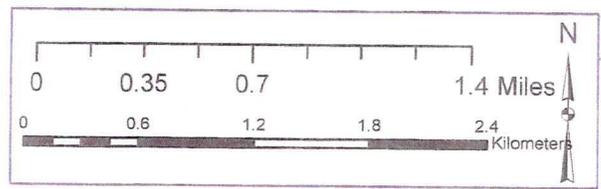
Enclosures (5)

# Drayton, ND Public Land





ND SHPO Ref: 12-622  
 USACE - Drayton Dam  
 T159N R51W Section 13 NE 1/4  
 Pembina County, ND  
 Plotted NAD 1983, in Drayton USGS Quad.  
 SHSND - 2/8/12



12-09222

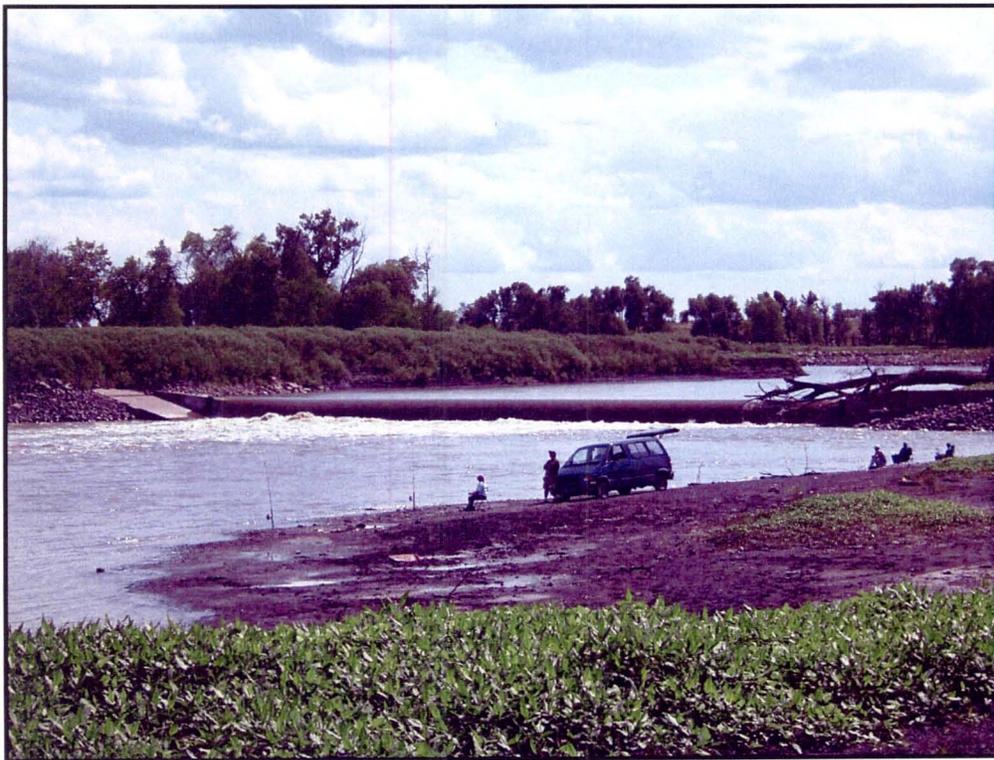
ENC 2



## Photographs of Drayton Dam



**Photograph 1** of the Drayton Dam on the Red River of the North was taken from North Dakota looking Southeast with Minnesota in the background (August 5, 2009).



**Photograph 2** of the Drayton Dam on the Red River of the North was taken from North Dakota looking south upstream toward the dam with Minnesota in the background (August 5, 2009).



**Photograph 3** of the Drayton Dam on the Red River of the North was taken from North Dakota looking Southeast with Minnesota in the background (September 18, 2008).

**Drayton Dam Section 206 Project  
Drayton, Pembina County, North Dakota and Kittson County, Minnesota**

**Interested and Consulting Parties**

Susan Quinnell  
Review and Compliance Coordinator  
State Historical Society of North Dakota  
ND State Historic Preservation Office  
North Dakota Heritage Center  
612 East Boulevard Avenue  
Bismarck ND 58505-0830

Mary Ann Heidemann  
Manager, Government Review and Compliance  
State Historic Preservation Office  
Minnesota Historical Society  
345 W. Kellogg Boulevard  
St. Paul MN 55102-1906

Carol Gardner  
City of Drayton, City Office  
122 South Main Street  
Drayton ND 58225-4504

Kathy Duttonhefner  
Coordinator/Biologist  
Natural Resources Division  
Nature Preserves/Natural Heritage Inventory/  
Natural Areas Registry  
1600 East Century Suite 3  
Bismarck ND 58503

Darrell E. Smith  
Cultural Advisor Cultural Preservation Office  
Spirit Lake Sioux Tribe  
P.O. Box 359  
Fort Totten ND 58335

Perry Brady  
Tribal Historic Preservation Officer  
Three Affiliated Tribes  
Mandan Hidatsa and Arikara Nation  
404 Frontage Road  
New Town ND 58763

Anthony Morse  
Lower Sioux Indian Community  
Tribal Historic Preservation Officer  
P.O. Box 308  
Res. Hwy 1  
Morton MN 56270

Kade Ferris  
Tribal Historic Preservation Officer  
Turtle Mountain Band of Chippewa  
PO Box 900  
Belcourt ND 58316

Curley Youpee  
Fort Peck Dakota & Assiniboine Tribes  
Director Cultural Resource Department and  
Native American Graves Protection and  
Repatriation Act Coordinator  
Box 1027  
Poplar MT 59255 59225

Waste'Win Young, THPO  
Standing Rock Sioux Tribe  
P.O. Box D  
Fort Yates ND 58538

Dianne Desrosiers & Jim Whitted  
Sisseton/Wahpeton Oyate  
Tribal Historical Preservation Officer  
PO Box 907  
205 Oak St. E., Suite 207  
Sisseton SD 57262

Hubert Two Leggins  
Cultural/Renewable Resources Director  
Apsaalooke (Crow Tribe)  
PO Box 159  
Crow Agency MT 59022

Conrad Fisher  
Tribal Historic Preservation Officer  
Northern Cheyenne Tribe  
PO Box 128  
Lame Deer MT 59043

Dennis Gill, Spokesperson  
Wahpekute Band of Dakota  
3322 Gill Rd  
Waubay SD 57273

Wilmer Mesteth, THPO  
Ogalala Sioux Tribe  
PO Box 320  
Pine Ridge SD 57770

Rosemary Berens  
Tribal Historic Preservation Officer  
Bois Forte Band of Chippewa Indians  
1500 Bois Forte Road  
P.O. Box 16  
Nett Lake MN 55772

LeRoy Defoe, Acting THPO  
Fond du Lac Band of Lake Superior Chippewa  
1720 Big Lake Road  
Cloquet MN 55720

Preservation Officer  
Grand Portage Band of Lake Superior Chippewa  
PO Box 428  
Grand Portage MN 55605

Gina Lemon  
Tribal Historic Preservation Officer  
Leech Lake Band of Ojibwe  
115 6th Street NW, Suite E  
Cass Lake MN 56633

Anthony Morse, Preservation Officer  
Lower Sioux Indian Community  
PO Box 3078  
Reservation Highway 1  
Morton, MN 56270

Natalie Weyaus, Preservation Officer  
Mille Lacs Band of Ojibwe Indians  
43408 Oodena Drive  
Onamia MN 56359

Mr. Marlow LaBatte, Preservation Officer  
Upper Sioux Community  
PO Box 147  
Granite Falls, MN 56241

Tom McCauley  
Tribal Historic Preservation Officer  
White Earth Band of Minnesota Chippewa Roads Department  
P.O. Box 418  
White Earth MN 56591

Lana Gravatt  
Tribal Historic Preservation Officer  
Yankton Sioux Tribe  
P.O. Box 248  
Marty SD 57631

Wanda Wells  
Tribal Historic Preservation Officer  
Crow Creek Sioux Tribe  
P.O. Box 50  
Ft. Thompson SD 57339

James B. "JB" Weston  
Tribal Historic Preservation Officer  
Flandreau Santee Sioux Tribe  
P.O. Box 285  
Flandreau SD 57028

Les Peterson  
Archaeologist/Environmental Specialist  
Red Lake Band of Chippewa Indians  
Tribal Engineering  
P.O. Box 274  
Red Lake MN 56671

## **Exhibit C – Distribution**

### **USEPA**

Mr. Kenneth Westlake  
NEPA Implementation Section  
USEPA REGION 5  
77 West Jackson Boulevard  
Mail Code: E-19J  
Chicago, IL 60604-3507

### **USFWS**

Mr. Tony Sullins  
Field Supervisor  
Fish and Wildlife Service  
Twin Cities Field Office  
4101 East 80th Street  
Bloomington, MN 55425-1665

Mr. Richard Davis  
Fish and Wildlife Service  
Twin Cities Field Office  
4101 East 80th Street  
Bloomington, MN 55425-1665

### **North Dakota Game and Fish**

Bruce Kreft  
North Dakota Game and Fish Department  
100 N. Bismarck Expressway,  
Bismarck, ND 58501-5095

### **North Dakota Dep of Health**

Pete Wax  
ND Department of Health  
918 East Divide Avenue, 4th Floor  
Bismarck, ND 58501-1947

Mike Ell  
ND Department of Health  
918 East Divide Avenue, 4th Floor  
Bismarck, ND 58501-1947

### **North Dakota Parks and Recreation**

North Dakota Parks and Recreation  
Kathy Duttonhemer  
1(j)() fiasl Century Avenue. Suite 3  
Bismarck, ND 58503-0649

### **ND State Water Commission**

John Paczkowski  
North Dakota State Water Commission  
900 E Boulevard Ave, Dept 770  
Bismarck, ND 58505-0850

Randy Gjestvang  
North Dakota State Water Commission  
623 E Main St. 103  
West Fargo, ND 58078

### **North Dakota SHPO**

Merlan Paaverud  
State Historic Preservation Officer  
State Historical Society of North Dakota  
North Dakota Heritage Center  
612 East Boulevard Ave  
Bismarck, North Dakota 58505-0830

### **Minnesota DNR**

Melissa J Doperalski  
Minnesota Department of Natural Resources  
500 Lafayette Road-Box 10  
St. Paul, Minnesota 55155-4010

Mr. Nathan Kestner  
Natural Resources Dept  
2115 Birchmont Beach Road NE  
DNR NW Region Headquarters  
Bemidji, MN 566018599

### **Minnesota PCA**

Mr. Craig Affeldt  
Municipal Division  
Minnesota Pollution Control Agency  
520 Lafayette Road  
St. Paul, MN 55155

Mr. James Brist  
Minnesota Pollution Control Agency  
520 Lafayette Road  
St. Paul, Minnesota 55155

### **Minnesota SHPO**

Ms Mary Ann Heidemann  
Government Programs and Compliance Officer  
State Historic Preservation Office  
Minnesota Historical Society  
345 Kellogg Boulevard West  
St. Paul, MN 55102-1906

**City of Drayton**

City of Drayton  
Attn: Carol Gardner  
PO Box 280  
Drayton, ND 58225-0280

**City of Fargo**

Mark Bittner  
City of Fargo,  
200 3rd St. N.,  
Fargo, ND, 58102

**City of Moorhead**

Robert Zimmerman  
City of Moorhead  
500 Center Ave  
Moorhead, MN 56561

**Native American POCs**

Darrell E. Smith  
Cultural Advisor Cultural Preservation Office  
Spirit Lake Sioux Tribe  
P.O. Box 359  
Fort Totten NO 58335

Perry Brady  
Tribal Historic Preservation Officer  
Three Affiliated Tribes  
Mandan Hidatsa and Arikara Nation  
404 Frontage Road  
New Town NO 58763

Anthony Morse  
Lower Sioux Indian Community  
Tribal Historic Preservation Officer  
P.o. Box 308  
Res. Hwy I  
Morton MN 56270

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Tribal Historic Preservation Officer  
Turtle Mountain Band of Chippewa  
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Curley Youpee  
Fort Peck Dakota & Assiniboine Tribes  
Director Cultural Resource Department and  
Native American Graves Protection and  
Repatriation Act Coordinator  
Box 1027  
Poplar MT 59255 59225

WasteWin Young, THPO  
Standing Rock Sioux Tribe  
P.O. Box 0  
Fort Yates NO 58538

Dianne Desrosiers & Jim Whitted  
Sisseton/Wahpeton Oyate  
Tribal Historical Preservation Officer  
PO Box 907  
205 Oak St. E., Suite 207  
Sisseton SO 57262

Hubert Two Leggins  
CulturalRenewable Resources Director  
Apsaalooke (Crow Tribe)  
PO Box 159  
Crow Agency MT 59022

Conrad Fisher  
Tribal Historic Preservation Officer  
Northern Cheyenne Tribe  
PO Box 128  
Lame Deer MT 59043

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Wahpekute Band of Dakota  
3322 Gill Rd  
Waubay SD 57273

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Ogalala Sioux Tribe  
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Pine Ridge SD 57770

Rosemary Berens  
Tribal Historic Preservation Officer  
Bois Forte Band of Chippewa Indians  
1500 Bois Forte Road  
P.O. Box 16  
Nett Lake MN 55772

LeRoy Defoe, Acting THPO  
Fond du Lac Band of Lake Superior Chippewa  
1720 Big Lake Road  
Cloquet MN 55720

Preservation Officer  
Grand Portage Band of Lake Superior Chippewa  
PO Box 428  
Grand Portage MN 55605

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Tribal Historic Preservation Officer  
Leech Lake Band of Ojibwe  
115 6th Street NW, Suite E  
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Anthony Morse, Preservation Officer  
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PO Box 3078  
Reservation Highway 1  
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Upper Sioux Community  
PO Box 147  
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Tom McCauley  
Tribal Historic Preservation Officer  
White Earth Band of Minnesota Chippewa  
Roads Department  
P.O. Box 418  
White Earth MN 56591

Lana Gravatt  
Tribal Historic Preservation Officer  
Yankton Sioux Tribe  
P.O. Box 248  
Marty SD 57631

Wanda Wells  
Tribal Historic Preservation Officer  
Crow Creek Sioux Tribe  
P.O. Box 50  
Ft. Thompson SD 57339

James B. "JB" Weston  
Tribal Historic Preservation Officer  
Flandreau Santee Sioux Tribe  
P.O. Box 285  
Flandreau SD 57028

Document also available at:  
[www.mvp.usace.army.mil](http://www.mvp.usace.army.mil)

**EXHIBIT D – Public Comments**

# Minnesota Department of Natural Resources

500 Lafayette Road • St. Paul, MN • 55155-40\_\_



January 7, 2013

Mr. Terry Birkenstock  
Deputy Chief, Regional Planning and Environment Division North  
U.S. Army Corps of Engineers  
St. Paul District  
180 fifth Street East, Suite 700  
St. Paul, MN 55101-1678

Mr. Elliott Stefanik  
Environmental Specialist  
U.S. Army Corps of Engineers  
St. Paul District  
180 fifth Street East, Suite 700  
St. Paul, MN 55101-1678

RE: Drayton Dam Fish Passage Project Federal Environmental Assessment (EA)

Mr. Birkenstock and Mr. Stefanik:

The Minnesota Department of Natural Resources (DNR) has completed its review of the December 3, 2012, Drayton Dam Fish Passage Project Federal Environmental Assessment (EA) and offers the following comments:

## General Comments

The proposed project would improve the ability for fish to migrate past the new dam structure and optimally select habitats that improve their ability for reproduction and survival, thus providing long-term benefits to the Red River and its tributaries. No long-term adverse impacts would be anticipated to aquatic habitat or biota.

The EA indicates, "The proposed action would provide strong, meaningful benefits to the aquatic environment through improved connectivity. The project will greatly help different aquatic species meet seasonal habitat requirements by reconnecting a pathway between habitat types that are interspersed throughout the watershed." The DNR agrees with this statement and the Division of Fisheries supports this project and the preferred design.

Furthermore we agree that the effects identified are acceptable given the great value that will be gained through improved fish passage and biotic connectivity.

## Environmental Review

As you are probably aware, the project exceeds a mandatory Environmental Assessment Worksheet (EAW) threshold (Minnesota Rules part 4410.4300, subpart 27) as it will change the course current or cross-section of one acre or more of a public water. Minnesota environmental review requirements will be fulfilled as part of the more detailed State Environmental Impact Statement (EIS) that will be prepared for the Fargo-Moorhead Flood Risk Reduction Project.

While this NEPA EA focuses on the environmental conditions and potential effects specific to the Drayton Dam mitigation project, the State EIS will need to evaluate the Drayton Dam project's effectiveness in mitigating fish passage biological connectivity impacts associated with the Fargo-Moorhead Flood Risk Reduction Project. We will continue to work with key Corps and project proposer staff on scoping of the appropriate type of assessment.

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Also, to reiterate past correspondence and conversations; until completion of the State EIS, no final government actions or decisions can be made until completion of the state environmental review process (Minnesota Rules part 4410.3100, subpart 1).

Thank you for the opportunity to review this project. Please contact me at 651-259-5089 with questions regarding this review or the State EIS scoping process.

Sincerely,



Stuart Arkley  
Environmental Review Unit  
Division of Ecological and Water Resources

cc: Nathan Kestner, DNR Bemidji



TRIBAL HISTORIC PRESERVATION OFFICE  
STANDING ROCK SIOUX TRIBE

Administrative Service Center  
North Standing Rock Avenue  
Fort Yates, N.D. 58538  
Tel: (701) 854-2120  
Fax: (701) 854-2138

December 18, 2012

Deputy Chief  
Regional Planning and Environment Division North  
St. Paul District, Corps of Engineers  
180 5<sup>th</sup> St. East, Suite 700  
St. Paul, MN 55101-1678

Subject: Drayton Dam Fish Passage Project, Pembina County, ND and Kittson County, MN

Dear Mr. Birkenstock:

Thank you for contacting us regarding this project. So long as the boulders used to complete the Fish Passage Dam (example depicted in figure 2, EA-4) are sourced from the river and not from the surrounding countryside, this office has no concerns with the proposed project.

If boulders are sourced outside the riverbed, we request further consultation to address potential impacts to stone feature sites of significance to the Standing Rock Sioux Tribe. If you wish to contact me regarding this project I can be reached at 701-854-8617 or [mwilson@standingrock.org](mailto:mwilson@standingrock.org). Please reference THPO file # 12-185.

Sincerely,

Mary S. Wilson  
Section 106 Project Coordinator  
Tribal Historic Preservation Office

## Stefanik, Elliott L MVP

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**From:** Brist, Jim (MPCA) [jim.brist@state.mn.us]  
**Sent:** Wednesday, January 09, 2013 8:25 AM  
**To:** Stefanik, Elliott L MVP; Birkenstock, Terry MVP  
**Cc:** Wilde, William (MPCA); Richfield, David (MPCA); Helwig, Daniel (MPCA)  
**Subject:** Preliminary 401 determination for the Drayton Dam project

Elliot here's our preliminary response for the Drayton Dam project.

The Minnesota Pollution Control Agency (MPCA) has made a preliminary determination about the 401 Certification for the proposed Fish Passage Project at Drayton Dam located on the Red River of the North, connecting Pembine County, North Dakota and Kittson County, Minnesota via of Drayton Dam. In addition, Drayton Dam is located approximately two miles north of the City of Drayton, North Dakota.

The MPCA does not see any significant outstanding issues that would prevent the issuance of the 401 Water Quality Certification. However, the MPCA would require the use of BMPs when installing the fish passage to minimize sedimentation and downstream monitoring, before during and after the project to ensure that any impacts are minimized and kept at acceptable levels.

Thx, Jim

Jim Brist  
401 Certification Coordinator  
MPCA  
(651) 757-2245



**STATE HISTORIC PRESERVATION OFFICE**

December 27, 2012

Mr. Terry Birkenstock  
U.S. Army Corps of Engineers  
180 5<sup>th</sup> Street East, Suite 700  
St. Paul, MN 55101-1678

RE: Drayton Dam Fish Passage Mitigation Project  
Red River, Kittson County  
SHPO Number: 2012-1761

Dear Mr. Birkenstock:

Thank you for submitting the results of the additional archaeological survey conducted for this project. This information has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the Advisory Council on Historic Preservation (36CFR800).

Based on our review of the additional survey work that was conducted for a storage yard and access road for this project, we agree that no archaeological sites will be affected by this project.

Regarding the dam itself, we previously agreed with your recommendation that the Drayton Dam is not eligible for listing in the National Register of Historic Places.

Therefore, we concur with your finding that **no historic properties will be affected** by the Drayton Dam Fish Passage Mitigation Project.

Please contact our Compliance Section at (651) 259-3455 if you have any questions regarding our review of this project.

Sincerely,

A handwritten signature in blue ink that reads 'Kelly Shagg Johnson'.

Mary Ann Heidemann, Manager  
Government Programs and Compliance

cc: Brad Perkl, U.S. Army Corps of Engineers



# Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | 651-282-5332 TTY | [www.pca.state.mn.us](http://www.pca.state.mn.us) | Equal Opportunity Employer

January 4, 2013

Mr. Terry Birkenstock  
Deputy Chief, Regional Planning and Environment Division North  
St. Paul District, Corps of Engineers  
180 Fifth Street East, Suite 700  
St. Paul, MN 55101-1678

Re: Drayton Dam Mitigation Project Environmental Assessment

Dear Mr. Birkenstock:

Thank you for the opportunity to review and comment on the Environmental Assessment (EA) for the Drayton Dam Mitigation Project (Project). The Project consists of the removal of the existing dam and construction of a new dam with a fish passage on the Red River of the North in Kittson County, Minnesota. Minnesota Pollution Control Agency (MPCA) staff has reviewed the EA and have no comments at this time.

Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EA, please contact me at 651-757-2508.

Sincerely,

A handwritten signature in black ink that reads "Karen Kromar".

Karen Kromar  
Planner Principal  
Environmental Review Unit  
Resource Management and Assistance Division

KK:bt

cc: Craig Affeldt, MPCA, St. Paul



January 15, 2013

Terry J. Birkenstock  
Deputy Chief, Regional Planning and Environmental Division North  
St. Paul District, Corps of Engineers  
180 5<sup>th</sup> Street East, Suite 700  
St. Paul, MN 55101-1678

**Section 401 Water Quality Certification:** Drayton Dam Fish Passage Project, Pembina County, ND and Kittson County, MN

Dear Mr. Birkenstock:

On December 10, 2012 the North Dakota Department of Health (department) received the Clean Water Act Section 404(b)(1) Evaluation and Environmental Assessment for the Drayton Dam Fish Passage Project. The department has evaluated the project for consistency in meeting the State's Standards of Quality for Waters of the State. Based on that evaluation, the department is reasonably assured that no violation of the Water Quality Standards will occur and is providing Clean Water Act Section 401 Water Quality Certification.

The department reserves the right to amend this certification if it is determined that the conditions no longer provide reasonable assurance that the project is complying with the Water Quality Standards or other appropriate requirements of state law.

Should you have any questions, I may be reached at 701.328.5268.

Sincerely,

Peter Wax  
Environmental Scientist  
Division of Water Quality

PNW:dlp