Walsh County Homme Dam Watershed Project Implementation Plan

Walsh County Three Rivers Soil Conservation District
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Homme Dam Watershed Project Implementation Plan

SPONSOR:
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STATE CONTACT PERSON: Greg Sandness
North Dakota Department of Health
Phone: (701) 328-5232
Fax: (701) 328-5200
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STATE: North Dakota
WATERSHEDS: Homme Dam
HYDROLOGIC UNIT CODE: 09020310
HIGH PRIOROTY WATERSHED: yes
TMDL STATUS: A nutrient TMDL has been developed for Homme Dam

TMDL Development and/or 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 & Cavalier County

MAJOR GOAL: The Homme Dam Watershed Project is designed to provide technical, financial, and educational assistance to agricultural producers, ranchers, and landowners within the watershed. The Homme Dam Recreation Area is located along the south Branch of the Park River. The goal of the project is to maintain the aquatic life and recreational uses of Homme Dam Recreational Area.

PROJECT DESCRIPTION: The project sponsors intend to 1) prioritize technical and financial assistance to the AnnAGNPS priority areas and riparian corridor, 2) track water quality trends over the life of the project to rectify any concerns as they surface, 3) develop educational programs to heighten public awareness of NPS pollution concerns and solutions, and 4) develop working partnerships in the local community to benefit natural resources.

The main objectives are:

Objective 1- Establish a support network to provide the technical assistance and administrative support needed to fully implement the project.

Objective 2- 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.

Objective 3- Increase producers, landowners, and the general public's understanding of the impacts of NPS pollution and the potential solutions to prevent or reduce NPD pollution.

Objective 4-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.

Homme Dam Watershed Funds:

Other Federal Funds:	$284,500	State/Local Match:	$176,734
319 Funds Requested:	$265,100	Total project cost:	$1,168,168

2.0 STATEMENT OF NEED

2.1 As part of the 2010 Clean Water Act Section 303(d) impaired waters listing process, the North Dakota Department of Health (NDDoH) has identified Homme Dam as an impaired water body. Based on a Trophic State Index (TSI) score, fish and other aquatic biota and recreation uses of Homme Dam are impaired due to nutrient/eutrophication/ biological indicators.

The Walsh County-Three Rivers Soil Conservation District (SCD) conducted a water quality and watershed assessment of Homme Dam from June 2010 to September 2011. The water quality data collected in 2010-2011 indicated that Homme Dam was eutrophic to hypereutrophic. This was due to nutrient inputs, such as phosphorus entering the lake from the surrounding agricultural watershed. In 2012, a Nutrient Total Maximum Daily Load (TMDL) report was developed and approved for Homme Dam.

In addition to a water quality, watershed assessment and TMDL for Homme Dam, the Walsh County-Three Rivers SCD developed and distributed a Landowner Interest Survey to individuals within the Homme Dam watershed. The purpose of the survey was to help gauge the public's interest and knowledge in the current water quality condition of Homme Dam. It also gauged as to whether or not there was interest in supporting a watershed project focused on water quality and conservation as well as feasible solutions for improving or protecting the quality of water in Homme Dam. The feedback from the survey would be used to identify water quality and resource concerns in the watershed and help utilize Section 319 grant money efficiently and effectively. The survey consisted of identifying the demographics of the watershed, recreational use of Homme Dam; identify resource concerns, financial and technical assistance opportunities, and ways to provide education and information to landowners within the Homme Dam watershed. A sample of the questions and responses from the survey can be found in Figures 1, 2, and 3. A copy of the letter, survey, and results can be found in Appendix 2.

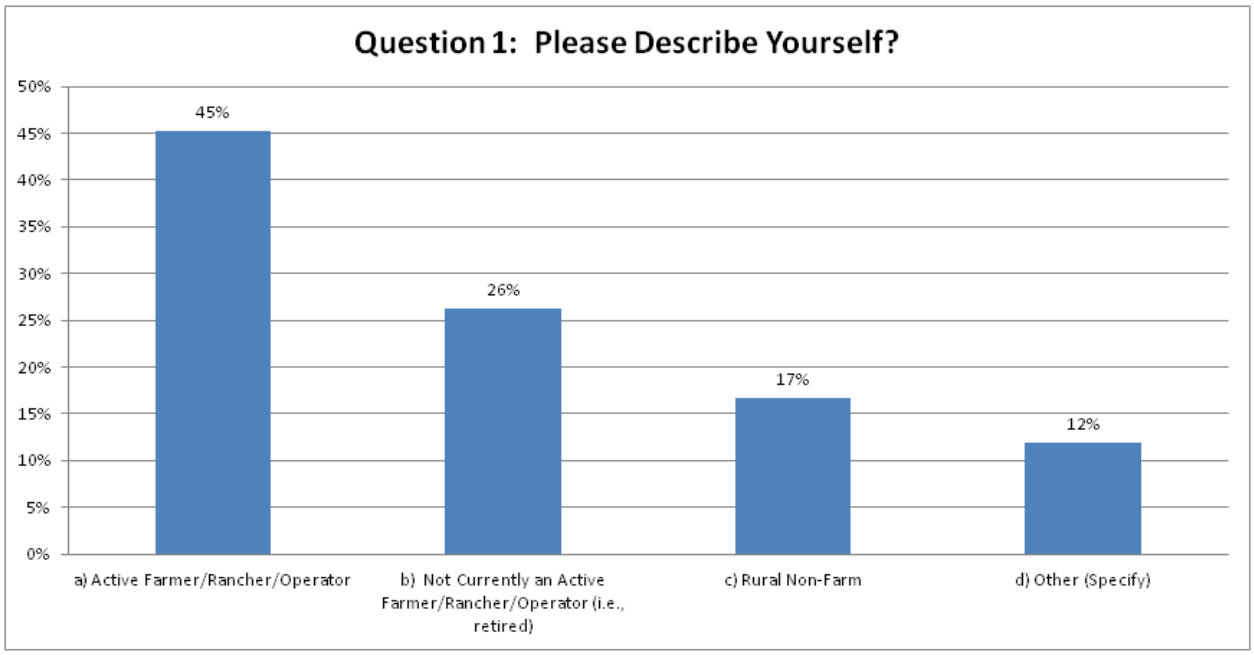


Figure 1. Survey results for question 1 which specifically targeted whether or not the landowners were active farmers/ranchers.

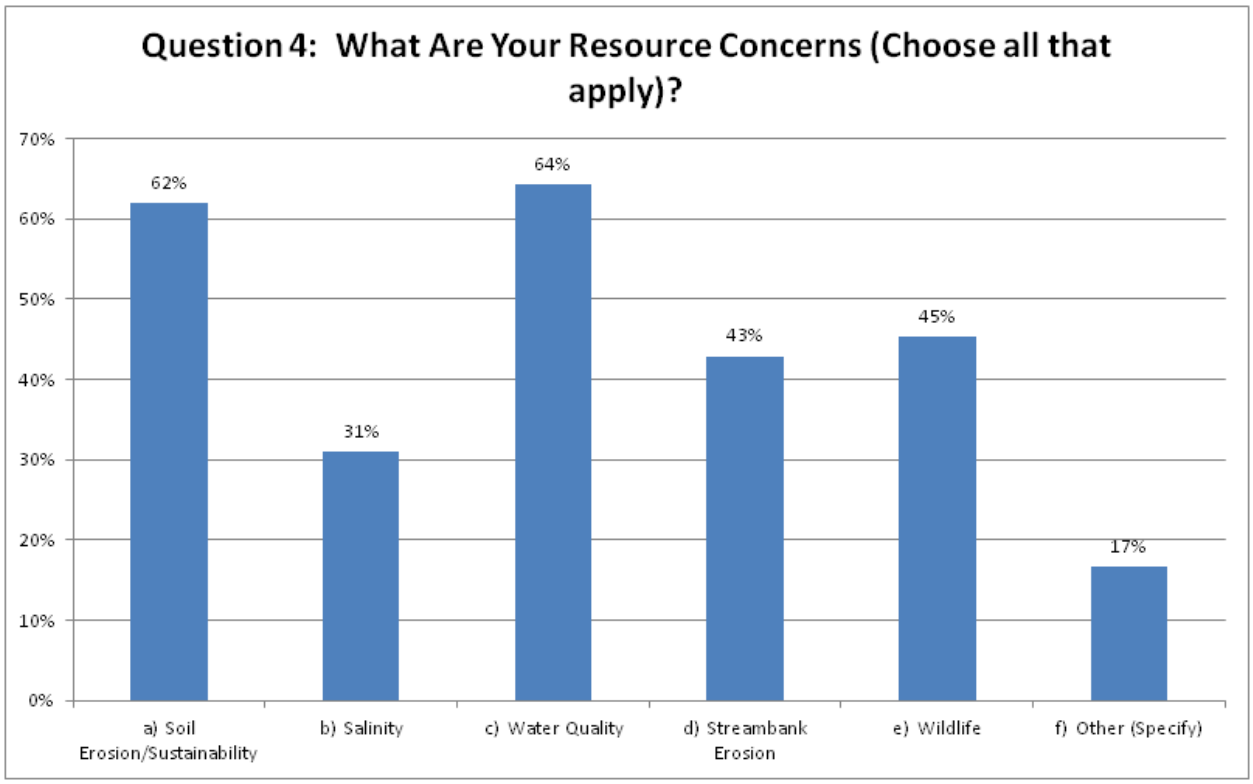


Figure 2. Survey results for question 4 which wanted to address the concerns adjacent landowners had with the Homme Dam watershed.

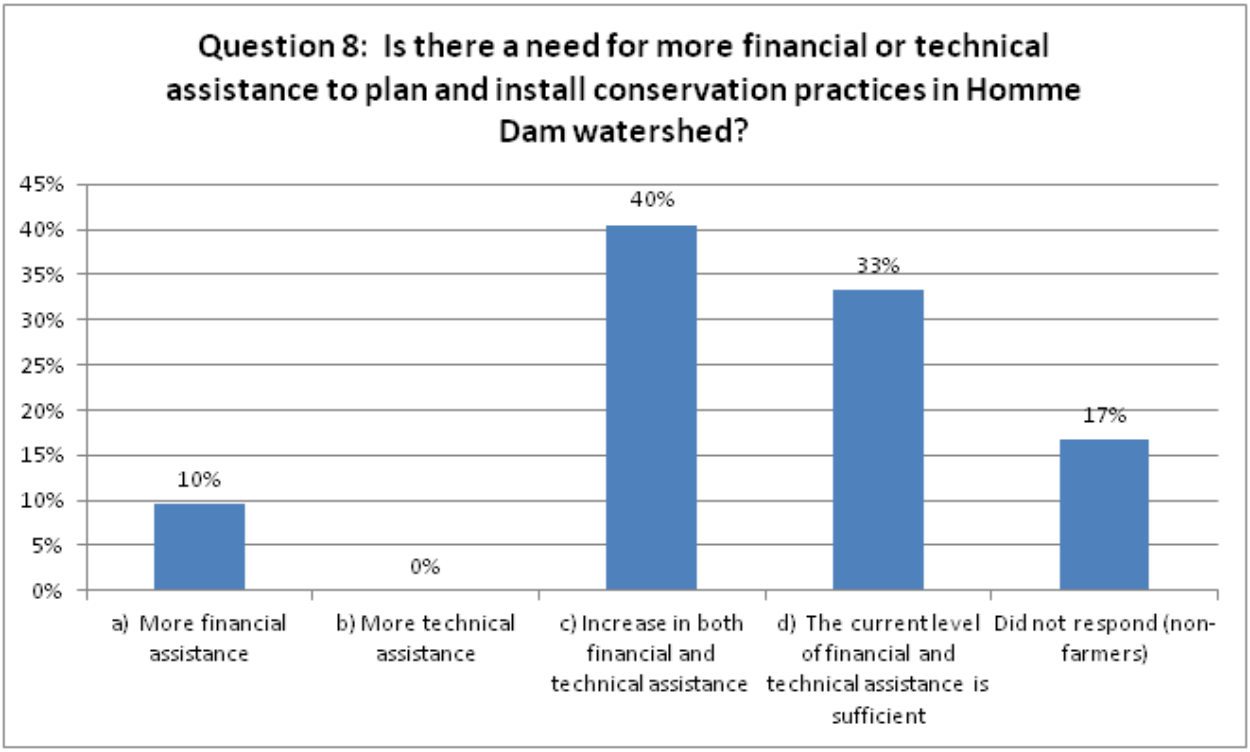


Figure 3. Survey results for question 8 targeting whether or not the landowners thought there should be more financial and technical assistance for the Homme Dam watershed practices.

2.2 Homme Dam (HUC 09020310-001) is located on the South Branch of the Park River located two miles west of Park River. Completed in 1950, Homme Dam is a 185-acre reservoir designed for flood control and water supply benefits (NDDoH, 2010). At full pool, Homme Dam covers a surface area of 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. 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." (NDDoH, 2011).

Homme Dam Recreation Area provides local residents plenty of leisure opportunities such as fishing, boating, camping, hiking, hunting, and snowmobiling. Recently a beach and swimming area have been reconditioned near the dam. A bike/walking trail have also been constructed on the west side of the Park River that leads to Homme Dam.

2.3 An Annualized Agricultural Nonpoint Source Pollution (AnnAGNPS) model was developed for the Homme Dam 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 financial assistance for the implementation of BMPs in the watershed,

focusing primarily on priority areas closest to the lake. Appendix 1 features Homme Dam watershed maps and AnnAGNPS priority maps, etc.

2.4 The topography of the Homme Dam watershed varies in topography from generally flat and level to a washboard and rolling landscape. The soils largely consist of glacial till, sand and gravel, and cobble substrate. The landscape is dotted with either a high concentration of temporary and seasonal wetlands or very few at all. The climate supports a grassland transition between tall and short grass prairie, but has been replaced with intensive agriculture.

Land use in the Homme Dam watershed is primarily agricultural. According to the 2012 National Agricultural Statistical Service (NASS) land survey data, approximately 63 percent of the land is active cropland, 19 percent pasture/grassland, 9 percent wetlands, and the remaining 7 percent in either forest, open water, barren, urban development, or fallow/idle cropland. The majority of the crops grown consist of spring wheat, canola, dry beans, and soybeans.

The climate of the Homme Dam watershed is characterized as sub humid with warm summers with frequent hot days and occasional cool days. Winters are very cold 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 about 20 inches. About 16 inches or 85 percent of rain falls between April and October.

2.5 Historical water quality data for Homme Dam is based on two Lake Water Quality Assessment (LWQA) projects in 1996 and 2006. Lake water quality samples were minimal ranging from two samples in 1996 to 3 samples in 2006. The LWQA results indicated that nutrient levels in Homme Dam were increasing two fold when compared in 1996 and 2006.

In 2010 and 2011 the Walsh County-Three Rivers SCD conducted at water quality and watershed assessment on Homme Dam. The assessment project started in June 2010 and ended in September 2011. Water quality monitoring was conducted on one inlet site, one outlet site and the deepest area of the reservoir. In 2010, average growing season (April-November) total phosphorus concentrations were 0.338 mg/L and average chlorophyll-a concentrations was 13.3 µg/L. Water quality data for 2011 indicated average growing season total phosphorus concentration was 0.233 mg/L and average chlorophyll-a concentration was 20.5 µg/L.

The average growing season Secchi disk transparency in 2010 and 2011 was 1.3 meters. In 2010, the maximum Secchi disk transparency measurement recorded was 2.7 meters, while the maximum measurement in 2011 was 2.1 meters (NDDOH, 2012).
Water quality data collected in Homme Dam in 2010 and 2011 showed an average chlorophyll-a concentration of 16.9 µg/L (TSI = 58.3) and average Secchi disk transparency depth of 1.3 meters (TSI = 56.4). Based on these data Homme Dam is

generally assessed as a eutrophic lake. Total phosphorus data and corresponding TSI value of 83.4, which characterizes Homme Dam as hypereutrophic.

Nonpoint source pollution (NPS) accounts for 100% of the nutrient loading to Homme Dam. The vast majority of nutrient loads are transported with overland runoff from agricultural areas and 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 Homme Dam watershed indicates that the majority of NPS loading is coming from cropland. Twenty-two percent of land in the watershed is used for pasture. Implementation of best management practices by producers in the watershed will be necessary in order to address loading from these lands.

The Homme Dam Nutrient TMDL established an in lake growing season average chlorophyll-a concentration target of 16.9 µg/L which corresponds to chlorophyll-a TSI of 58.3. This TSI target will be a trophic state sufficient to maintain both aquatic life and recreation uses of Homme Dam. The chlorophyll-a TSI target will be achieved by reducing nutrient inputs into the lake by forty percent which equates to a total phosphorous load capacity of 8,996.4 kg/yr or a daily load of 24.6 kg/day.

Phosphorus loads into the reservoir could be reduced by forty percent by treating AnnAGNPS identified "high priority areas". There are 28,479 acres within the Homme Dam watershed identified as "high priority areas" by AnnAGNPS modeling. These "high priority areas" fall within two categories cropland and non-cropland (identified as livestock use in the riparian corridor) (Appendix 1, Figures 2 and 3). If these "high priority areas" can be treated with appropriate best management practices (BMPs), then the specified reduction is possible.

3.0 PROJECT DESCRIPTION

3.1 Goal: The main goal of the project is to maintain the fully supporting status of the aquatic life and recreational uses of Homme Dam reservoir by reducing the phosphorus loading to the reservoir by 40 percent (40%). The 40% reduction in phosphorus loadings will limit annual loadings to 8,996.4 kg/yr and ensure the target concentration for chlorophyll-a in the reservoir is maintained at 16 µg/L, which also corresponds to a chlorophyll-a TSI score of 58.3. This would also take the lake out of the Hypereutrophic status and put it into a Eutrophic status which allows better support for aquatic life as well as increasing the overall recreational use quality. Homme Dam has regularly had problems with erosion and sedimentation (especially near the dam structure) and thus a secondary goal of this project will be to implement BMPs to lessen erosion of stream banks and decrease the amounts of sedimentation.

The main point of focus to implement BMPs will be the high priority land closest to Homme Dam's inlet which consists mainly of pastures and woodlands with mixed in patches of agricultural grounds. The main use of this land is livestock production and thus will be our main focus in implementing BMPs to decrease total phosphorous. A lot of this land also consists of agricultural property where producers farm right up to the stream banks, leaving open areas which are being permitted to erode away. These will also be points of focus for improving water

conditions. Even though our main focus area lies relatively close to the Homme Dam inlet, all producers within the watershed who want to implement BMPs on their properties will get an opportunity to apply.

To achieve our goals we will be focusing more on improved grazing management, filter/buffer strips along stream banks, implementing windbreak and hedgerow plantings along the stream to lessen erosion damage, implementing new fencing systems and stock ponds/trough systems to lessen the amount of direct access livestock have to the water body. In addition we will be focusing on cropland next to the river and implementing BMPs to lessen erosion/sedimentation and NPS runoff from these lands such as grass buffers, riparian plantings, cover crop sites, no-till sites, and windbreak plantings.

3.2

Objective 1- Establish a support network to provide the technical assistance and administrative support needed to fully implement the project.

Task 1: Employ one full-time project coordinator and staff to implement the tasks in this project and develop plans for future priority initiatives addressing NPS pollution concerns.

Product: One full time project coordinator focused on project development and BMP implementation.
Cost: $191,900

Task 2: Coordinate with other organizations, agencies, and stakeholders as needed to obtain additional technical and financial assistance to implement current and future projects addressing priority water quality and NPS pollution concerns. These potential partners are presented in part 4.0 Coordination Plan.

Product: Expertise and financial resources necessary to implement current and future projects
Cost: Costs included in Task 1 Costs

Task 3: Organize and conduct a joint meeting involving affiliated organizations, agencies and stakeholders (as listed in section 4.0 of the Coordination Plan) to recognize other priority areas in the watershed as well as receive input as where to proceed on the tasks involved with the Homme Dam Management Plan including goals, future quality testing, and stakeholder awareness.

Product: Long-term assessment and management plan for the Homme Dam Watershed coordinated with affiliates and stakeholders.
Cost: Costs are covered under Task 1

Task 4: Manage the Section 319 funds and local match and oversee all aspects of project implementation to ensure the project tasks are completed as scheduled.

Product: Monthly SCD meetings to review project activities and progress; annual evaluations of staff performance; ongoing project promotion; assist with outreach efforts; approve BMP cost share agreements; coordinate with project partners; provide support staff; and secure necessary matching funds.
Cost: Cost covered in Task 1 cost and SCD meeting budget ($10,000 financial and in-kind)

Objective 2- 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 5: Work with livestock producers to develop improved grazing management systems such as vegetative buffers/filter strips as well as fencing systems and exclusion grazing.

Product: Implementation of BMP's (Best Management Practices) on range/pasture and riparian areas to improve and protect stream banks and water quality by lessening NPS on the Homme Dam watershed
Cost: $350,000

Task 6: Work with crop producers to develop improved land practice along the stream banks of the watershed such as cover crop, no till planting, grass buffers, and windbreaks

Product: Implementation of BMP's (Best Management Practices) on stream adjacent areas of cropland to lessen stream bank erosion and sedimentation and improving water quality by lessening NPS runoff into the watershed.
Cost: $305,000

Objective 3- 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 7: Acquire a location within the Homme Dam Watershed upstream of the reservoir to implement a BMP demonstration site and implement a couple BMPs for demonstration of the water project. If such a site cannot be obtained, will coordinate with the Red River Riparian project to acquire a site with demonstration value downstream.

Product: A demonstration site in place for educational and promotional purposes on the Homme Dam watershed with implemented BMPs on the site. Will be used to promote and show benefits of BMPs on the stream bank. Annual tour day will be scheduled.
Cost: $32,500- includes land/site prep, weed control, nuisance animal control, supplies and equipment, yearly maintenance of site, seed, trees, etc…
Task 8: Coordinate with NDSU Extension Service specialists and NRCS specialists to conduct at least 3 workshops addressing stream bank erosion, water quality issues, cover crops, riparian management, and nutrient management.

Product: At least 3 workshops targeted towards producers in the Homme Dam watershed with a variety of speakers and specialists on the issues (e.g. soil health, residue management, site specific nutrient management).
Cost: $11,500

Task 9: Utilize radio, newspaper articles, direct mailings, section of the Soil 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. Will provide direct mailings to landowners in the AnnAGNPS priority areas of the watershed.

Product: At least 2 sections on mail-out newsletters, possible radio spot talking about water issues and solutions, at least 4 news articles in local paper, one on one contact with producers. Yearly direct mailings
Cost: $5,000

Task 10: Work with Walsh County Schools in educating their students about water quality issues and NPS, by distributing educational material (booklets, flyers, etc…) to all the school districts. Continue to do water quality seminars at the SCD's annual Eco-Ed Day.

Product: a dispersal of educational material to be used for making students aware in the local schools
Cost: $2,500

Objective 4-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 11: Coordinate with the NDDH to develop and implement a Quality Assurance Project Plan (QAPP) to track in-lake trends in chlorophyll-a concentrations and annual phosphorous loading to the reservoir.

Product: Approve QAPP and data to track trends
Cost: Cost covered in Task 1 cost

Task 12: Maintain the NPS Program BMP Tracker database to document the type, location, cost and amount of BMP applied with Section 319 financial assistance.

Product: Record of all BMP implemented with Section 319 financial support
Cost: Costs are included in Task 1 cost.

3.3 See attached Milestone Table (Appendix #4)

3.4 All necessary permits will be acquired. These may include CWA (Clean Water Act) Section 404 permits. Project sponsors will work with NDDH 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.

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

3.6 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 Watershed Coordinator will serve as a liaison between watershed projects/producers and USDA program participation.

2) USDA Natural Resources Conservation Service (NRCS) will provide technical assistance by coordinating project activities, facilitating local involvement, providing technical support and participating in educational outreach programs during the project. 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 project. An annual review will be conducted with the Field Office, District Conservationist, and the SCD to reaffirm and acknowledge NRCS's commitment to the project.

3) The NDDH 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.

4) North Dakota State University Extension Service will assist in project information and education activities with the possibility of providing "in-kind" funds. Specialists will be asked to assist in tours and educational demonstrations.

5) North Dakota Game & Fish Department and the US Fish & Wildlife Service will be solicited for technical and financial assistance when needed.

6) Walsh County Water Resource District- share common water quality goals and concerns. Homme Dam is a high priority concern for the Water Resource District. Technical and financial support will be requested from the Walsh County WRD when needed.

7) Other potential partners include the North Dakota Forest Service, Cavalier County Soil Conservation District, Red River Regional Council, Walsh County Park Board, North Dakota Stockmen's Association, Ducks Unlimited, and City Commissioners.

4.2

Local support- On February 1, 2012 a survey was mailed out to landowners in the Homme Dam Watershed to address the interest in BMP implementation and the concerns they had with the watershed. (Appendix #2). Results showed that not only did landowners utilize the watershed but they were concerned about the water quality and willing to support practices that would be implemented to increase the overall health of the watershed if additional funding and assistance were available. Unanimous support has been received for the continuation of the Homme Dam project by local landowners as well as the local NRCS district, NDSU extension service, Red River Riparian Project and the county water board.

4.3

Several of the affiliates listed contain programs and projects that would coincide with the SCD's Homme Dam watershed product. NRCS's immediate pertinent programs such as wetland easements, wetland reserve programs (WRP), and Environmental Quality Incentives Program (EQIP) will be utilized during the implementation of BMPs on the watershed. Also the Conservation Reserve Program (CRP) will be a constant option provided by the local Farm Service Agency (FSA). The Red River Riparian Project has already completed work on the Park River downstream of Homme Dam and they will be an invaluable tool and resource when it comes to implementing BMPs. The North Dakota Forest Service issues financial support for the planting of trees and they too will be utilized when considering specific BMP's such as riparian and windbreak plantings. The Walsh County Water Board already issues funds and support to those in the county for water and stream issues and will be worked with during the implementation of the Homme Dam watershed project. Other possible projects currently in place that could benefit the districts watershed project include the Save Our Lakes Program (North Dakota Game and Fish Dept.), Environmental Services Program (North Dakota Stockmen's Association), and the activities maintained by the Walsh County Park Board, whom currently maintain and operate the recreational facilities around the lake.

4.4

To enhance BMP design ideas and expand the technical, educational, and financial assistance available to producers, the Walsh County Three Rivers SCD is coordinating with USDA's NRCS and FSA, NDSU Extension Service, Walsh County Water and Park Boards, and the Red River Riparian Project. These are the main entities in the county working on current water quality issues, and by coordinating the Homme Dam implantation plan with these affiliations there is an assurance that there will be no duplication of efforts.

5.0 Evaluation and Monitoring Plan

The Quality Assurance Project Plan will be developed by the ND Department of Health after the draft proposal has been approved and revised, accordingly, to complete the final project implementation plan. The Quality Assurance Plan will be included in the final Project Implementation Plan (PIP) and submitted to the EPA.

6.0 Budget

6.1 See Attachments (Appendix #3)

7.0 Public Involvement

7.1 Educational and informational meetings will be conducted to keep the community informed. Community leaders, County Commissioners, Water Resource Board members, City Council members, and District supervisors will be involved or have partial input in decision-making processes involving the implementation of BMPs within the county.

Walsh County Homme Dam Watershed Project Implementation Plan

Appendix List

1. **Walsh County Maps & Photos**
2. **Copy of Homme Dam Survey**
3. **Budget Tables**
4. **Milestone Table**

Appendix #1

Walsh County/Homme Dam Watershed Maps & Photos

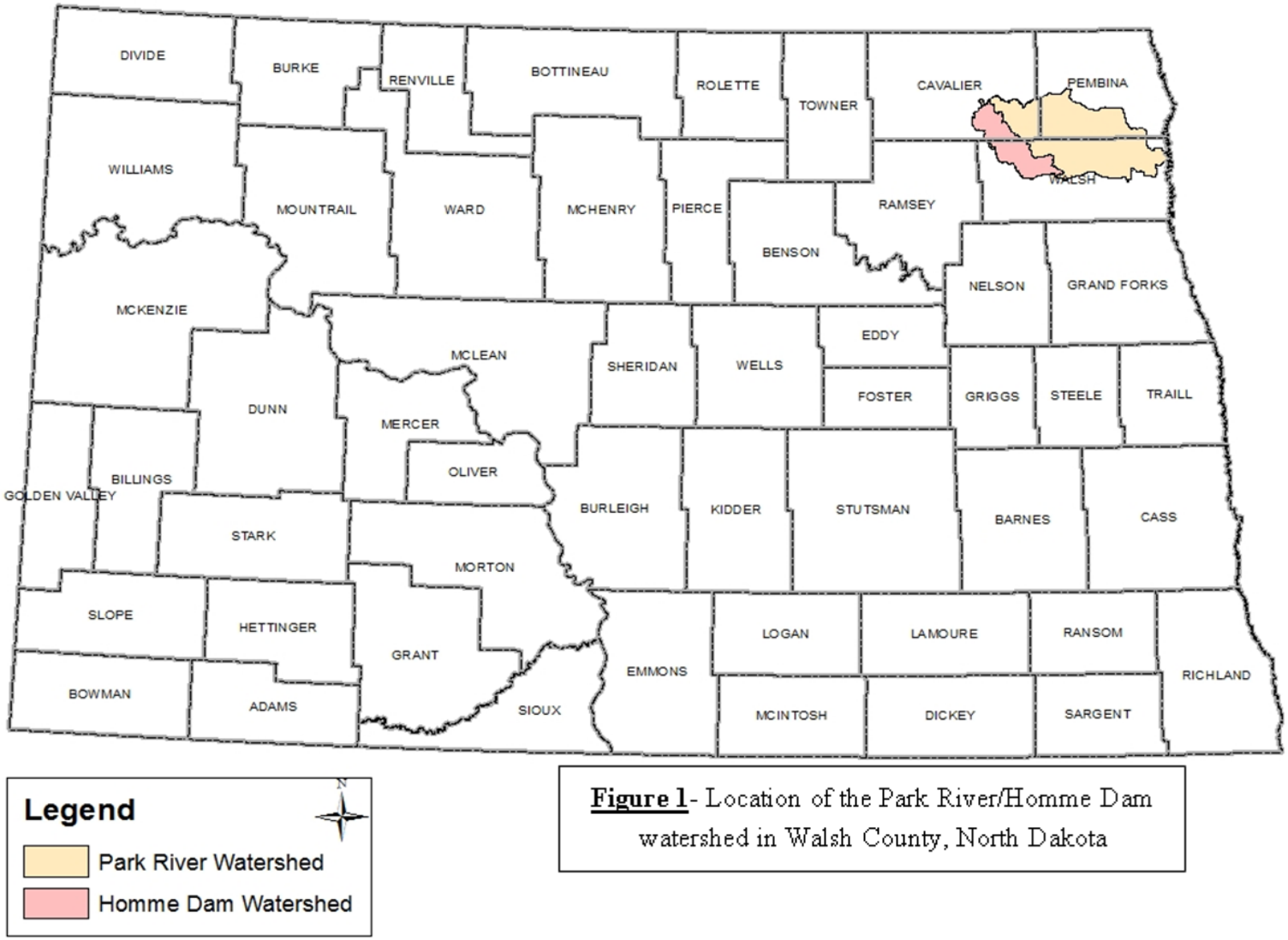


Figure 1- Location of the Park River/Homme Dam watershed in Walsh County, North Dakota

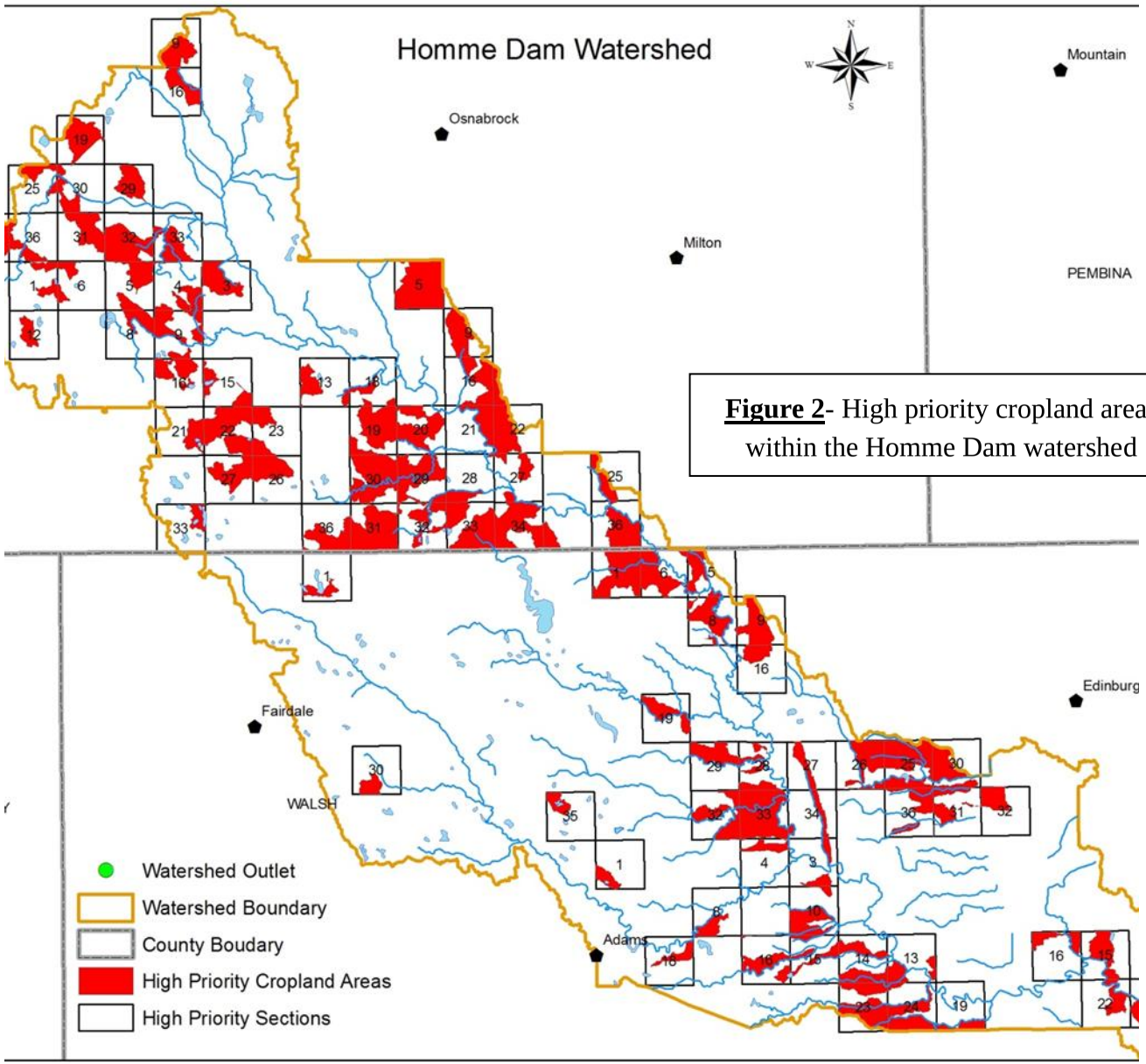


Figure 2- High priority cropland areas within the Homme Dam watershed

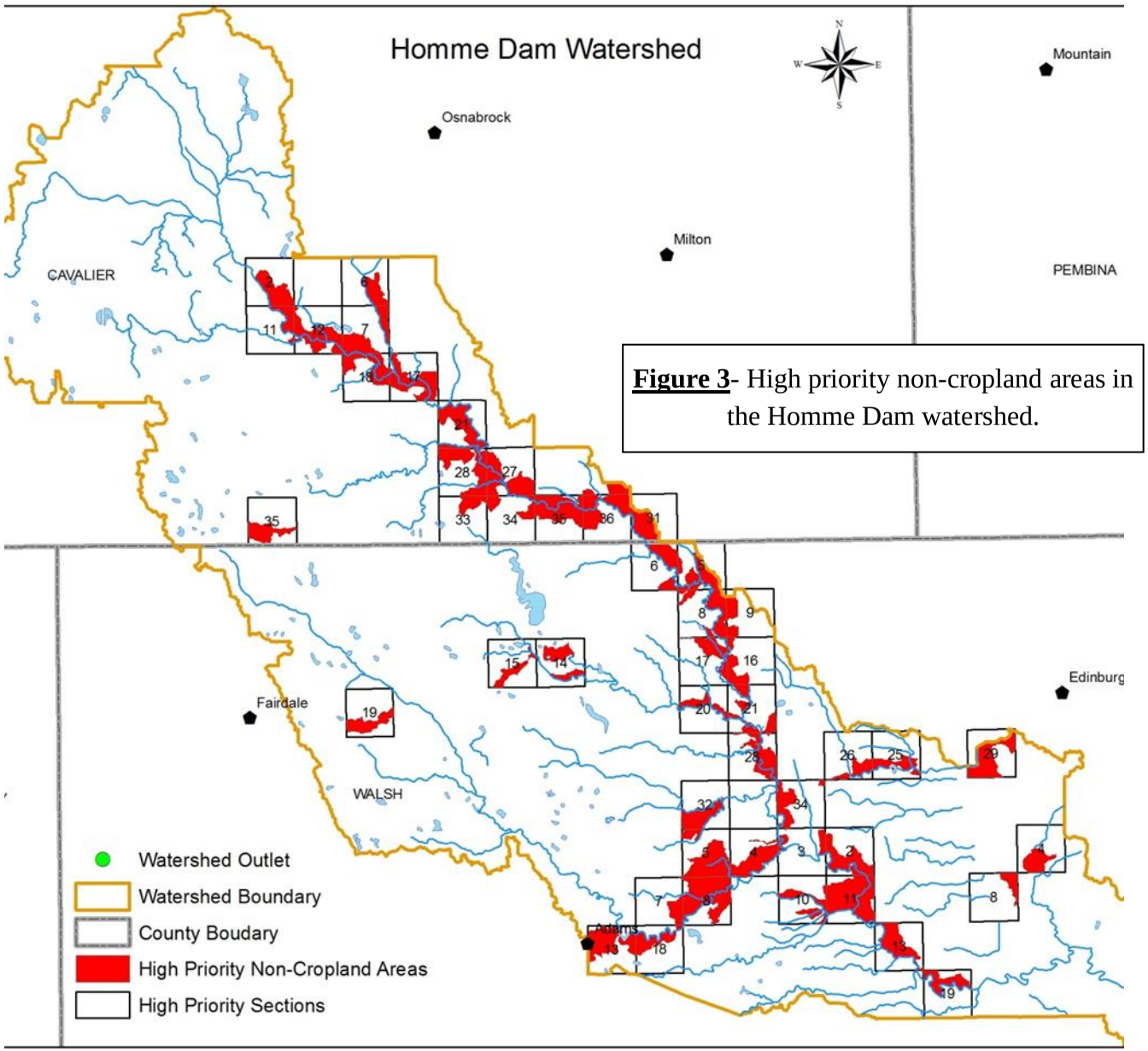


Figure 3- High priority non-cropland areas in the Homme Dam watershed.

Appendix #2

Homme Dam landowner Survey

Homme Dam Watershed Survey

Walsh County Three Rivers Soil Conservation District

Date
2/1/2012

Dear Landowner:

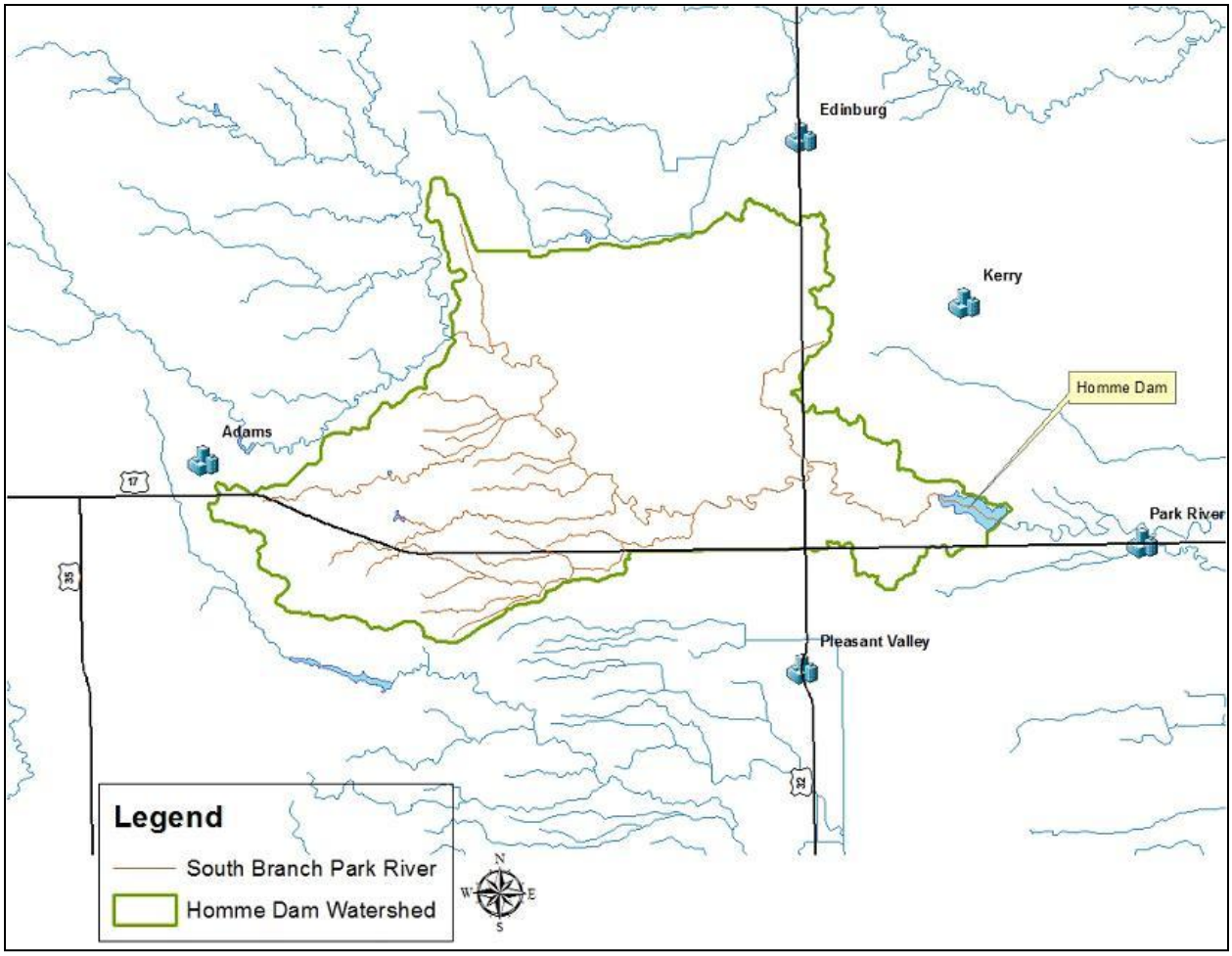
The primary goal of the Homme Dam Water Quality and Watershed Assessment Project was to evaluate current water quality conditions and uses of Homme Dam and its watershed. This was accomplished by collecting and analyzing water samples at three sites. One located at the inlet site at the bridge by the Park River Bible Camp, the second located at the outlet site in Park River by the golf course, and the third site located at the deepest point on the Homme reservoir. Samples were collected on the river during open water period of 2010/2011 and on the Homme reservoir under ice and winter of 2010/2011. We also conducted a stream bank and erosion assessment along the south branch of the park river at multiple sites and developed.

To better understand the general public's interest, the Walsh County Three Rivers Soil Conservation District (SCD) is conducting a survey of residents in the Homme Dam watershed. Your responses to this survey will greatly help the SCD to better understand watershed residents' thoughts on: 1) current water quality conditions in Homme Dam; 2) interest in supporting a watershed project focused on water quality and conservation; and 3) feasible solutions for improving or protecting the quality of water in Homme Dam watershed. Feedback through the survey will also provide the information needed to apply for a Section 319 grant to support efforts addressing water quality concerns identified through the watershed assessment and survey. If successful, the SCD will use the Section 319 funding to support a wide variety of activities including: conservation planning; cost share assistance for conservation practices; educational workshops; water quality monitoring; equipment demonstrations and other activities that would help address water quality concerns in the Homme Dam watershed.

Enclosed you will find the survey, a map of the watershed area, and a self-addressed, stamped envelope to use when returning the survey. Please feel free to include any additional comments you deem necessary or relevant to the project. Your response and time is greatly appreciated. If you would like more information about Section 319 funding or Homme Dam water quality results, please stop in the office anytime and ask for Matt Nelson. Thank you!

Sincerely,

Matt Nelson
Watershed Coordinator/ District Technician
Walsh County Three Rivers Soil Conservation District
Park River, ND
(701) 284 7466 ext. 3


Edinburg
Kerry
Homme Dam
Adams
17
Park River
35
Pleasant Valley
32
Legend
South Branch Park River
Homme Dam Watershed
N
W
E
S

Homme Dam Landowner Interest Survey

1. Please describe yourself.
    a. Active Farmer/Rancher/Operator
    b. Not Currently an active Farmer/Rancher/Operator (i.e., retired)
    c. Rural Non-Farm
    d. Other (please specify)_____

2. Do you actively recreate on the Homme Dam reservoir? (Ex. fishing, boating, swimming, camping, etc.)
    a. Yes (go to #3)
    b. No (go to #4)

3. How many days do you recreate on the Homme Dam reservoir per year?
    a. 1-10 days
    b. 10-30 days
    c. 30+ days

4. What are your resource concerns (Circle all that apply)?
    a. Soil Erosion/Sustainability
    b. Salinity
    c. Water Quality
    d. Stream bank Erosion
    e. Wildlife
    f. Other (please specify) _____

5. What resource concerns do you feel should be addressed in the Homme Dam Watershed?

6. Have you ever received technical assistance to help with management decisions regarding the implementation of conservation practices on cropland or grazing land? (Yes/No).
    a. Yes (go to #6a)
    b. No (go to #7)

6a. If yes, which entities provided the assistance? (Choose all that apply)
    a. Private Firms (ex. Co-ops or seed dealers)
    b. Commodity groups/organizations
    c. NRCS
    d. Local Soil Conservation District
    e. NDSU Extension
    f. Websites, magazines, etc.
    g. Friends and neighbors
    h. Someone else (Please Specify) _____
    i. Don't Know

7. Do you feel the financial and technical assistance programs offered by USDA (i.e. EQIP, WHIP, CSP) are sufficient to adequately address your resource concerns listed in #4?
    a. Yes
    b. No

8. Is there a need for more financial or technical assistance to plan and install conservation practices in Homme Dam watershed?
    a. More financial assistance
    b. More technical assistance
    c. Increase both financial and technical assistance
    d. The current level of financial and technical assistance is sufficient

9. If Section 319 funding was received by the SCD to increase the availability of financial and technical assistance in the Homme Dam watershed, would you participate in the program to help address the resource concerns in the watershed?
    a. Yes
    b. No
    c. Maybe
    d. Need to know more about the Program

10. Categorize these 10 BMPs in importance to your resource needs and/or those of the Homme Dam Watershed? (1-very important to 10-least important)

___Residue Management (no-till, strip-till, mulch-till)
___Salinity & Sodic Soil Management (establish vegetative cover only)
___ Windbreak/ Shelterbelt Establishment
___Nutrient Management
___Cover Crops
___Streamside Buffer Strips
___Grassed Waterway
___Pasture and Hayland Planting
___Fencing/Prescribed Grazing
___Stream Channel Stabilization

Total Surveys Received/Total Surveys Mailed: 42/130	32%	
	Total	Percentage
Question 1: Please Describe Yourself.		
a) Active Farmer/Rancher/Operator	19	45%
b) Not Currently an Active Farmer/Rancher/Operator (i.e., retired)	11	26%
c) Rural Non-Farm	7	17%
d) Other (Specify)	5	12%
No Answer		
Owner		
Resident of Nursing Home		
Owner/Farm Leaser		
Rent out Cropland		
Question 2: Do you actively recreate on the Homme Dam reservoir?		
a) Yes	17	40%
b) No	24	57%
Question 3: How many days do you recreate on the Homme Dam reservoir per year?		
a) 1-10 days	13	31%
b) 10-30 days	2	5%
c) 30 + days	1	2%
Question 4: What are your resource concerns? (circle all that apply)		
a) Soil Erosion/Sustainability	26	62%
b) Salinity	13	31%
c) Water Quality	27	64%
d) Streambank Erosion	18	43%
e) Wildlife	19	45%
f) Other (Specify)	7	17%
Debris in Lake-Trees		
More Sites for Campers		
Cleaning silt out of Homme Dam		
Gates to the dam opened without notification because floods our crossing		
Retention Capacity		
Entertainment		
Don't Have Any		
Question 6: Have you ever received technical assistance to help with mgmt decisions regarding the implementation of conservation practices on cropland or grazing land?		
a) Yes	17	40%
b)No	22	52%
Question 6a: If yes, which entities provided the assistance?		
a) Private Firms	2	5%
b) Commodity groups/organizations	1	2%
c) NRCS	13	31%
d) SCD	9	21%
e) NDSU Ext	11	26%
f) Websites, magazines, etc.	3	7%
g) Friends and neighbors	7	17%
h) Someone else	0	0%
i) Don't Know	0	0%
Question 7: Do you feel the financial and technical assistance programs offered by USDA are sufficient to adequately address your resource concerns listed in #4?		
a) Yes	22	52%
b)No	14	33%
Question 8: Is there a need for more financial or technical assistance to plan and install conservation practices in Homme Dam watershed?		
a) More financial assistance	4	10%
b) More technical assistance	0	0%
c) Increase in both financial and technical assistance	17	40%
d) The current level of financial and technical assistance is sufficient	14	33%
Question 9: If Section 319 funding were received by the SCD to increase the availability of financial and technical assistance in the Homme Dam watershed, would you participate to help address the resource concerns in the watershed?		
a) Yes	12	29%
b)No	3	7%
c) Maybe	12	29%
d) Need to know more about the Program	11	26%

Questions 5 and 10 were omitted in this table, because they were not talliable.

Appendix #3

Budget Tables

Homme Dam Watershed Project Implementation Plan Table for Phase II						Budget
Part 1: Funding Sources						
	2014	2015	2016	2017	2018	Total
EPA SECTION 319 FUNDS						
1)FY14 Funds (FA)	$28,483	$27,162	$70,432	$70,769	$68,255	$265,100
STATE/LOCAL MATCH						
1) Walsh County 3 Rivers SCD (TA & FA)	$18,989	$18,108	$16,855	$17,179	$17,504	$88,634
2) Landowners (FA)	$0	$0	$30,100	$30,000	$28,000	$88,100
Subtotals	$18,989	$18,108	$46,955	$47,179	$45,504	$176,734
TOTAL BUDGET						
	$66,461	$63,377	$164,341	$165,127	$159,262	$618,568
OTHER FEDERAL FUNDS						
1) NRCS (TA, EQIP, and other programs)	$40,000	$40,000	$40,000	$40,000	$40,000	$200,000
2)FSA (CRP)	$0	$5,000	$5,000	$5,000	$50,000	$65,000
3) NDDoH	$0	$0	$6,500	$6,500	$6,500	$19,500
TOTAL FEDERAL FUNDS	$40,000	$45,000	$51,500	$51,500	$96,500	$284,500
TOTAL PROJECT COST						$1,168,168

FA: Financial Assistance
TA: Technical Assistance
SCD: Soil Conservation District
NRCS: Natural Resource Conservation Service
FSA: Farm Service Agency
NDDoH: North Dakota Department of Health

Homme Dam Watershed Project Implementation Plan
Budget Table for Phase II

	2014	2015	2016	2017	2018	Total Costs	Cash and In-kind Match	319 Funds
Objective 1: PERSONNEL/SUPPORT/ADMIN								
Salary/Fringe	$28,327	$29,125	$29,936	$30,748	$31,559	$149,695	$59,878	$89,817
Travel,food & Lodging	$1,200	$1,200	$1,200	$1,200	$1,200	$6,000	$2,400	$3,600
Office Space/Utilities	$1,950	$1,950	$1,950	$1,950	$1,950	$9,750	$3,900	$5,850
Equipment/Supplies	$2,500	$2,500	$2,500	$2,500	$2,500	$12,500	$5,000	$7,500
Training	$205	$204	$200	$200	$200	$1,009	$404	$605
SCD meetings	$1,000	$1,000	$1,000	$1,000	$1,000	$5,000	$2,000	$3,000
Subtotals	$35,182	$35,979	$36,786	$37,598	$38,409	$183,954	$73,582	$110,372
Objective 2: Financial & Technical Assistance								
Grazing management BMPs			$45,250	$45,000	$45,000	$135,250	$54,100	$81,150
Cropland BMPs			$30,000	$30,000	$25,000	$85,000	$55,000	$51,000
Subtotals	$0	$0	$75,250	$75,000	$70,000	$220,250	$88,100	$132,150
Objective 3: Information/Education								
Public meetings/Workshops/Tours	$1,400	$1,400	$1,400	$1,400	$1,400	$7,000	$2,800	$4,200
Newsletters/News releases/Mailings	$650	$650	$650	$650	$650	$3,250	$1,300	$1,950
Educational materials/schools	$350	$350	$350	$350	$350	$1,750	$700	$1,050
Demonstration site	$9,500	$6,500	$1,000	$1,000	$1,000	$19,000	$7,600	$11,400
Subtotals	$11,900	$8,900	$3,400	$3,400	$3,400	$31,000	$12,400	$18,600
Objective 4: Water Quality Monitoring								
Sampling/Transport/Supplies	$390	$390	$1,950	$1,950	$1,950	$6,630	$2,652	$3,978
Subtotals	$390	$390	$1,950	$1,950	$1,950	$6,630	$2,652	$3,978
Total for all Objectives/Tasks								
Total 319/Non-federal Budget	$47,472	$45,269	$117,386	$117,948	$113,759	$441,834	$176,734	$265,100

Section 319 Funds per year	$28,483	$27,162	$70,432	$70,769	$68,255	$265,100
Total local match per year	$18,989	$18,108	$46,955	$47,179	$45,504	$176,734
SCD match per year	$18,989	$18,108	$16,855	$17,179	$17,504	$88,634
Producer BMP match per year	$0	$0	$30,100	$30,000	$28,000	$88,100

Part 3: Projected BMP List		
Practice Code	Practice Description	Cost per unit
340	Cover Crop	$20/ acre
378	Pond	Engineer Est.
382	Fencing (Barbed)	$1.35/ ft
382	Fencing(multiple wire electric)	$0.67/ft
382	Fencing (single wire electric)	$0.51/ft
386	Field Border	$20/acre
393	Filter Strip	$125/acre
422	Hedgerow Planting	$20/hlnft
472	Access Control/Use Exclusion	$20/acre
590	Nutrient Management	$5/acre
391	Riparian Forest Buffer	$350/acre
390	Riparian Herbaceous Cover	$300/acre
614	Trough and Tank	Local Rate
601	Vegetative Buffer	$125/acre
380	Windbreak/Shelterbelt Establishment	$22.50/hlnft

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

Appendix #4

Milestone Table

Milestone Table for Homme Dam Watershed Project							
			Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Task/Responsible Organization	**Output**	**Qty**					
OBJECTIVE 1-establish support network							
Task 1- employ 1 watershed coordinator	Watershed Coordinator	1	X				
Group 3							
Task 2-coordinate with other organizations	financial/technical assistance	1	X	X	X	X	X
Group 1,2,3,4,5,6							
Task 3- conduct meeting with affiliates	long term plan	5	1	1	1	1	1
Group 1,2,3,4,5,6							
Task 4-manage 319 funds and project	project implementation	5	1	1	1	1	1
Group 3,4							
OBJECTIVE 2-reduce phosphorous load							
Task 5-work with livestock producers	BMPs	3	0	0	1	1	1
Group 1,2,3,6							
Task 6-work with crop producers	BMPs	3	0	0	1	1	1
Group 1,2,3,6							
OBJECTIVE 3- increase public understanding							
Task 7-create a BMP demonstration site	demonstration site	1	X				
Group 3,6							
Task 8- conduct workshops on water quality	workshops	5	1	1	1	1	1
Group 1,3,5,6							
Task 9- relay information via radio, newspaper, etc.	ads, advertisements	5	1	1	1	1	1
Group 3							
Task 10- distribute materials to schools	materials for education	5	1	1	1	1	1
Group 1,3,6							
OBJECTIVE 4- document trends in water quality							

Task 11-implement a QAPP	QAPP	1			X	X	X
Group 3,4							
Task 12- maintain NPS program BMP tracker database	Record of BMPs	1	X	X	X	X	X
Group 3							
Group 1- Natural Resources Conservation Service- Provide technical assistance to plan, design, and implement BMPs.							
Group 2- Landowners in Homme Dam watershed- make land management decisions and provide cash and in-kind match for BMPs.							
Group 3- Walsh County Three Rivers SCD- Local project manager and sponsor, including responsibilities for project coordination, reimbursement payments, match tracking, and progress reporting the ND Health Department							
Group 3- Walsh County Three Rivers SCD- Local project manager and sponsor, including responsibilities for project coordination, reimbursement payments, match tracking, and progress reporting the ND Health Department ***Group 4***- North Dakota Health Department- Statewide Section 319 program management including oversight of local 319 planning and expenditures							
Group 5- Walsh County Water Resource Board- Provides technical and financial assistance for the project							
Group 6- NDSU extension service- Provides technical and financial or 'In-Kind' assistance for the project							