



RECORD OF DECISION
CART CREEK SITE 1, NORTH BRANCH PARK RIVER WATERSHED PLAN
PEMBINA COUNTY, NORTH DAKOTA

I. DECISION

Natural Resources Conservation Service (NRCS) has prepared a ROD following the 2024 Watershed Plan and Environmental Impact Statement for Cart Creek Site 1 of the North Branch of the Park River Watershed. The purpose of the EIS and its assessment and review is to ensure agencies consider the environmental impacts of their action in decision making. NRCS involvement in the project is through both the Regional Conservation Partnership Program (16 U.S.C. Chapter 58, Subchapter VIII) and the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended, 16 U.S.C. 1001-1008). The ROD is available for viewing.

NRCS has selected Alternative 2 of the EIS, Cart Creek Site 1, a multi-purpose, off-channel, dry dam with a drainage area of 33.8 square miles, temporary flood storage capacity of 2,593 acre-feet, embankment length of 2.6 miles, maximum height of 17.3 feet, and average height of 9.7 feet. The dam is located in Section 24 of Township 160 North, Range 56 West, approximately 2 miles east of the town of Mountain, in Pembina County, North Dakota. Within the temporary flood pool, 133.6 acres of shallow retention basins with water control structures and subsurface drainage will be constructed and operated for the purpose of phosphorus and nitrogen removal from incoming runoff through biomass harvest. Also planned within the temporary flood pool are 470.8 acres of wetland restoration (inclusive of the 133.6-acre managed shallow retention basins), 18.5 acres of wetland enhancement, 36.3 acres of upland wildlife habitat restoration, and 3.9 acres of existing upland wildlife habitat protection.

II. BACKGROUND

The proposed federal action includes potential provision of technical and financial assistance for implementation of a 2,593 acre-feet multi-purpose dry dam, subject to congressional approval, acquisition of land rights by the Park River Joint Water Resource District (PCWRD) as the Sponsoring Local Organization for the project, and available NRCS funding for the final engineering design and the construction phases of the project.

North Branch Park River Watershed is 164,761 acres, in northeastern North Dakota, and is a tributary to the Red River of the North, which drains to Lake Winnipeg and then Hudson Bay. The watershed is subject to expansive, long duration, floods events. Average annual flood damages in the watershed are approximately \$1,733,000 as a result of 4,485 acres of cropland inundation and damage to roads, buildings, and other property. The 100-year flood inundates 136 structures, including the community of Crystal, ND. The watershed is also a significant contributor of nutrients to the mainstem Red River, contributing 36,412 lbs of phosphorus and 197,533 lbs of nitrogen annually. The Red River Basin is one

of the largest artificially drained landscapes in the world, with historic losses of wetland and prairie habitat threatening multiple wildlife species.

The Park River is a tributary to the Red River of the North, which outlets to Lake Winnipeg, the world's 10th largest freshwater lake. Lake Winnipeg supports a commercial fishing industry, recreation, over 30 communities, and numerous tribal populations that rely on the lake for economic, cultural, and spiritual activities. Increases in runoff, nutrient loads, and warming temperatures since the 1990s have resulted in degraded water quality and extensive algal blooms, with subsequent negative consequences to fisheries, recreation, and lake ecology. While the Red River contributes only 10-15% of runoff to the lake by volume, monitoring records indicate that it contributes an estimated 69% of the total phosphorus to Lake Winnipeg as well as a substantial load of nitrogen. The Boundary Waters Treaty (BWT) was signed in 1909 to adjudicate conflicting interests on rivers and lakes along the international border between the U.S. and Canada. Article IV of the BWT states that "boundary waters or waters flowing across the boundary shall not be polluted to the injury of health and property of the other". The International Joint Commission was established as an independent and objective advisor to the two governments to prevent and resolve disputes therefore their sub-entities in the Red River, the International Red River Board and Red River Joint Commission have been engaged in scientific studies, stakeholder group meetings, and negotiations for decades on Red River nutrient impacts on Lake Winnipeg. The result was adoption of a total phosphorus and total nitrogen load and concentration objectives at the U.S. Canadian border in 2020. The adopted phosphorus target is 0.15 mg/L, which has been consistently exceeded by measurements over the last two decades at the USGS gauge station near the border, with a flow average trendline that is continually increasing. The adopted nitrogen target is 1.15 mg/L, which has also been consistently exceeded over the last two decades, but for which the flow average trendline is stable.

The North Branch Park River, Cart Creek Site 1 Project is a federally assisted action authorized for planning under Public Law 83-566, the Watershed Protection and Flood Prevention Act. This act authorizes the Natural Resources Conservation Service (NRCS) to provide technical and financial assistance to local project sponsors. The local sponsor of the project, who would be the owner and operator of the project under terms of a 50-year Operation and Maintenance Agreement with the USDA-NRCS, is the Park River Joint Water Resource District (PRJWRD).

In 2015, the Red River Retention Authority (RRRA) was awarded a \$12 Regional Conservation Partnership Program project to support watershed planning under the authority of the Watershed Protection and Flood Protection Act within the United States portions of the Red River Basin. Following approval of a request by the PRJWRD to the RRRA and NRCS, the watershed planning effort for the North Branch Park River was initiated in 2016. The U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service agreed to be cooperating federal agencies on the planning effort and an additional 51 local, state, federal agencies, and Tribes invited to participate on the planning team.

The purposes of the federal action are to:

- Reduce flood damage to cropland, roads, buildings, and other property;
- Reduce phosphorus and nitrogen transport from Cart Creek to the mainstem Park River;
- Restore wetland and upland wildlife habitat.

III. ENVIRONMENTAL REVIEW

This ROD is issued pursuant to NEPA (42 U.S.C. 4321 et seq.), the Council of Environmental Quality (CEQ) NEPA regulations (40 CFR Parts 1500-1508), and the Environmental Protection Agency's (EPA) NEPA implementing regulations (40 CFR Part 6). NEPA Section 1505.2(a)(2) requires that, in cases where an EIS has been prepared, the Record of Decision identify "alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural and natural resources. Cart Creek Site 1 (Alternative 2 of the EIS) is the environmentally preferred alternative due to the significant long-term environmental benefits the project provides as well as protections for downstream cultural resources. The U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service, North Dakota Department of Environmental Quality (NDDEQ), North Dakota Department of Water Resources (NDDWR), and North Dakota Game and Fish Department are participated in the watershed planning effort and are in support of this project. Individual permits from the USACE, NDDEQ, and NDDWR would be applied for and issued immediately prior to construction.

IV. ALTERNATIVES

The PCWRD established two project purposes: flood damage reduction and watershed protection (nutrient reduction and wetlands/wildlife habitat). After the initial 2016 public scoping meeting, an additional twelve meetings were held between 2016 and 2019, which resulting in identification and evaluation of ten potential strategies for flood reduction. Those then resulted in identification of four specific project alternatives analyzed and evaluated by the interagency team, landowners, and members of the public. The resulting recommendation by the planning team, which was supported by PCWRD and NRCS, was to move only the Cart Creek Site 1 alternative forward to detailed analysis in the EIS given that it was the alternative which provided the highest level of flood protection, nutrient reduction, and wetlands/wildlife habitat.

Alternative 1 – No Action assumes that without NRCS financial assistance, potential for implementation of flood damage reduction projects within the watershed would be limited. Frequency and magnitude of flood damages will remain consistent with existing conditions, which result in \$1,733,000 in average annual flood damages from inundation of 4,069 acres of cropland and damage to roads, buildings, and other property. Cropland flooding would continue to generate 9,404 pounds per year of phosphorus and 51,017 pounds per year of nitrogen at the 86th Steet NE bridge. Approximately 299 acres within the proposed flood pool would continue in row crop production and 228 acres of land enrolled in USDA Conservation Reserve Program and Wetland Reserve Program would remain in perennial vegetation but functioning without natural hydrology because ditches intercept and divert natural hydrology away from the site. As that land came out of the 10- and 30-year easements over the next decades, it could be re-enrolled in conservation programs or converted to cropland.

Alternative 2 – Cart Creek Site 1 is a multi-purpose, off-channel, dry dam with a drainage area of 33.8 square miles, temporary flood storage capacity of 2,593 acre-feet, embankment length of 2.6 miles,

maximum height of 17.3 feet, and average height of 9.7 feet. The dam is located in Section 24 of Township 160 North, Range 56 West, approximately 2 miles east of the town of Mountain, in Pembina County, North Dakota. Construction of the dry dam, which impounds water for less than two weeks, will reduce flood damage to cropland, roads, and buildings by \$198,530 a year. River flow up to a bankfull event will continue down the natural river channel, with peak flows beyond that stage diverted via a sheet pile weir and channel into the dry dam for temporary retention (7-days for a 2-year event, 15-days for a 100-year event).

Within the temporary flood pool, 133.6 acres of shallow retention basins with water control structures and subsurface drainage will be constructed and operated for the purpose of phosphorus and nitrogen removal from incoming runoff through biomass harvest. At the 86th Street NE bridge, phosphorus loads are anticipated to be reduced by 66% and nitrogen loads by 73%. Additional, unquantified nutrient reduction will occur downstream due to the fact that average annual cropland inundation will be reduced based on peak flow reductions downstream: 39% at a 2-year event, 64% at a 10-year event, 65% at a 100-year event at the 86th Street NE bridge. The 64% reduction at the 10-year, for example, results in 769 acres of cropland removed from inundation. Also planned within the temporary flood pool are 470.8 acres of wetland restoration (inclusive of the 133.6-acre managed shallow retention basins), 18.5 acres of wetland enhancement, 36.3 acres of upland wildlife habitat restoration, and 3.9 acres of existing upland wildlife habitat protection.

Alternative 2 will result in permanent loss of 2.13 acres of wetlands caused by fill placement. An additional .296 acres of wetlands would be temporarily impacted by excavation, which would return to equivalent function post-construction. The permanent losses would be mitigated via restoration of historic wetlands currently in cropland with subsurface tile drainage, with deed restrictions placed the 2.13 acres required for mitigation. Temporary environmental impacts due to noise and dust will be mitigated with best management practices during construction. The project generates a long-term reduction in carbon dioxide of 279 tons per year and a net gain of 468.7 acres of wetlands, as well as functional improvements to the quality of 18.5 acres of existing wetlands.

V. FACTORS CONSIDERED IN MAKING THE DECISION

The following conclusions were reached after carefully reviewing the proposed North Branch Park River, Cart Creek Site 1 Watershed project in light of all national goals and policies, particularly those expressed in NEPA, and after evaluating the overall merit of possible alternatives to the project:

- a. The PCWRD Alternative #2 – Cart Creek Site 1 will employ reasonable and practical means that are consistent with NEPA while permitting the application of other national policies and interests, including contributions towards the international treaty obligation of the U.S. to reduce nutrient loads in the Red River. These means include a project planned and designed to maximize environment benefits in conjunction with providing flood control objections. Project features designed to preserve or increase the extent of environmental values for future generations include:
 - (1) Provisions to recover significant archaeological and historic resources discovered during project construction;

- (2) Developing and operating shallow retention cells with biomass harvest to remove phosphorus and nitrogen transport;
 - (3) Reducing the extents of downstream cropland flooding, to reduce transport of phosphorus and nitrogen to the river;
 - (4) Restoring natural hydrology and establishing perennial, native vegetation managed for wildlife habitat.
- b. The North Branch Park River Watershed project was planned using a systematic interdisciplinary approach involving integrated uses of the natural and social sciences and environmental design arts. All conclusions concerning the environmental impact of the project were based on a review of data and information that would be reasonably expected to reveal significant environmental consequences of the proposed project. These data included studies prepared specifically for the project and comments and views of all interested Federal, State, and local agencies and individuals. The results of this review constitute the basis for the conclusions and recommendations. The project will not affect any cultural resources eligible for inclusion in the National Register of Historic Places. Nor will the project affect any species of fish, wildlife, or plant or their habitats that have been designated as endangered or threatened.
 - c. In studying and evaluating the environmental impact of the North Branch Park River Watershed project, every effort was made to express all significant environmental values quantitatively and to identify and give appropriate weight and consideration of nonquantifiable environmental values.
 - d. Every possible effort has been made to identify those adverse environmental effects that cannot be avoided if the project is constructed.
 - e. The long and short-term resource uses, long-term productivity, and the irreversible and irretrievable commitment of resources are described in the FEIS.
 - f. All reasonable and viable alternatives to project features and to the project itself were studied and analyzed with reference to national policies and goals, especially those expressed in NEPA and the Federal water resource development legislation under which the project was planned. Each possible course of action was evaluated as to its possible economic, technical, social, and overall environmental consequences to determine the tradeoffs necessary to accommodate all national policies and interests. No alternative or combination of alternatives will afford greater protection of the environmental values while accomplishing the other project goals and objectives.
 - g. The proposed project will be the most effective means of meeting national goals and is consistent in serving the public interest by including provisions to protect and enhance the environment. The recommended alternative, Cart Creek Site 1, is the environmentally preferable alternative.

VI. PUBLIC NOTICE

Two public meetings were held by the Sponsor (Park River Joint WRD) in 2014 to solicit input on concerns within the watershed, prior to NRCS involvement in the planning effort. The meetings focused on soliciting input from attendees to identify problems and opportunities to reduce flood risk. Comment forms were provided to allow input on observed locations of flood concerns in the watershed. In total, approximately 40 comment forms were returned to the SLO. Comments received generally indicated a high level of concern with damages related to flood flows within the North Branch Park River Watershed.

These damages included field erosion, transportation and infrastructure disruptions, community impacts, and impacts to rural residents.

At the outset of the NRCS watershed planning effort in 2016, NRCS requested the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service to be cooperating federal agencies on the planning effort, which they agreed to. An additional 51 local, state, federal agencies, and tribes were invited to all meetings and solicited for comments throughout the planning process. Formal consultation through Section 106 of the National Historic Preservation Act was initiated with 30 Tribes and the ND State Historic Preservation Office (SHPO) in 2018 and concluded in late 2023. The ND SHPO concurred with the NRCS findings of “No Adverse Effect”. An initial Public Scoping meeting was held by the SLO occurred on February 17, 2016, in Mountain, ND. The meeting was advertised in the Cavalier Chronicle newspaper and invitations were also mailed to some potentially affected landowners, as well as local, state and federal agencies. The meeting focused on solicitation of public input on concerns within the North Branch Park River Watershed. The meeting was attended by approximately 90 residents and resulted in 13 returned comment forms. The highest indicated concerns included culvert and bridge washouts, field erosion/deposition, channel erosion/deposition, road damages, floodplain management, land use, soil resources, prevented planting, riparian areas, and delayed planting.

The Project Team met on April 27, 2016; May 25, 2016, June 29, 2016, July 27, 2016; and August 31, 2016. The focus of early coordination with the Project Team was to define resources of concern within the watershed, and to preliminarily narrow the range of alternatives to evaluate within planning effort. The Sponsor also met publicly on March 26, 2019, August 13, 2019, and November 19, 2019, during monthly public Pembina County Water Resource District meetings to discuss the development of alternatives. These meetings focused on benefits vs costs, technical feasibility, and local acceptance of proposed actions.

In 2022, NRCS deemed it necessary to upgrade the environmental evaluation from an Environmental Assessment to an Environmental Impact Statement due to planned beneficial water quality impacts to the Red River, an international water course, as well as the fact that the final alternative identified for detailed analysis requires congressional approval. As specified in 7 CFR 650.12(c) and 40 CFR 1505.2 A Notice of Intent (NOI) to prepare an EIS was published to the U.S. Federal Register on December 14, 2022 and advertisements for a new public scoping meeting were placed in the Cavalier Chronicle February 8th, 15th and 22nd, 2023. An in-person/virtual public scoping meeting for the EIS was held on February 23, 2023, in Cavalier.

As specified in 7 CFR 650.12(c) and 40 CFR 1505.2, the draft EIS public notice was initiated by publication of the draft EIS on December 1, 2023, as identified by EIS number 20230166, to the EPA's CDX system. All stakeholders including the Governor of ND, tribes, cooperating federal agencies, affected landowners and local, state and other federal agencies were sent a Notice of Availability of the Draft Plan-EIS via mail or email and invited to an in-person Public Meeting on December 12, 2023, in Cavalier, ND. Newspaper advertisements were published 3 times in the Cavalier Chronicle prior to the public meeting. The public comment period ended on January 26, 2024 and eight substantive comments were

received and addressed with additions to the Final Plan-EIS related to hydrology, sedimentation, bat roosting habitat, invasive species, and air quality.

The Final Plan-EIS was made available for review through the EPA's CDX system on July 19, 2024 under EIS number 20240125. The Notice of Availability of a Final Plan-EIS was also published in the Cavalier Chronicle newspaper on July 24, 2023. All stakeholders including the Governor of ND, congressional representatives and senators, tribes, cooperating federal agencies, affected landowners and local, state and other federal agencies were sent a Notice of Availability of the Final Plan-EIS via mail or email. The comment period on the FEIS was opened through August 23, 2024. Comments were received from the USFWS and EPA on the FEIS and are included in Appendix A, along with responses.

VII. CONCLUSION

The project uses all practical means, consistent with considerations of national policy, to meet the goals established in NEPA. The project will serve the overall public interest and meet the needs of the project sponsors. The EIS has been prepared, reviewed, and accepted in accordance with the provisions of NEPA as implemented by Departmental regulations for the preparation of EIS. After considering a broad range of alternatives, the EIS has found the PRJWRD Alternative 2 – Cart Creek Site 1 to be the environmentally preferable alternative to serve the Sponsor's purpose and need.

I have decided to authorize the PRJWRD Alternative 2 – Cart Creek Site 1, subject to congressional approval, which includes construction of a of 2,593 acre-feet multi-purpose dry dam to provide flood control and significant, long-term environmental benefits.

Dan Hovland,
North Dakota State Conservationist,
U.S. Department of Agriculture, Natural Resources Conservation Service