Park River Watershed Project Implementation Plan

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STATE: North Dakota
WATERSHEDS: Park River Watershed, including Homme Dam Reservoir
HYDROLOGIC UNIT CODE: 09020310 **HIGH PRIORITY WATERSHED:** Yes
TMDL STATUS: Homme Dam Reservoir – TMDL in 2012
The Park River has no TMDL

TMDL Implementation

PROJECT TYPES	WATERBODY TYPES	NPS CATEGORY
[ ] STAFFING & SUPPORT	[ ] GROUNDWATER	[X] AGRICULTURE
[X] WATERSHED	[X] LAKES/RESERVOIRS	[ ] URBAN RUNOFF
[ ] GROUNDWATER	[X] RIVERS	[ ] SILVICULTURE
[ ] I & E	[X] STREAMS	[ ] CONSTRUCTION
	[ ] WETLANDS	[ ] RESOURCE EXTRACTION
	[ ] OTHER	[ ] STOWAGE/LAND
		[ ] DISPOSAL

PROJECT LOCATION: Latitude: 48.40628 Longitude:-97.79094
Walsh County

MAJOR GOAL:
The primary goals of this watershed program are to restore recreational uses and fish/aquatic biota at the Homme Dam reservoir and to improve water quality and riparian areas in the South, Middle, and North Branches of the Park River for fish and aquatic biota facing impairments due to nonpoint source pollution.

Phase III of the project will focus on increasing BMP practices within the watershed boundaries through a bolstered education and outreach campaign addressed to landowners, crop producers, and ranchers in the areas of critical concern near Homme Dam and the riparian corridor.

PROJECT DESCRIPTION:

The watershed project will:

1. Restore recreational uses at Homme Dam through the maintenance of chlorophyll-a concentrations in the reservoir at the level of 16 µg/L. Meeting this target requires the reduction in phosphorus loading into the reservoir by 40%. The reduction in phosphorus also would benefit the impaired function of the fishery and associated aquatic species.

2. Improve conditions in riparian areas and reduce non-point sources of phosphorus loading from cropland and non-cropland areas in impaired reaches of the North, Middle and South Branches of the Park River.

3. Design and deliver educational outreach for a targeted BMP campaign focused on landowners and producers near Homme Dam and the riparian corridor.

4. Deliver technical and financial assistance for the implementation of best management practices (BMPs) within AnnAGNPS priority areas on cropland, rangeland, and adjacent riparian corridors in the watershed.

5. Partner with producers, landowners, communities, local governments, local agencies, and other stakeholders to coordinate conservation planning that will address resource concerns and benefit natural resources in the watershed.

6. Meet quarterly with the Walsh County Water Quality Team to aid in watershed planning for the reduction of nonpoint source pollution impacting water quality and to host annual Water Summit in Walsh County to help recruit landowners for BMPs and partners for conservation planning.

7. Document trends in water quality over the course of the project, including chlorophyll-a concentrations and phosphorus loading and evaluate progress towards established water quality goals.

8. Educate landowners, students, and other stakeholders on NPS pollution concerns and solutions, including soil erosion, nutrient transport, and harmful algae blooms (HABs) at the Homme Dam reservoir.

9. Coordinate with the Soil Health Team in Walsh County to provide BMP recommendations for implementation in the watershed.

10. Coordinate with the NDDEQ and International Water Institute to utilize the PTMApp

Decision Support Tool for the Park River Watershed developed in 2020 to allow for better prioritization and identification of watershed and field areas for nutrient and sediment reduction.

Total 319 FY 25-28 Funds Requested: $300,663	Local Match: $442,504
Other State and Federal: $151,000	Total Budget: $442,504
Total 319 FY 22 Funds Awarded: $125,752	Local Match: $189,081
Other State and Federal: $1,114,000	Total Budget: $1,428,83

PURPOSE

This water quality summary was developed for the Walsh County Three Rivers Soil Conservation District (SCD) to support the Park River Homme Dam Watershed Project – Phase II (RNIPARK). The project funded from FY 21-25 aimed to reduce nonpoint source pollution impacts to aquatic life and recreation uses in Homme Dam and to improve water quality and riparian areas in the South, Middle, and North Branches of the Park River for aquatic life. To achieve this, the SCD coordinated local conservation planning, including Best Management Practice (BMP) implementation in priority areas. Priority areas are identified based on watershed pollution assessment tools such as AnnAGNPS (Annual Agricultural Non-Point Source model) and PTMApp (Prioritize, Target, and Measure Application). In coordination with these tools, water quality sampling assessed conditions throughout the watershed and measure nutrient, sediment, and bacteria reduction progress. The following provides an overview and analysis of the water quality data collected (2022-2024) and future monitoring planning for the project.

LOCATION

Water quality sampling and macroinvertebrate sampling took place at three stream sites in the Park River watershed: one on the Middle Branch Park River and two on the South Branch Park River. Additionally, water quality sampling took place at one reservoir site, the deepest point on Homme Dam. (Figure 1)

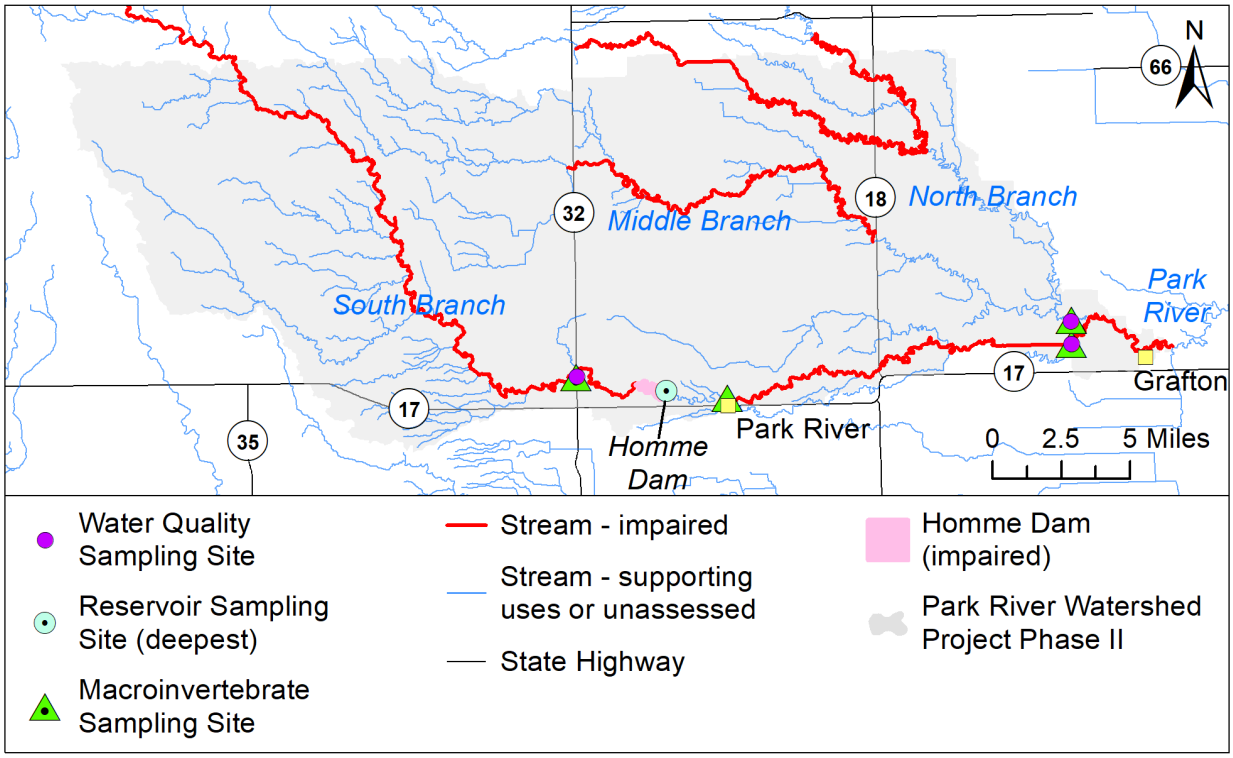


Figure 1: RNIPARK project area and sampling locations.

SAMPLING OVERVIEW

To determine impacts to recreation and aquatic life in the reservoir, water quality samples were collected by the SCD at the deepest location and analyzed for surface (2-m column sample) Total Suspended Solids (TSS), nutrients complete (ammonia as nitrogen, nitrate+nitrite, total Kjeldahl nitrogen, total nitrogen, total phosphorus), chlorophyll-a, Secchi disc transparency, and depth profiles of temperature and dissolved oxygen.

To determine impacts to recreation and aquatic life in streams, water quality samples were collected by the SCD and analyzed for *Escherichia coli* bacteria (*E. coli*), TSS, and nutrients complete; macroinvertebrate samples were collected by the North Dakota Department of Environmental Quality (NDDEQ).

Each water body in the state is assigned a unique ID to track water quality status. Table 1 details each water body sampled under RNIPARK, including status relative to state water quality standards (supporting standards vs impaired). "Pre-Project Status" reflects water quality conditions *prior to* the start of this project. Updated status' will appear in the next iteration of the ND Integrated Report (https://deq.nd.gov/WQ/3_Watershed_Mgmt/2_TMDLs/TMDLs_IR.aspx).

Table 1. Project sampling sites and pre-project conditions for RNIPARK.

Site IDs	Assessment Unit ID	Pre-Project Status*
381260 (Homme Dam)	ND-09020310-001-L_00	Recreation: Impaired based on nutrient levels Aquatic Life: Impaired based on nutrient levels and sedimentation
386031	ND-09020310-025-S_00	Recreation: Not assessed Aquatic Life: Insufficient data
380121	ND-09020310-020-S_00	Recreation: Not assessed Aquatic Life: Impaired based on benthic and fish populations
386032	ND-09020310-016-S_00	Recreation: Not assessed Aquatic Life: Impaired based on benthic, fish, and habitat surveys

*Based on data collected from 2008 - 2018

WATER QUALITY STANDARDS

Recreation and aquatic life uses are assessed based on North Dakota surface water quality standards. The following sections list the numeric standards used to determine water quality conditions and project progress. The state also has narrative water quality standards describing conditions needed to support uses, such as "All waters of the state shall be free from nutrients attributed to municipal, industrial, or other discharges or agricultural practices, in concentrations or loadings which will cause accelerated eutrophication…to the extent that it threatens public health or welfare or impairs present or future beneficial uses."

Complete water quality standards can be found at: https://ndlegis.gov/information/acdata/pdf/33.1-16-02.1.pdf.

Lakes and Reservoirs

Recreation & Aquatic Life

Recreation and aquatic life uses are assessed based, in part, on the amount of nutrients in a lake or reservoir. Additionally, aquatic life is based on dissolved oxygen levels and sedimentation.

Nutrients

A Total Maximum Daily Load (TMDL) addressing excess nutrients impacting recreation and aquatic life in the reservoir was developed in 2012 (https://deq.nd.gov/ search "Homme Dam TMDL"). TMDLs identify the maximum amount of a pollutant that a water body can handle while still meeting water quality standards. The TMDL was developed based on the following targets for the growing season (April-November):

Chlorophyll-a ≤ 16.9 µg/L
Total Phosphorous ≤ 0.048 mg/L (expressed as 27.4 kg/day)
Secchi Disk Transparency ≥ 1 m

Dissolved Oxygen (DO)

Dissolved oxygen ≥ 5 mg/L as a daily minimum (up to 10% of representative samples collected during any 3-year period may be < 5 mg/L if lethal conditions are avoided). This does not apply to the hypolimnion (cold bottom layer of water) of class 3 (including Homme Dam) and 4 lakes/reservoir during periods of thermal stratification.

Total Suspended Solids (TSS) < 25 mg/L

North Dakota does not currently have numeric water quality standards for TSS. Similar reservoir projects in the Red River Basin have used a guideline target of < 25 mg/L.

Rivers and Streams

Recreation

Recreation use is assessed based, in part, on the amount of *Escherichia coli (E. coli)* bacteria in a river or stream.

E. coli Bacteria

Monthly geometric mean ≤ 126 CFU/100mL (CFU = colony forming units)
AND
≤ 10% monthly samples exceed 409 CFU/100mL

Aquatic Life

Aquatic life use is assessed based, in part, on the amount of sediment and nutrients in a river or stream and it's biological integrity.

Total Suspended Solids (TSS)

North Dakota does not currently have numeric water quality standards for TSS. Similar stream projects in the Red River Basin have used a guideline target of ≤ 35 mg/L.

Total Phosphorus (TP)

To align with the nutrient TMDL developed for Homme Dam, a TP target of ≤ 0.048 mg/L will be used.

Index of Biological Integrity (IBI)

A macroinvertebrate IBI score > 70 for streams in this ecoregion is considered "Least Disturbed" (target of ≥ 71) which corresponds with the TN and TP targets above.

Nutrient and IBI targets for the Red River Basin can be found at:

https://deq.nd.gov/publications/WQ/3_WM/River-Stream/RedRiver/Final_RBARED_20130401.pdf.

RESULTS

Between May 2023 and July 2024 nearly 300 water quality samples were collected and analyzed for this project. In 2024, eight lake profiles were collected. No data were collected in 2022. Some August/September data were not available at the time of this report and may shift overall results described below. The following sections summarize results for each sampling site. A complete set of water quality data can be found at: https://deq.nd.gov/WQ/3_Watershed_Mgmt/SWDataApp/viewer/index.html.

Reservoir Results

In June 2024 a water quality factsheet was developed for the SCD, describing reservoir conditions from April-June 2024 compared to historical data (Homme Reservoir fact sheet). The following expands on this summary to include July and August 2024 data.

Chlorophyll-a

Chlorophyll samples are collected from April-October. None of the samples exceeded the target (16.9 µg/L) and concentrations decreased overall across the sampling period (Figure 2).

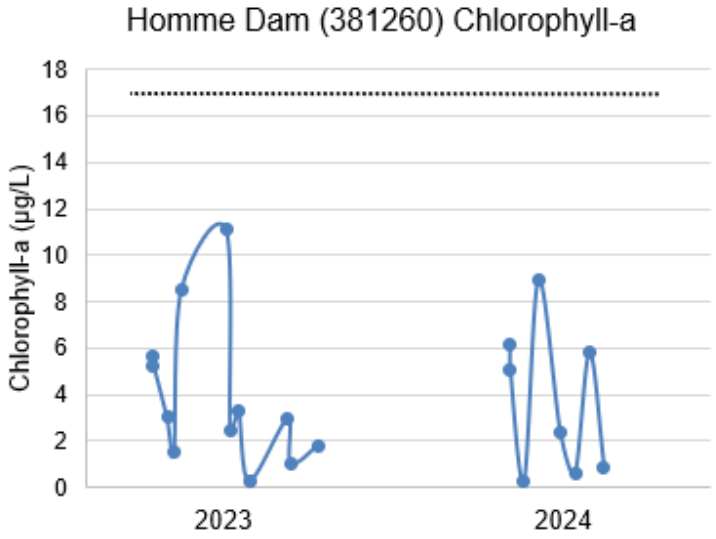
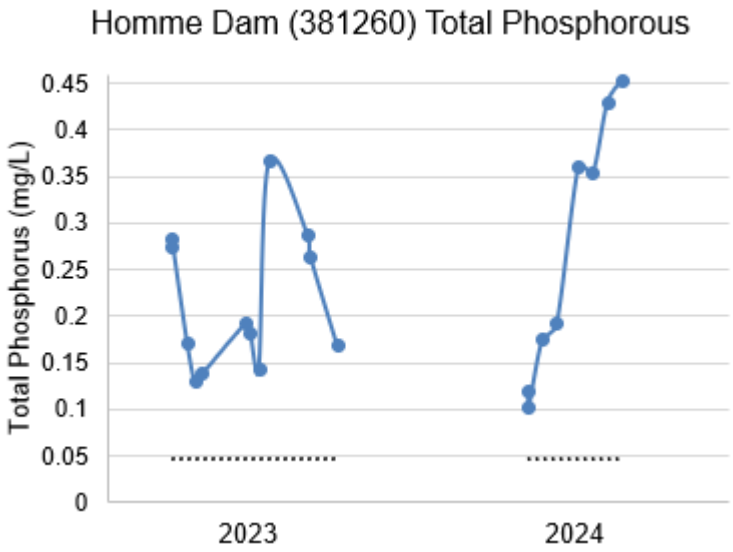


Figure 2. Chlorophyll-a concentration at Homme Dam (deepest site, 381260) from May 2023-July 2024, compared to target (dotted line, 16.9 µg/L).

Total Phosphorus (TP)

TP samples are collected from April-October. All samples exceeded the target (0.048 mg/L) and concentration increased overall across the sampling period (Figure 3).

Figure 3. Total phosphorous concentration at Homme Dam (deepest site, 381260) from May 2023-July 2024, compared to target (dotted line, 0.048 mg/L).



Secchi Disk Transparency

Secchi disk readings were not collected in 2023. In 2024, nine readings were taken from April-August, ranging from 0.6 m to 3 m and averaging 1.1 m. Two of the seven readings did not support the target value (≥ 1 m) (June/July).

Dissolved Oxygen (DO)

Depth profiles were not collected in 2023. In 2024, eight DO/temperature profiles were taken from April-August. Dissolved oxygen ≥ 5 mg/L as a daily minimum (up to 10% of representative samples collected during any 3-year period may be < 5 mg/L if lethal conditions are avoided).This does not apply to the hypolimnion (cold bottom layer of water) during periods of thermal stratification. The hypolimnion is estimated based on a temperature gradient and varies throughout the year, typically identified with > 1 degree Celsius change in temperature over 1-m change in depth.

Figure 4 displays DO profiles including the estimated hypolimnion and state water quality standard (5 mg/L). In the early spring (4/2524 & 5/8/24) the reservoir was well-mixed (no thermal stratification) and DO concentrations supported the > 5 mg/L standard. Moving into late-spring (5/22/24 & 6/12/24), DO concentrations began to decrease overall and bottom layer concentrations did not support the standard. As the lake began to stratify (June), DO concentrations continued to decrease overall, but still meet standards. In July, the reservoir again became well-mixed, likely due to high-intensity precipitation events (moving the hypolimnion deeper), resulting in DO concentrations not supporting the standard. Finally, in August conditions re-stratified and DO concentrations were sufficient to support the standard.

A total of 80 individual DO measurements were collected in 2024, 6 of which (7.5%) did not meet the target criteria described above. Being less than 10%, these conditions, overall, supported the state water quality DO standard for aquatic life.

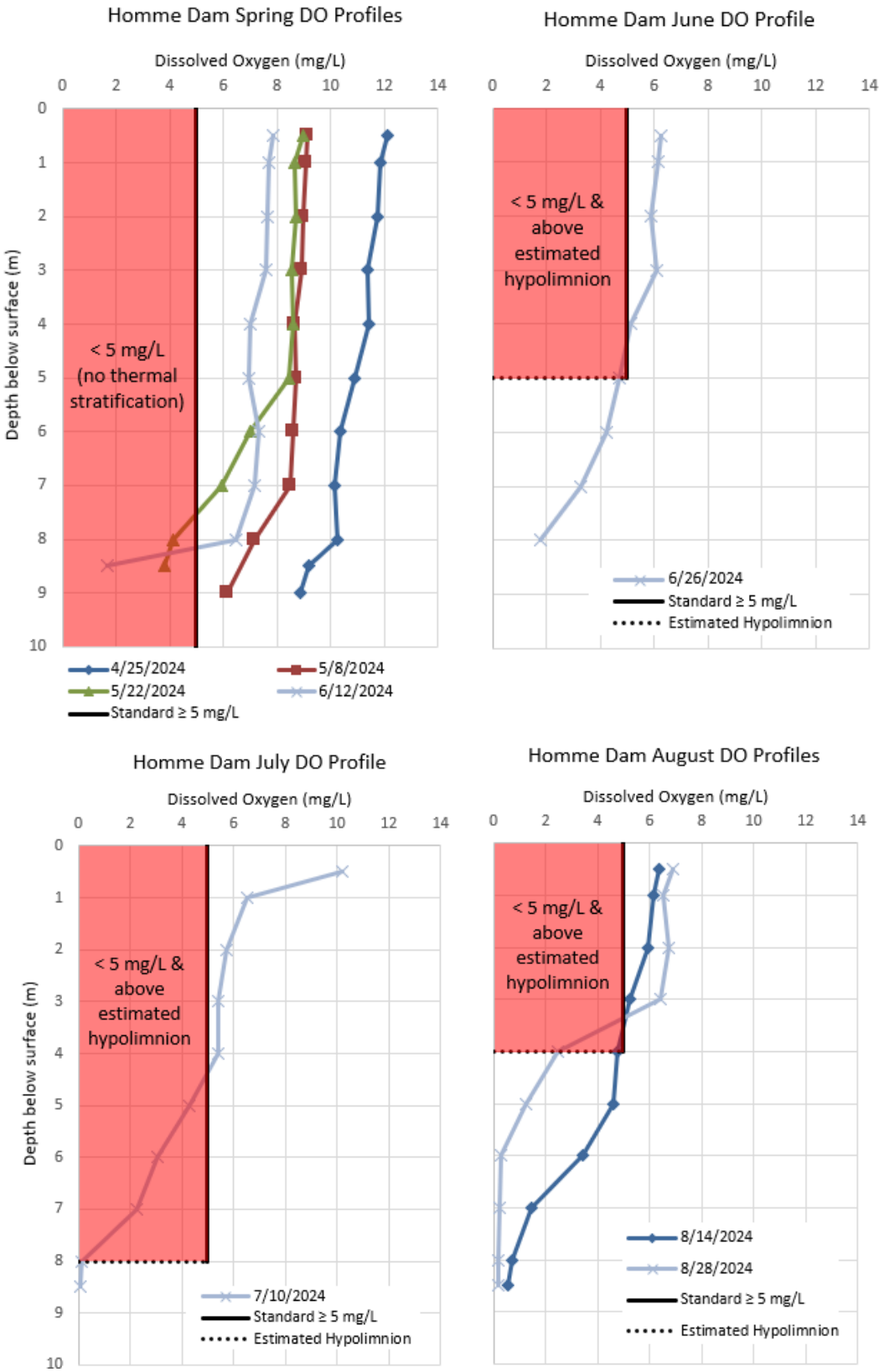


Figure 4: Homme Dam DO profiles at site 381260 (deepest).

Total Suspended Solids (TSS)

TSS samples are collected from April-October. None of the samples exceeded the target (25 mg/L) and concentration decreased overall across the sampling period (Figure 5).

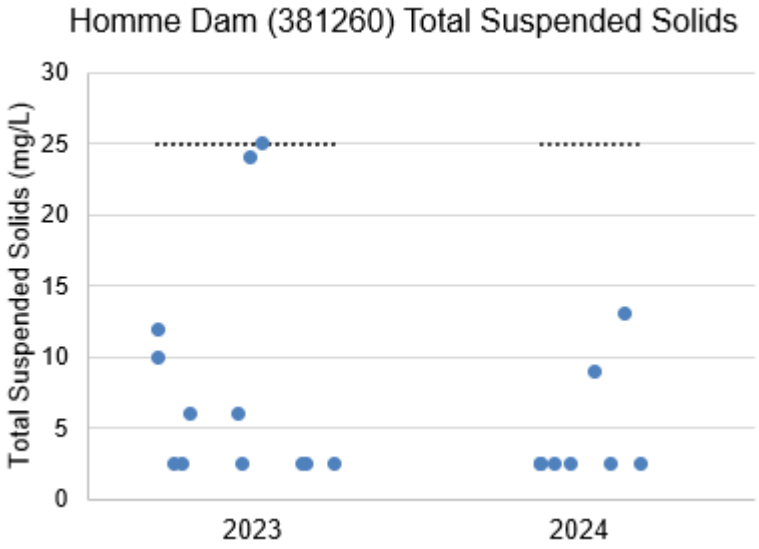


Figure 5. Total suspended sediment concentration at Homme Dam (deepest site, 381260) from May 2023-July 2024, compared to target (dotted line, 25 mg/L).

Stream Results

E. coli Bacteria

E. coli concentrations in rivers and streams can be highly variable. As a result, the state water quality standard is represented by a *monthly* geometric average (≤ 126 CFU/100mL). To compare the average to the state water quality standard a minimum of five samples should be used per month. Two of the three sampling sites had datasets with less than five samples for one or more months; however, for the purposes of this summary all data was used to calculate and display monthly geomeans even if less than five samples were available.

All three sites supported water quality standards in May of each year, but exceeded standards thereafter. Site 386031, Middle Branch Park River, showed the two highest monthly geometric averages in June/July 2023 and the highest single sample maximum in July 2023 (10,000 CFU/100mL). Overall, both South Branch Park River sites showed an increase in monthly geometric average *E. coli* concentration, whereas the Middle Branch Park River decreased (Table 2).

Table 2. Overall change in monthly *E. coli* geometric mean May 2023 – July 2024.

Site ID	Water Body	Overall Change
380121	South Branch Park River (above Homme Dam)	Increase
386032	South Branch Park River	Increase
386031	Middle Branch Park River	Decrease

Figure 6 below shows the monthly *E. coli* geometric mean for each sampling site during the recreation season compared to the state water quality standard (≤ 126 CFU/100mL).

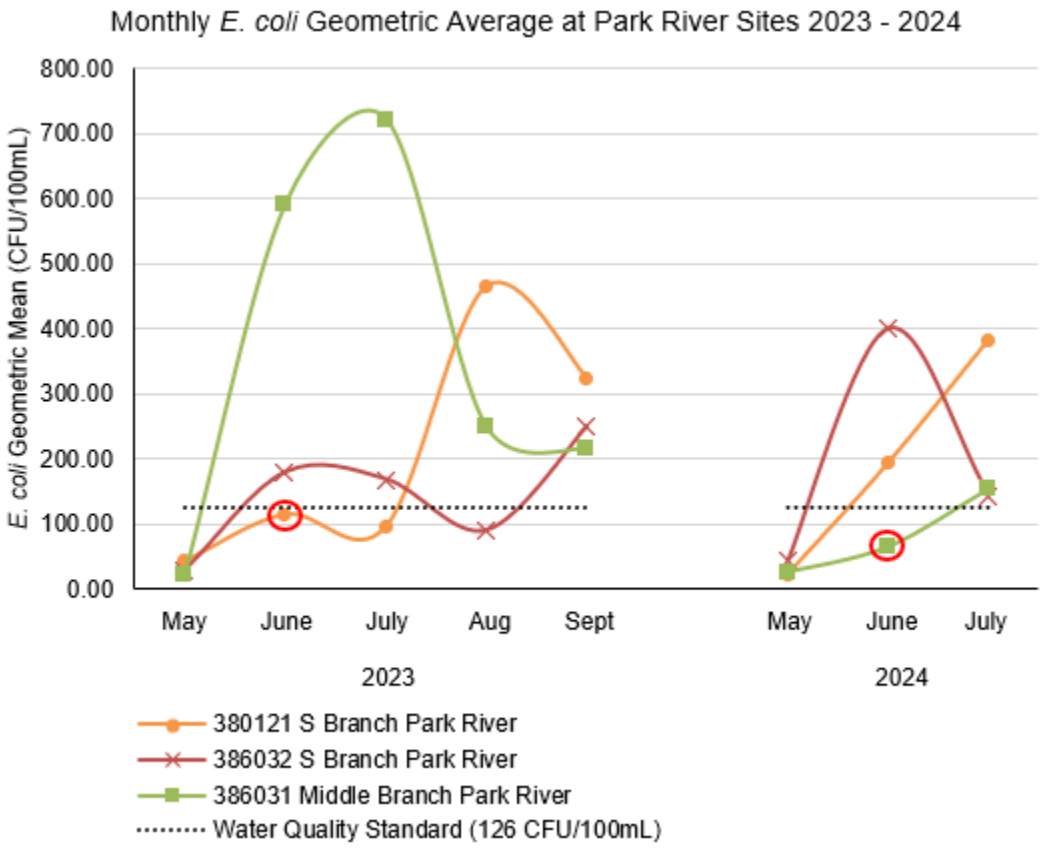


Figure 6. *E. coli* bacteria monthly geometric means at sampling locations. Red circles indicate that the monthly geometric mean ≤ 126 CFU/100mL was met, but the monthly percent > 409 CFU/100mL was exceeded (> 10%).

The following datasets are based on fewer than five monthly samples:

386031 – May/June/August/September 2023
386032 – June/August/September 2023, July 2024

Total Suspended Solids (TSS)

Similar to *E. coli*, TSS concentrations in rivers and streams can be highly variable. TSS samples are collected from April-October.

All three sites exceeded the TSS target during the sampling period. Concentrations were highest at the two South Branch Park River sites (380121, 386032) and both showed an increase in overall TSS concentration. Middle Branch Park River (386031) showed a marginal decrease (nearly unchanging) (Table 3).

Table 3. Overall change in TSS concentration May 2023-July 2024.

Site ID	Water Body	Overall Change
380121	South Branch Park River (above Homme Dam)	Increase
386032	South Branch Park River	Increase

386031	Middle Branch Park River	Decrease

Figure 7 displays annual TSS ranges for each site compared to the target.

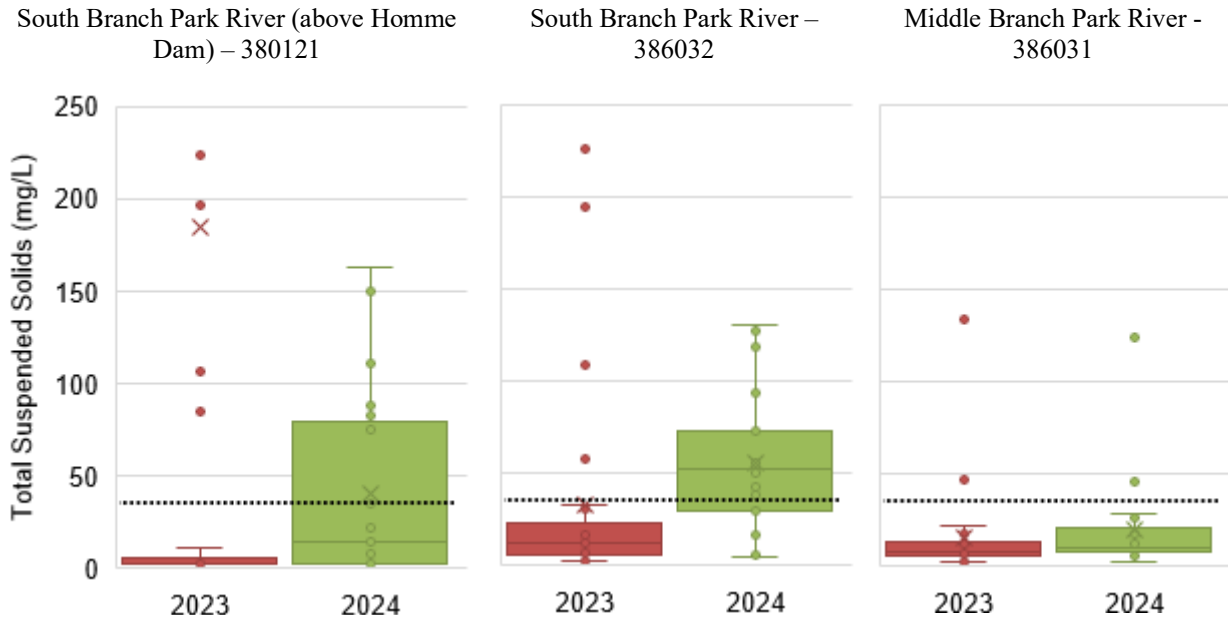


Figure 7. Annual TSS ranges at each sampling site (May 2023-July 2024) compared to target (dotted line, 35 mg/L).

Total Phosphorus (TP)

TP samples are collected from April-October. All sites exceeded the TP target during the sampling period. Concentrations were highest at the two South Branch Park River sites (380121, 386032) and both showed an increase in overall TP concentration. Middle Branch Park River (386031) showed a marginal decrease (nearly unchanging) (Table 4).

Table 4. Overall change in TP concentration May 2023-July 2024.

Site ID	Water Body	Overall Change
380121	South Branch Park River (above Homme Dam)	Increase
386032	South Branch Park River	Increase
386031	Middle Branch Park River	Decrease

Figure 8 displays annual TP ranges for each site compared to the target.

South Branch Park River (above Homme Dam) – 380121 | South Branch Park River – 386032 | Middle Branch Park River - 386031

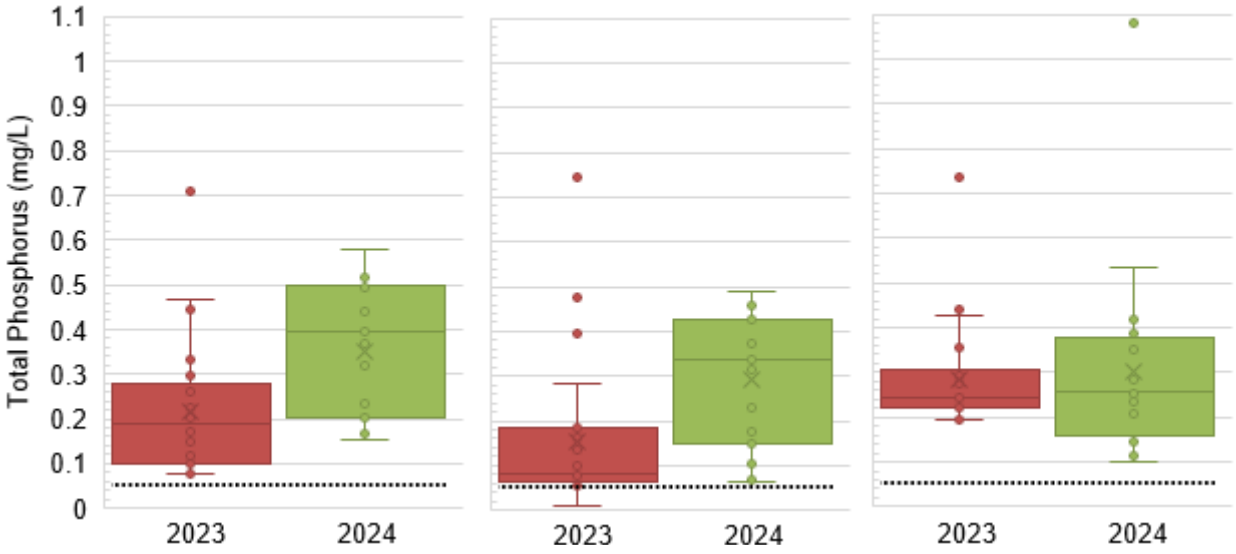


Figure 8. Annual TP ranges at each sampling site (May 2023-July 2024) compared to target (dotted line, 0.048 mg/L).

Macroinvertebrates (IBI)

Macroinvertebrate samples were collected from four sites in 2023 to supplement aquatic life assessments. Samples are analyzed by an external laboratory; results are expected in 2025.

NEXT STEPS

Park River stream sites all exceeded state standards and/or project targets, but in the case of Middle Branch Park River, showed signs of improving or at least stable conditions for several parameters. On Homme Dam chlorophyll-a, DO, and TSS concentrations all supported water quality targets; however, nutrient (total phosphorus) concentrations have increased overall and continue to exceed the TP aquatic life and recreation target developed in the 2012 TMDL. As AnnAGNPS and PTMApp are used to prioritize locations for BMP implementation, sampling should continue in order to determine effectiveness, particularly in watershed areas directly above and below Homme Dam. Future efforts should also consider re-sampling previous priority areas that received BMP implementation (for example, areas targeted under previous watershed projects/phases) to determine effectiveness and identify reduction efforts.

ACCOMPLISHMENTS TO DATE

Partnerships and successful collaborations are the primary success of the program to date. These partnerships provide opportunities for landowners to learn from one another, and to receive technical and financial resources from agencies. The program has also led to the formation of the Walsh County Water Quality Team, including representation from NRCS, ND Rural Water Systems Association, Walsh County SCD, and collaborations with area partners and landowners.

PARTNERSHIPS	
ND Department of Environmental Quality (NDDEQ)	Walsh County Water Quality Team

ND Forest Service (NDFS)	NDSU Soil Science Extension Specialist
ND Game & Fish Department (Save Our Lakes)	319 BMP Team
ND Natural Resource Trust (NDNRT)	ND Rural Water Systems Association
Natural Resource Conservation Service (NRCS)	Project WET

Actions to date include:

- Completed the Walsh County Soil Health Demonstration Project (also referred to as the No-Till Demonstration Project). The four producers enrolled in the No-Till Demonstration Project (sponsored by General Mills) demonstrated no-till and strip still cropping systems with sugar beets in a four-year rotation. The program was featured in the 2023 Walsh County Soil Health Field Tour and in a feature-length article written by Ann Bailey in the August 14, 2023, issue of *AgWeek*.
- Developed media outreach program focused on the relationship between soil health and water quality, including front-page interview with Brad Dokken in the *Grand Forks Herald* (Sept. 21, 2024), featured interview on *Valley News Live* T.V., multiple radio interviews for KXPO's *AgDay*, multiple interviews and articles in the *Walsh County Press* and *Walsh County Record*, episodes of our grant-funded podcast series *Common Ground: A Prairie Podcast* (supported by NDNRT grant), and our grant-funded documentary film *Watershed* (in production, supported by ND Association of Conservation Districts grant).
- Coordinated with NDDEQ to implement a Quality Assurance Project Plan (QAPP) to track in-lake trends in chlorophyll-a concentrations and annual phosphorus loading to the reservoir (Homme Dam).
- Organized first-ever annual Arbor Walks along the Park River in Grafton's Leistikow Park and the Park River Arboretum in 2023 and 2024. These events included keynote speakers from ND Forest Service, NDSU certified Master Gardeners, and the FARRMS program, and they offered participants opportunities to learn about the role trees play in protecting water quality, especially in riparian corridors. The Grafton events attracted 50 participants each year and the Park River events attracted an average of 25 participants each year.
- Developed and hosted water quality education events for area K-12 students, including the first-ever Project WET Water Festival in Walsh County for area 4th graders in 2024. Two of our staff members are Project WET certified facilitators, and we continue to grow our water quality education programs through our Eco Ed field day for area 6th graders and our collaborations with North Valley Career & Technology Center with high school students and teachers throughout the region.
- One-on-one consultations with landowners on the farm and promotion of practices and programs to bring conservation solutions to landowners
- Direct mailing to watershed landowners to promote the program.

2.0 STATEMENT OF NEED

Figure 1. Homme Dam boat dock with harmful algae bloom in September 2024.

After a new management team took over in 2023, Walsh County collected harmful algae bloom (HAB) samples in addition to stream samples for TSS, nutrients complete, and E-coli. Homme Dam continues to exceed the reporting limit for microcystin, which is 8 micrograms per liter (ug/L). In September 2024, Walsh County SCD reported a bloom containing 29,300ug/L, which was the highest levels of microcystin in the state. Walsh County's HABs testing and monitoring have been conducted in close collaboration between NDDEQ and the Walsh County SCD staff and watershed coordinator. Small children and dogs, who are most susceptible to toxicity from cyanobacteria toxins, are frequent visitors at the Homme Dam swim beach and fishing docks, where algae blooms accumulate.

In 2024, the SCD Board and its agency partners met to form a strategic plan to address resource concerns. Our mission is "to promote and demonstrate soil and water conservation by offering financial, technical, informational, and educational assistance and opportunities to the people in our District." The top concerns discussed in the strategic plan included soil erosion, water quality, soil health (cover crops, conservation tillage, crop rotation), riparian areas, and education (youth and adult).

Flooding is a major concern since Walsh County is in a100-year flood plain.[1]

The SCD reformed the Walsh County Water Quality Team in 2023 and developed a range of partnerships and grant-funded programs to address water quality concerns in the Park River Watershed and throughout the region.

The Walsh Water Quality Team includes representatives from NRCS, ND Rural Water Systems Association, and Walsh County SCD. The collaborations across districts and agencies now includes planning for the first-ever Water Summit in Walsh County to address concerns focused on HABs and reducing farm runoff and other forms of nonpoint source pollution in the watershed. Additionally, the Water Summit includes an effort to expand existing partnerships with Pembina and Cavalier counties in order to develop comprehensive plans for addressing water quality concerns throughout the Park River Watershed, which includes portions of Cavalier and Pembina.

Walsh County will continue to host annual soil health field days that featured guest speakers from NDDEQ in 2023 and highlighted water quality issues at Homme Dam and throughout the Park River Watershed in 2023 and 2024. These events attract an average of 50 participants each year and help to promote BMP practices.

2.1 Homme Dam (HUC 09020310-001) is located on the South Branch of the Park River, two miles west of Park River. The dam is operated by the US Army Corp of Engineers out of the Lake Ashtabula station, Valley City, N.D. Homme Dam is a 185-acre reservoir designed for flood control. At full pool, Homme Dam covers 185 acres, has a maximum depth of 34.5 feet and an average depth of 16.5 feet. The Homme Dam watershed is a 131,699-acre watershed in the Park River basin located in Cavalier and Walsh counties (Appendix 1).

Homme Dam has been classified as a Class 3 warm-water fishery, "capable of supporting natural reproduction and growth of warm-water fishes (i.e. largemouth bass and bluegill) and associated aquatic biota and marginal growth. Some cool water species may also be present." The trophic status of the Homme Dam reservoir was determined to be eutrophic to hypereutrophic based on water quality data collected from 2010 to 2011by the SCD and analyzed by the NDDEQ.

The reservoir provides several recreational opportunities. Since 1953, Homme Dam Recreation Area has been a happening place for local residents' recreational needs--offering fishing, swimming, boating, camping, hiking, hunting, and snowmobiling.

2.2 An Annualized Agricultural Nonpoint Source Pollution (AnnAGNPS) model was developed for Park River Watershed. The AnnAGNPS model uses soils, fertilization rates, cropping systems, elevation, land use, precipitation data, etc. to 1) characterize the size and shape of the watershed and 2) identify "high priority areas" that are potentially the most significant sources of nutrients (N & P) and sediment in the Homme Dam watershed. The results of the AnnAGNPS model will be used to target technical and financialassistance for the implementation of BMPs in the watershed (Figures 2 and 3).

A PTMApp for the Park River Watershed has been developed by the International Water Institute and the NDDEQ. The PTMApp calculates total nitrogen, phosphorus, and sediment. The PTMApp allows for better prioritization at the watershed scale and field scale to identify specific areas for nutrient and sediment reduction. This application will be used during consultations with landowners when essential.

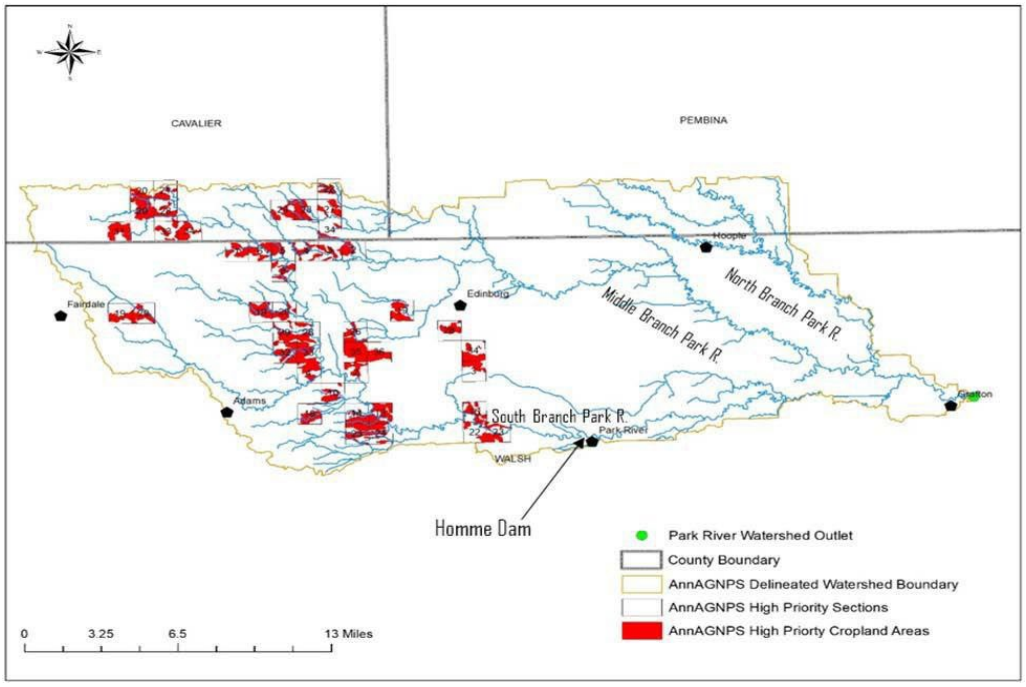


Figure 2. AnnAGNPS Critical Areas for Cropland for all branches of the Park River

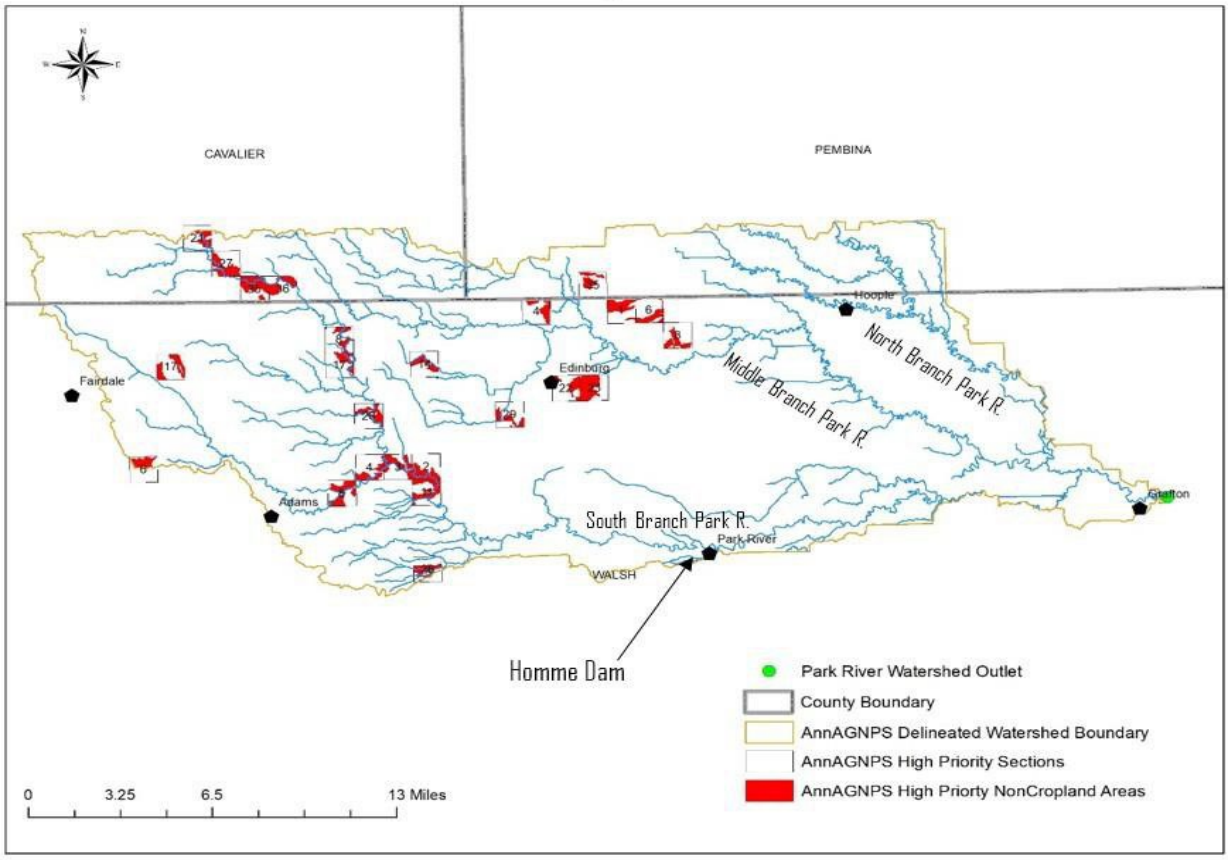


Figure 3. AnnAGNPS Critical Areas for Non-Cropland for all branches of the Park River.

2.3 The topography of the Park River Watershed varies from west to east due to glaciation. Elevation changes dramatically from Homme Dam in western Walsh County at 1,120 ft to 825ft at Grafton in eastern Walsh County. In western Walsh County, in what is referred to as the Glacial Till Plain, the landscape is composed of undulating hills in addition to terminal moraines that are hilly. The area is categorized as Major Land Resource Area (MLRA) 55, the Northern Black Glaciated Plains. Within hilly areas, temporary or seasonal wetlands are not uncommon. Outcrops of shale bedrock from the Cretaceous age are exposed across the glacial till plain where the rivers and ravines drain into the lakebed. In general, the soils of the Glacial Till Plain largely consist of glacial till, sand and gravel deposits, and cobble substrate. These soils formed in calcareous loam and clay loam glacial till and the associated alluvium from the till process.

Several Lake Agassiz beach lines exist within the glacial till plain. Several more ancient beach lines lie in the elevation gradient experienced transitioning east until approximately five miles west of Highway 18 until it gradually flattens into level the glacial lakebed where little or no slope exists. This area is classified as MLRA 56- the Red River Valley of the North. The western lakebed consists of very fine sand, silt, and silty clay loam (USDA SCS 1972). On the eastern lakebed, clay and silty clay were deposited. The climate supports a grassland transition between short grass prairie in the west and tallgrass prairie towards the

east portion of the watershed. Agriculture has replaced most of the grassland areas. Riparian areas face degradation and are often encroached upon by agriculture, including grazing of narrow riparian corridors.

According to the 2016 National Agricultural Statistical Service (NASS) land survey, the 251,021 acres in the project area can be classified as follows:

- 66% active cropland
- 15.25% pasture or grassland,
- 6.4% wetlands,
- 4.62% are riparian woodlands or shelterbelts,
- 5.3% barren or urban development,
- 1.12% tamegrasses or planted grass,
- 0.50% alfalfa.

Crops commonly grown in the lower elevations of the watershed in fertile lakebed soils include spring wheat, soybeans, corn, potatoes, and sugarbeets. The Homme Dam sub-watershed include spring wheat, edible beans, soybeans, canola and corn.

The climate of the Park River Watershed is characterized as sub-humid with warm summers with frequent hot days and occasional cool days. Very cold winters are influenced by blasts of arctic air surging over the area. Average temperatures range from 20° F in the winter to 68° F in the summer. Precipitation occurs primarily during the warm period and is normally heavy in late spring and early summer. Total average annual precipitation is approximately 20 inches. approximately 16 inches or 85 percent of rain falls between April and October.

2.4

Nutrient loading into Homme Dam originates 100% from nonpoint source pollution (NDDEQ 2012). These nutrient loads are primarily transported with overland runoff from agricultural areas, riparian degradation, and over-utilization by livestock in the riparian corridor. Existing land use and Annualized Agricultural Non-Point Source pollution modeling (AnnAGNPS) within the watershed indicates that the majority of NPS loading is coming from cropland.

Figure 4. Riparian restoration site west of Edinburg, ND showing the installation of vegetation in 2016, and its progress towards renewal in 2019.

Implementation of best management practices by producers in the watershed will be necessary in order to address loading from NPS sources. Sediment loading upstream of Homme Dam could be reduced by working with livestock producers who are managing cool season riparian pastures that are often grazed for long periods of time. We have worked with several producers with small beef herds, discovering that producers generally don't have many areas to rotate cattle to other riparian areas. By finding ways to rotate cattle to feeding areas other than the riparian zone, such as crop aftermath grazing, cover crop grazing, or temporary feeding in paddocks, we can reduce over-utilization of riparian pastures. Further consultation with NDSU Extension specialists will result in broadening options for livestock producers needing alternative forage for livestock to accomplish rotation goals.

Riparian areas in the Park River Watershed are another focus of critical concern. In Walsh County, there many farmsteads and communities next to waterways that face flooding and streambank erosion problems (Figure 4). The PRW program will help address these concerns and help restore affected areas. Riparian areas found within AnnAGNPS areas are expected to experience an increase in overall function as streambank erosion is reduced through riparian and cropland BMPs. Improvements in water quality are expected to be accomplished through increasing riparian vegetation and buffer widths to reduce channel erosion and improve function. Walsh County would like to be proactive in addressing streambank erosion issues in other areas throughout the Park River Watershed to avoid increasing the number of costly streambank restoration projects in the region.

We are working to incorporate soil health principles into producers' farming practices across the watershed in an effort to reduce the amount of runoff, sediment transport, and NPS pollution from cropland. Looking into the history of soil erosion in the Park River Watershed, soils in both the east and west portions of the watershed were greatly affected by wind erosion if not covered in the dirty thirties, due to sandy loam and silty loam textures (USDA SCS 1942). In Dr. Franzen's article, *Wake Up Call*, he describes how Dr. Hopkins and Montgomery compare erosion rates on cropland within the Red River Valley. He also states that over 50% of topsoil in the South Branch of the Park River Watershed has been lost since 1960.

In 2024, Walsh County SCD interviewed Jon Stika, former NRCS soil health specialist and author of *A Soil Owner's Manual* for an episode of *Common Ground: A Prairie Podcast*. Mr. Stika and Naeem Kalwar, NDSU soil health specialist, have become valuable consultants in the best soil health methods for the region and how to communicate these methods to landowners, crop producers, and ranchers.

Soil erosion remains a major concern in Walsh County, with several major wind and water erosion events in the last three years alone. The Walsh County Soil Health Team continues to educate producers on how they can use BMPs such as no-till farming coupled with cover crops to reduce soil erosion, increase infiltration, improve soil structure, increase soil water holding capacity, and overall health of their soils. These practices will benefit water quality by reducing soil erosion and sediment loading, reducing phosphorus inputs and scavenging nutrients.

Walsh County is in great need to help demonstrate the use of soil conservation and soil health BMPs on cropland areas to reduce NPS pollution. The SCD will continue to work with crop producers to develop improved management practices, such as cover crop, no-till, and strip till planting in areas with soil erosion and runoff. Walsh County's Working Lands Cover Crop Initiative, funded through the NACD/USDA Climate Smart Commodities Grant, will provide numerous demonstration sites in Walsh County and throughout the ND Area 1 region that will showcase how full-season, multispecies cover crops with livestock integration can become a profitable part of any crop rotation and improve soil health while protecting water quality. The USDA is in final review of the Working Lands Cover Crop Initiative with funding expected by the end of 2024.

The PRWP will have met its goals when Homme Dam can maintain the fully supporting status of the aquatic life and recreational uses. This restoration will take place by reducing the phosphorus loading to the reservoir by 40 percent of the annual phosphorus load. Therefore, the maximum allowable load target is 8,996.4 kg/yr. The end target concentration for chlorophyll-a in the reservoir should be maintained at 16 µg/L, which also corresponds to a chlorophyll-a TSI score of 58.3. This change means that the lake is taken out of a Hypereutrophic status and labeled as Eutrophic, which allows better support for aquatic life as well as increasing the overall recreational use quality.

3.0 PROJECT DESCRIPTION

3.1 The main goal of the project is to reduce phosphorus loading into Homme Dam to restore beneficial uses of recreation and fish and aquatic biota and to reduce the occurrence of harmful algae blooms (HABs). In addition, impaired beneficial uses of fish and aquatic biota in the North, Middle, and South Branches of the Park River Watershed will be addressed by working in riparian areas and using cropland BMPs to decrease NPS pollution by nitrogen, phosphorus, and sediment.

Objective 1- Maintain the chlorophyll-a concentrations in the reservoir at 16 µg/L by reducing the phosphorus loading to the reservoir by 40%. This equates to an annual phosphorus load capacity of 8,996.4 kg/yr.

Task 1: Work with livestock producers to develop improved grazing management systems as well as fencing systems and exclusion grazing. Coordinate with NDSU Extension Service livestock specialists and NRCS to address the need for additional grazing opportunities by incorporation rotations that include crop aftermath and/or cover crop incorporation into the grazing system.

Product: Implementation of BMP's (Best Management Practices) on range/pasture and riparian areas to improve and protect stream banks and water quality upstream of Homme Dam.
Cost: $15,500

Task 2: Work with landowners to improve riparian areas by installing BMPs to reduce and capture sediment.

Product: Implementation of low-cost riparian vegetation and other approved BMPs.
Cost: $ 37,390

Task 3: Work with crop producers to develop improved management practices, such as cover crop, no-till planting, strip-till, grass buffers, and windbreaks in areas with soil erosion and runoff.

Product: Implementation of BMP's (Best Management Practices) in the watershed to improve water quality by lessening NPS runoff into ditches and streams. Coordinate with NRCS and NDSU Extension to plan cropland practices, including finding ways to help specialty crop farmers reduce soil erosion and improve soil health. In addition, we will work closely with NRCS to plan and fund BMPs.
Cost: $ 142,500

Objective 2- Targeted education and outreach plan to increase producers, landowners, and the general public's understanding of the impacts of NPS pollution and the potential solutions to prevent or reduce NPS pollution.

Task 1: Coordinate with NDSU Extension and NRCS to conduct at least four workshops during the project period to discuss stream bank erosion, water quality issues, rotational and aftermath grazing, cover crops, riparian management, nutrient management, and no-till practices. Educate students about water quality issues and NPS, including annual Water Festivals for area 4th graders and Eco Ed for area 6th graders.

Product: Four informative workshops targeted towards active farmers and landowners in the watershed, with emphasis on landowners upstream of Homme Dam in impaired reaches of the watershed. Hands on experience in the classroom and in educational field days, such as Eco Ed Day and Native Seed Collection program.
Cost: $ 10,000 (Speaker fees, advertising, and printing costs of meeting materials)

Task 2: Utilize radio, newspaper articles, social media, direct mailings, Soil Conservation District newsletter, one-on-one contacts, etc., to disseminate information on conservation and management options using BMP's that can be used to improve water quality in the watershed. We will provide direct mailings to landowners in the AnnAGNPS priority areas of the watershed at least twice per year.

Product: Continue to promote soil health and water quality to the public through annual newsletters, traditional (newspapers, radio, television) and social media, including *Common Ground: A Prairie Podcast* (paid for by ND Natural Resources Trust Grant), short documentary films and short videos, and Facebook, Instagram, and other social media accounts.
Cost: $7,500

Objective 3- As BMP are applied, document trends in water quality and beneficial use conditions (i.e. chlorophyll-a concentrations, chlorophyll-a TSI score and phosphorus loadings) to evaluate progress toward established goals. Also, track the type, location, amount, and costs of BMP applied with Section 319 cost share assistance.

Task 1: Coordinate with the NDDEQ to implement a Quality Assurance Project Plan (QAPP) to track in-lake trends in chlorophyll-a concentrations and annual phosphorous loading to the reservoir.

Product: Data collection through routine sampling
Cost: Cost covered in Task 2.

Task 2: Maintain the NPS Program BMP Tracker database to document the type, location, cost and amount of BMP applied with Section 319 financial assistance.

Product: Hire a watershed coordinator and watershed tech, including funds for salary/fringe benefits, travel, office rent/utilities, equipment/supplies, training, phone/postage, sampling/transport supplies.
Cost: $288,215 ($287,215 for salaries and operational expenses + $1,000 for sampling supplies)

3.2 See attached Milestone Table (Appendix 3).

3.3 All necessary permits for BMP implementation will be acquired. These may include CWA (Clean Water Act) Section 404 permits. Project sponsors will work with NDDEQ to determine if National Pollution Elimination System permits are needed for the proposed livestock systems. The project staff will also consult with the ND State Historic Preservation

Officer to determine if the planned BMP will have an effect on cultural resources and if a cultural inventory is needed.

3.4 The Walsh County Three Rivers Soil Conservation District is the appropriate entity to coordinate and implement this project. The SCD is a locally elected conservation organization that serves all the people in the county. The sponsors will work with the North Dakota Department of Health (NDDoH) to determine the need for any environmental permits for livestock management systems.

3.5 The Walsh County Three Rivers SCD will be responsible for auditing Operation and Maintenance Agreements (O&M) of BMP cost shared with Section 319 funds during the project period. This will include yearly status reviews to evaluate the maintenance of the BMP and determine if any changes are needed to enhance or maintain the effectiveness of the BMP. The lifespan of each BMP will be listed in the individual contracts to ensure longevity of the practices. The producer signs the "EPA 319 Funding Agreement Provisions" form which explains in detail the consequences of destroying a BMP before the completion of its lifespan.

4.0 Coordination Plan

4.1

1) The Walsh Country Three Rivers Soil Conservation District will be the lead agency liable for project administration, conservation planning, technical assistance, educational campaign, clerical assistance, access to equipment and supplies, and annual financial support. The Park River Watershed Coordinator will serve as a liaison between watershed projects/producers and USDA program participation.

   The Park River Watershed Coordinator will work closely with the agency partners to streamline project planning to meet resource needs in the watershed. This collaboration can include technical planning efforts that incorporate best management practices (BMP's), drawing upon both coordinators' strengths to provide planning and project management in the project area.

   USDA Natural Resources Conservation Service (NRCS) and the Park River Watershed Coordinator will work closely throughout the project to ensure landowners in the watershed are receiving needed planning assistance. NRCS will support the project by providing technical assistance, facilitating local involvement, participating in educational outreach programs during the project, and coordinating special initiatives together. NRCS will also provide cost-share assistance through the USDA conservation programs and will serve as participants on the Local Work Group. Staff will incorporate existing USDA programs (financial and technical) and target resources to enhance efforts within the watershed. Existing office space and office equipment use will be made available to the watershed coordinator. The Watershed Coordinator will be kept to date on NRCS standards and provided appropriate technical training opportunities.

2) The NDDEQ will administer the Section 319 funding allocations and agreements with the Walsh County Three Rivers SCD. Technical assistance will be provided for the development

of the necessary quality assurance project plans for the watershed assessment projects and the appropriate training will be provided for the proper water quality sample collection, preservation, and transportation. NDDEQ also will continue to provide analytical support for water quality and HABs samples.

3) North Dakota State University Extension Service will assist in education and outreach activities with the possibility of providing "in-kind" funds. Specialists will be asked to assist in tours and educational demonstrations. Specialists will also be solicited for assistance for landowners with complex resource needs.

4) North Dakota Game & Fish Department will be solicited for technical and financial assistance when needed. Walsh County will consult with US Fish and Wildlife, US Army Corp of Engineers, Walsh County Water Resource District, and Walsh County Commission on projects affecting resources in the watershed. Financial and technical support will be requested from the above agencies on as-needed project basis.

5) Other potential partners include the Audubon Great Plains, ND Meadowlark Initiative, Ducks Unlimited, North Dakota Forest Service, Cavalier County Soil Conservation District, Pembina County Soil Conservation District, Walsh County Park Board, North Dakota Stockmen's Association, and City Commissioners. Additional funding sources may include the North Dakota Natural Resources Trust and the North Dakota Outdoor Heritage Fund.

4.2 Support for this project has been received from the Park River NRCS office, the Walsh County Extension Service, the Walsh County Commission, and landowners---several who are looking forward to utilizing the new program.

4.3 Several affiliates have programs and projects that would coincide with the Park River Watershed's goals. The NRCS's immediate pertinent programs such as wetland easements, Wetland Reserve Programs (WRE), and Environmental Quality Incentives Program (EQIP), especially the Red River Basin Initiative, will coincide with the implementation of BMPs in the watershed. Also, the Conservation Reserve Program (CRP) will be an option provided by the local Farm Service Agency (FSA).

The North Dakota Forest Service offers financial support for tree plantings/renovations and will be considered as an additional source of funding for specific BMP's such as riparian and windbreak plantings. The Walsh County Water Board issues funds and support to those in the county for water and stream issues and will be approached as a funding source on riparian projects.

4.4 The Walsh County Soil Health Team is working closely on the same resource concerns in the project area, and our collaboration has allowed for prevention of duplication of efforts. We have learned that time, money, and knowledge can be gathered through networking and collaboration with one another and partnering agencies. NRCS and County Extension have worked closely with 319 coordinators, and that relationship is expected to continue. Continuing to strengthen collaboration efforts will only increase the success of our agencies and goals to reduce

non-point source pollution (NPS). In 2024, both NRCS and Extension indicated the need to continue the watershed program, as wells as the need to expand the project staff.

The team will continue to collaborate to address resource concerns, and to develop educational workshops, press releases, and demonstration sites. Additional technical support will be sought from the resource team in project planning.

Evaluation and Monitoring Plan

5.0 The Quality Assurance Project Plan (QAPP) has been developed by the ND Department of Environmental Quality (NDDEQ) and provides a protocol for routine water quality sampling at Homme Dam. Nutrient levels, chlorophyll-a and other water quality parameters are gathered and tested as outlined in the QAPP.

Because of generous efforts by agencies like NDDEQ, EPA, and NOAA to provide testing support, equipment and training to the local watershed coordinator, the coordinator is well prepared for future harmful blooms that may have impact to human and animal health. At the present time, the watershed coordinator is able to expedite the identification of toxin producing species like Aphanizominon, Microcystis, and Anabaena. The public relies on Walsh County SCD's public messaging in traditional and social media and the signage at Homme Dam to determine if the water is safe, and therefore, the coordinator has a key role in HABs testing and response in the watershed.

6.0 Budget

6.1 See Attachments (Appendix 2)

7.0 Public Involvement

7.1 The Park River Watershed Project will work closely with watershed stakeholders to provide them opportunities to contribute input on resource concerns, BMP prioritization, education and outreach, and other watershed restoration efforts. Workshops and videos will allow for education on topics influencing water quality in the watershed.

Outreach at crop improvement association meetings, livestock improvement association meetings, the county fair, public schools, township meetings, county commission meetings and other local places of public gathering will allow information sharing to take place. Public outreach has been a strong point of the current Homme Dam Watershed Project and will continue into the next phase of the program.

Park River Watershed Implementation Plan

Appendices

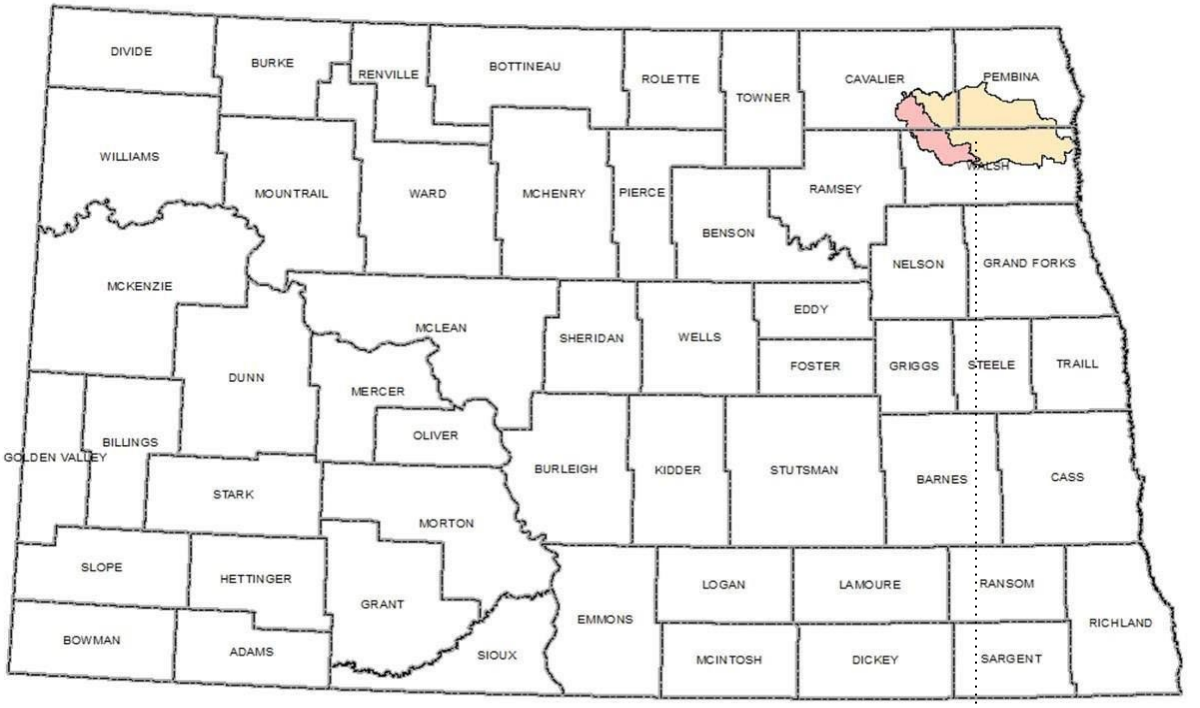
1. **Walsh County Maps**

2. **Budget Tables**

3. **Milestone Table**

Appendix 1

Map of the Park River Watershed in North Dakota


DIVIDE
BURKE
RENVILLE
BOTTINEAU
ROLETTE
TOWNER
CAVALIER
PEMBINA
WILLIAMS
MOUNTRAIL
WARD
MCHENRY
PIERCE
RAMSEY
WALSH
BENSON
NELSON
GRAND FORKS
MCKENZIE
MCLEAN
SHERIDAN
WELLS
EDDY
FOSTER
GRIGGS
STEELE
TRAILL
DUNN
MERCER
OLIVER
BILLINGS
GOLDEN VALLEY
BURLEIGH
KIDDER
STUTSMAN
BARNES
CASS
STARK
MORTON
SLOPE
HETTINGER
GRANT
EMMONS
LOGAN
LAMOURE
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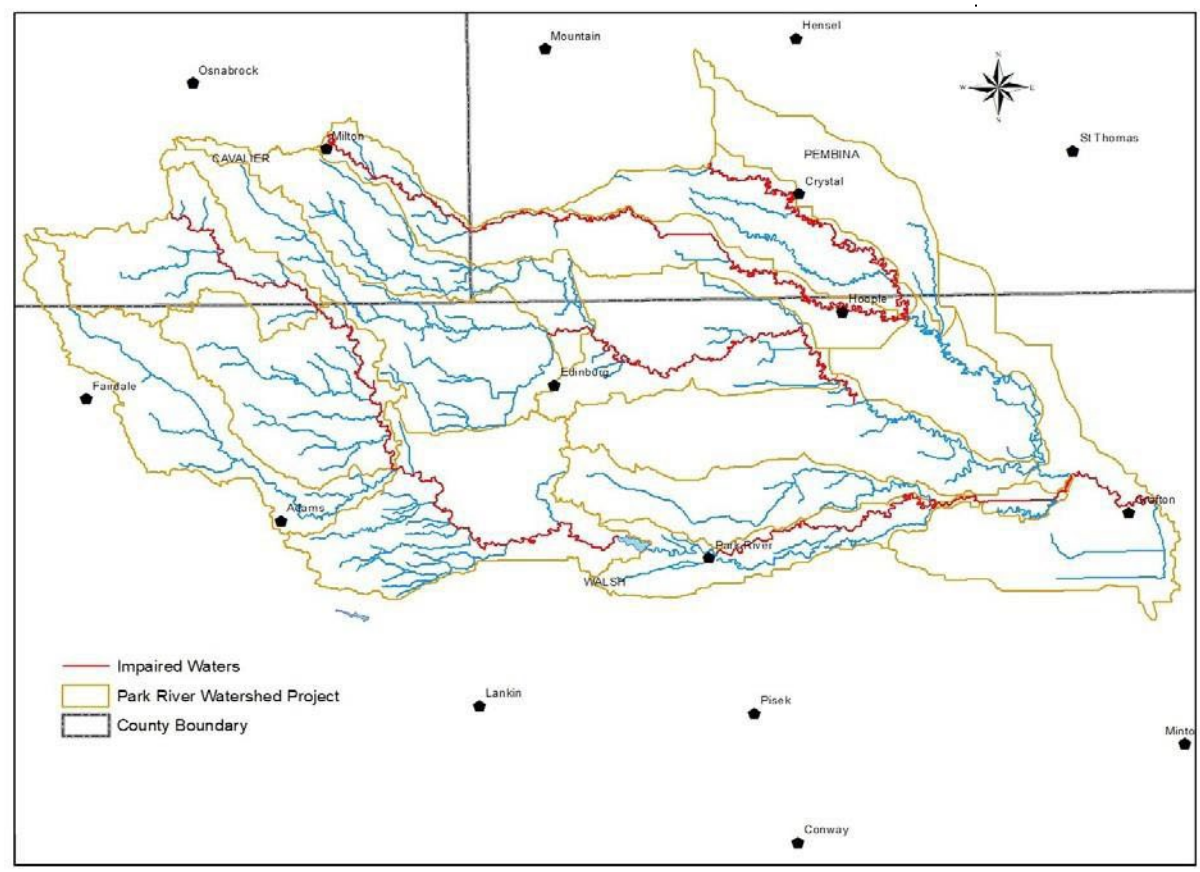
BOWMAN
ADAMS
SIOUX
MCINTOSH
DICKEY
SARGENT
Legend
Park River Watershed
Homme Dam Watershed


Mountain
Hensel
Osnabrock
Milton
CAVALIER
PEMBINA
Crystal
St Thomas
Hoople
Edinburg
Fairdale
Adams
Park River
WALSH
Grafton
Impaired Waters
Park River Watershed Project
County Boundary
Lankin
Pisek
Conway

Appendix 2

Budget Tables

Part 1: Funding Sources						
	2025	2026	2027	2028		Total
EPA SECTION 319 FUNDS						
1)FY 2025 Funds (FA)	$43,322	$96,987	$107,275	$53,078		$300,662
STATE/LOCAL MATCH						
1) Walsh Co. Three Rivers SCD (TA & FA)	$17,931	$38,598	$41,682	$18,931		$117,142
2) Landowners BMPs (FA)	$4,100	$8,200	$8,200	$4,200		$24,700
Subtotals	$22,031	$46,798	$49,882	$23,131		$141,842
TOTAL BUDGET						
	$65,353	$143,785	$157,157	$76,209		$442,504
*OTHER FEDERAL FUNDS						
1) NRCS (TA, EQIP, CSP)	$17,500	$35,000	$35,000	$18,000		$105,500
2) FSA (CRP)	$7,500	$15,000	$15,000	$8,000		$45,500
TOTAL FEDERAL FUNDS	$25,000	$50,000	$50,000	$26,000		$151,000
TOTAL PROJECT COST						$593,504

*Funding is subject to change due to current application enrollment.

FA: Financial
SCD: Soil Conservation District
NRCS: Natural Resource Conservation
Service FSA: Farm Service Agency
NDDEQ: North Dakota Department of Environmental Quality

Part 2: Detailed Budget (Section 319/Non-Federal)								
	2025	2026	2027	**2028		Total Costs	Cash and In-Kind Match	319 Funds
PERSONNEL/SUPPORT/ADMIN								
Salary/Fringe	$39,974	$83,945	$88,142	$46,274		$258,335	$103,334	$155,001
Travel	$500	$1,000	$1,100	$600		$3,200	$1,280	$1,920
Office Rent/Utilities	$1,500	$3,000	$3,000	$1,500		$9,000	$3,600	$5,400
Equipment/Supplies	$1,500	$3,100	$3,200	$1,650		$9,450	$3,780	$5,670
Training	$280	$600	$700	$400		$1,980	$792	$1,188
Communications (Telephone/Postage)	$800	$1,700	$1,800	$950		$5,250	$2,100	$3,150
Subtotals	$44,554	$93,345	$97,942	$51,374		$287,215	$114,886	$172,329
Objective 1: Applying Grazing Management Practices								
BMPs for Cropland	$17,500	$45,000	$55,000	$25,000		$142,500	$57,000	$85,500
BMPs for Rangeland	$1,500	$4,000	$6,000	$4,000		$15,500	$6,200	$9,300
BMPs for Riparian	$5,750	$13,500	$13,500	$4,640		$37,390	$14,956	$22,434
Subtotals	$24,750	$62,500	$74,500	$33,640		$195,390	$78,156	$117,234
Objective 3: Information/Education								
Public meetings/Workshops/Tours/Education	$1,500	$3,000	$3,500	$2,000		$10,000	$4,000	$6,000
Newsletters/News releases/Videos	$1,250	$2,500	$2,500	$1,250		$7,500	$3,000	$4,500
Subtotals	$2,750	$5,500	$6,000	$3,250		$30,000	$12,000	$10,410
Objective 4: Water Quality Monitoring								
Sampling/Transport/Supplies	$150	$300	$350	$200		$1,000	$400	$600
Subtotals	$150	$300	$350	$200		$1,000	$400	$600
Total for all Objectives/Tasks								
Total 319/Non-federal Budget	$72,204	$161,645	$178,792	$88,464		$501,105	$200,442	$300,663

** Funding for 2028 is only from January 1st through June 30th.

Part 3: Projected BMP List		
Practice Code	Practice Description	Cost per unit
340	Cover Crop	$20/ acre
378	Pond	Engineer Est.
380	Windbreak/Shelterbelt Establishment	$30/hlnft
382	Fencing (Barbed)	$1.80/ ft
382	Fencing (2 wire electric)	$0.95/ft
382	Fencing (single wire electric)	$0.90/ft
386	Field Border	$20/acre
390	Riparian Herbaceous Cover	$300/acre
391	Riparian Forest Buffer	$350/acre
393	Filter Strip	$125/acre
422	Hedgerow Planting	$20/hlnft
472	Access Control/Use Exclusion (Livestock)	$20/acre
512	Pasture & Hayland Planting	$52/acre
516	Pipelines	$3.15/ft
528A	Prescribed Grazing	$5/acre
550	Range Planting	$40/acre
590	Nutrient Management (Advanced Precision only)	$27/acre
601	Vegetative Buffer	$125/acre
610	Salinity & Sodic Soil Management	$20/acre
614	Trough and Tank	Local Rate

- Additional BMPs will be implemented as needed in accordance with Section 319 guidelines

Appendix 3

Milestone Table

Milestone Table: Park River Watershed Project			**2025**	**2026**	**2027**	**2028**
Task/Responsible Organization	**Output**	**Total Qty**	**Qty**	**Qty**	**Qty**	**Qty**
OBJECTIVE 1-reduce phosphorous load						
Task 1- Work with livestock producers Groups 1,2,3,5	BMP Implementation	3	X	X	X	X
Task 2-work with landowners in riparian zone Groups 1,2,3,5	BMP Implementation	3	X	X	X	X
Task 3- Work with crop producers Groups 1,2,3,5	BMP Implementation	3	X	X	X	X
OBJECTIVE 2- increase public understanding						
Task 1- Creative BMP demonstration sites Groups 1,3,5	Soil Health sites	4	X	X	X	X
Task 2- Conduct workshops on water quality Groups 1,3,5	Workshops	5	1	1	1	1
Task 3- Relay information via radio, newspapers, social media, etc. Group 3	Newspaper column, advertisements, online videos	22	2	5	5	5
Task 4-Education and outreach in schools Groups 1,3,5	Classes in schools, and Eco-Ed	5	2	2	1	1
OBJECTIVE 3- document trends in water quality						
Task 1- Implement a QAPP Groups 3,4	QAPP	1	1	X	X	X
Task 2- Maintain NPS program BMP tracker database Group 3	Hire watershed staff Record of BMPs	1	X	X	X	X

Group 1- Natural Resources Conservation Service- Provide technical assistance to plan, design and implement BMPs.

Group 2- Landowners in the Park River Watershed- Make land management decisions and provide cash and in-kind match for BMPs.

Group 3- Walsh Co. Three Rivers SCD- Local project manager and sponsor, project coordination, administration of project funds, and progress reporting to the NDDEQ.

Group 4- North Dakota Department of Environmental Quality- Statewide Section 319 program management including oversight of local 319 planning and expenditures.

Group 5- NDSU Extension Service- Provides technical and financial or "In-kind" assistance for the project.

Group 6- Walsh County Water Resource District - Participation in watershed planning efforts.

END NOTES

[1] Report prepared by Houston Engineering, Inc., and the Park River Joint Water Resource District in 2015, North Branch Park River Watershed Feasibility Report and Plan of Work; HEI 2015.