

NORTH DAKOTA

NPS POLLUTION MANAGEMENT PROGRAM

FISCAL YEAR 2001 ANNUAL REPORT

November 1, 2000 - October 31, 2001

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11/01/00 - 10/31/01**

I. Introduction

Since 1990, the North Dakota NPS Pollution Management Program has received \$25,475,107 in Section 319 funding to support Program personnel and over 60 local projects across the state. Approximately, 10% of these funds have been secured to support state level activities including; staffing and support, statewide groundwater monitoring, local project development, and public education. The balance of the funds, 90%, have been allocated for locally sponsored projects addressing various NPS pollution impacts.

While the size, target audience, and structure of the locally sponsored projects may vary significantly, they all share the same basic objectives. These common objectives are: 1) increase public awareness of NPS pollution issues; 2) reduce/prevent the delivery of NPS pollutants to waters of the state; and 3) disseminate information on effective solutions to NPS pollution where it is threatening or impairing uses. In recent years, an increasing amount of Section 319 funding has also been used by local entities to evaluate water quality conditions and determine sources and causes of NPS pollution within priority watersheds.

State and local projects currently supported with Section 319 funding essentially include three different types of projects. These project types or categories are: 1) development phase projects; 2) educational projects; and 3) watershed projects. Although most projects clearly fit into one of these categories, several projects do include components from all three categories.

The primary purposes of development phase projects are to identify beneficial use impairments or threats to specific waterbodies and determine the extent to which those threats or impairments are due to NPS pollution. Work activities during a development phase project generally involve an inventory of existing data and information and supplemental monitoring, as needed, to allow an accurate assessment of the watershed. Through these efforts the local project sponsors are able to: 1) determine the extent to which beneficial uses are being impaired; 2) identify specific sources and causes of the impairments; 3) establish preliminary pollutant reduction goals or TMDL endpoints; and 4) identify practices or management measures needed to address pollutant sources and restore or maintain the beneficial uses of the waterbody. Development phase projects are generally one to two years in length.

Educational projects, as the name implies, are designed to disseminate information on various NPS pollution issues, ranging from specific sources or causes of NPS pollution to management solutions that can be used to reduce NPS pollution. Educational tools typically used by the sponsoring entities include brochures, all media (TV, radio, newspaper, etc.), workshops, "how to" manuals, tours, exhibits, and demonstrations. These projects are generally one to five years in length.

The watershed projects are the most comprehensive projects currently implemented through the NPS Pollution Management Program. These projects are typically long-term efforts designed to address documented NPS pollution impacts and beneficial use impairments within priority watersheds. Common objectives for watershed projects include; 1) protection and/or restoration of impaired beneficial uses through voluntary implementation of best management practices; 2) dissemination of information on local NPS pollution concerns and effective solutions to those concerns; and 3) evaluation of progress toward identified use attainment or NPS pollutant reduction goals. Watershed projects are generally five to ten years in length, depending on the size of the watershed and extent of NPS pollution impacts.

The North Dakota Nonpoint Source Pollution Management Program continues to be a voluntary program directed toward locally sponsored initiatives that strive to reduce/prevent NPS pollution impacts to the beneficial uses of the state's water resources. To emphasize this "local focus" and more clearly define the long-term direction of the NPS Program, the ND Department of Health (NDDH) updated the state's NPS Pollution Management Program Plan (Management Plan) in 1999. **The updated Management Plan was fully approved by EPA on October 28, 1999.** Updates to the Management Plan included; 1) establishing a Program mission statement and long-term goal; 2) describing key components of the Program; and 3) identifying specific objectives and tasks that need to be completed to achieve the goal of the NPS Program. The mission statement and long-term goal are as follows:

North Dakota NPS Program Mission: "To protect or restore the chemical, physical, and biological integrity of the waters of the state by promoting locally sponsored, incentive based, voluntary programs where those waters are threatened or impaired due to nonpoint sources of pollution."

North Dakota NPS Management Program Long-term Goal: "To initiate a balanced program focused on the restoration and maintenance of the beneficial uses of the State's water resources (i.e. streams, rivers, lakes, reservoirs, wetlands, aquifers) impaired by NPS pollution."

To allow closer evaluation of accomplishments and progress toward Program goals, the annual report format was also revised in January 2000. **Starting with the 2000 annual report, the "start date" for all future reports will be November 1999. This date is consistent with the approval date for the updated Management Plan.** Program progress prior to November 1999 is reflected in annual reports previously submitted to EPA. The "end date" for future reports will be dependant on the specific reporting year (e.g., October 31, 2001, October 31,2002, etc.). This section, **Section I, provides a general description of the structure and goals of the NPS Program. Sections II through VII of the new report format discuss the cumulative accomplishments associated with each component of the Management Plan.** Information in each section will generally include a discussion on the accomplishments related to the applicable Program objectives and a brief status report for each task associated with the objectives. The six major components of the Management Plan that will be addressed in this report are as follows:

- Resource Assessment - This section addresses the NPS Program's existing inventory/assessment system and future needs to improve or expand assessment efforts.
- Prioritization - This section discusses existing and future prioritization methods or strategies within the NPS Program.
- Assistance - This section focuses on "how" the financial and technical assistance available through the Program will be delivered to state/local project sponsors.
- Coordination - Development and maintenance of partnerships with private and local/state/federal agencies and organizations are described in this section.
- Information/Education - The Program's multi-year strategy for public outreach and information dissemination is described under this section.
- Evaluation/Monitoring - Program and local project evaluation/monitoring efforts are addressed in this section.

II. Resource Assessment

Resource Assessment Goal: To accurately and thoroughly assess beneficial use support and the sources and causes of use impairments within the state's watersheds.

Resource assessment under the NPS Program essentially involves two main objectives. On a statewide basis, NDDH staff utilize data (e.g., water quality, biological, etc.) collected by state and local staff to evaluate beneficial use conditions and trends throughout the state. At the local level, financial and technical assistance is provided to resource managers to assess beneficial use impairments within specific waterbodies or measure benefits resulting from applied BMP. To allow for more accurate analysis of the sources and causes of beneficial use impairments at the state and local levels, the NDDH has also initiated efforts to delineate and digitize the 12 digit hydrologic units throughout the state.

To gain a better understanding of NPS pollution concerns across the state, an assessment of existing water quality and landuse data from the state's major river basins was completed in September 1998. This assessment was conducted in cooperation with NRCS and concluded with the publication of the FY99 ND Unified Watershed Assessment. This document is available on the NDDH web site www.health.state.nd.us. Updates to the UWA are scheduled to be conducted on a five year cycle.

As part of the nationwide effort to create a national, consistent and seamless watershed database, several state and federal agencies in North Dakota have partnered to delineate and digitize watershed and subwatershed boundaries in the state. The North Dakota Department of Health, in cooperation with the Natural Resource Conservation Service (NRCS), is the lead agency in the

delineation and digitization effort. These two agencies, along with the North Dakota Geological Survey, North Dakota State Water Commission, U.S. Geological Survey, and U.S. Forest Service – Dakota Prairie Grasslands and other federal and state agencies involved with natural resource management in North Dakota have formed an Interagency Hydrologic Unit Work Group to oversee the delineation process. The new Interagency terminology, coding and average HU sizes being used by the Group are listed in Table 1.

Table 1. New Interagency Guideline Terminology, Coding, and Average HU Size.

New Interagency Categories	HU Digit	HU Level	Average Acreage
Region	2	1	----
Subregion	4	2	----
Basin	6	3	----
Subbasin	8	4	448,000
Watershed	10	5	40,000 - 250,000
Subwatershed	12	6	10,000 - 40,000

To date, the 12 digit HU delineations have been completed in 12 river basins (e.g., Cannonball, Pembina, Little Missouri, etc.) in North Dakota. Delineations are also scheduled to be completed in another five river basins (e.g., James, Sheyenne, etc.) in 2002. This equates to roughly one fourth of the total watershed acreage in the state. The North Dakota Interagency HU Work Group has also set a tentative long term delineation schedule for the remaining watersheds in the state. Under this schedule, delineations of all the 12 digit HU's in North Dakota should be complete by the end of 2003 and certified by the end of 2004. Upon completion, these 12 digit HU's will form the basis for all local or basin-wide assessments supported by the NPS Program.

Small subwatershed NPS pollution assessments have continued to be the primary approach/tool used by local sponsors to identify future management needs and establish subwatershed priorities (i.e., Tier III, Tier II). These assessments, commonly referred to as “development phase projects,” provide the foundation for all watershed projects by identifying specific sources and causes of beneficial use impairments or threats. When appropriate, the assessment data is also used by NDDH staff to develop NPS pollution TMDLs. In most cases, data collected through the assessments is used to establish a Tier III ranking for the targeted watershed(s) and develop multi-year watershed project implementation plans (PIP) that address the beneficial use impairments associated with NPS pollution.

Since November 1999, 13 assessment or development phase projects have been active and/or initiated in the state. Basic goals of these projects include the identification of; 1) beneficial use impairments or threats; 2) sources and causes of the impairments; and 3) specific corrective

measures needed to address the documented NPS pollution impacts. These local assessments have generally included water quality and biological (macroinvertebrates and fish) monitoring; stream discharge measurement; landuse inventories; and riparian assessments. At the conclusion of each assessment/development phase project, NPS Program staff and the local sponsors determine the Tier ranking of the watersheds and develop a NPS assessment report and/or TMDL. These reports identify specific use impairments, pollutant sources and causes, as well as future management needs and goals. All NPS assessment reports are maintained on file at the NDDH and local project offices. Table 2 lists the active or completed assessment/development phase projects during the period of November 1, 1999 through October 31, 2001.

Table 2. Summary of the active and completed assessment or development phase projects for the period of November 1, 1999 through October 31, 2001.

Project Name	Project Period	319 Allocation & Source **	319 Expenditures	NPS Report Status	Water Quality Variables and Comments *
Phase I Cannonball River Watershed	8/99 - 6/01	\$13,865 in Development Funds	\$13,865	Phase I & II data will be included the same report.	Targeted three headwater subwatersheds. Data collection included FCB, TSS, N, and P concentrations, stream discharge, AGNPS modeling, and riparian assessment. Also see Cannonball Phase II
Maple River (Dickey & LaMoure Counties)	7/99 - 10/00	\$153,706 in Development Funds	\$153,706	Data included in PIP	Assessed use conditions in Maple Creek. Data collected included FCB, TSS, N, and P loadings. Also completed riparian assessment and AGNPS modeling of the watershed. One livestock waste system demonstration was also installed. Assessment data was incorporated into the Maple River WRAS.
Cedar Creek Basin	3/97 - 12/00	\$52,235 in Development Funds (Includes funds allocated & expended prior to 11/01/99.)	\$52,235	Compl. 10/00	Final phase of the Cedar Creek Basin assessment. Based on AGNPS modeling and subwatershed assessment reports, the subwatersheds were prioritized and PIP's developed. PIP's for the highest priority subwatersheds were approved by EPA in 1/01.
Pipestem Creek (Foster Co.)	5/99 - 6/01	\$3,829 in Development Funds	\$3,829	Compl. 6/01	Assessed beneficial use conditions of the creek and its tributaries (below Lake Hiawatha) that flow into Pipestem reservoir. Data collection includes FCB, TSS, N, and P concentration trends. Also conducted a riparian assessment, landuse inventory, and livestock winter feeding area inventory
Powers Lake	2/00 - 6/02	\$6334 in Development Funds	\$5,060	Due 6/02	Assessing degree of beneficial use impairments in Powers Lake. In- stream and lake data to be collected includes FCB, TSS, N, chlorophyl a, P, loadings/discharge and landuse.

Project Name	Project Period	319 Allocation & Source **	319 Expenditures	NPS Report Status	Water Quality Variables and Comments *
Kelly Creek Assessment	2/99 - 6/00	\$36,391 in Development Funds	\$36,391	Data summary included in PIP	Assessed headwater tributary to Kelly Creek. Data collected included SWMM modeling and stream habitat assessment. Also conducted limited water chemistry analysis for model calibration.
Tyler Coulee Watershed Water Quality Improvement	5/00 - 6/02	\$17,155 in Development Funds & \$57,523 in Base Funds	\$51,229	Due 6/02	Assess the extent of NPS impacts to water quality in Tyler Coulee within Bismarck city limits by; developing XPSWMM model; identifying potential corrective measures; and establishing numeric reduction goals. Variables being evaluated include stream flow/stage, N, TSS, P, current landuse and projected urban development.
James River Headwaters & Rocky Run Watershed	4/00 - 6/04	\$72,000 in Base Funds	\$28,678	Rocky Run Report Compl. 7/01; James River Report Due 6/04	Assess beneficial use conditions and sources and causes of NPS pollution impairing uses in James River Headwaters and Rocky Run Creek.. Monitoring activities include AGNPS modeling, water quality and biological sampling, and riparian assessment. Variables being monitored include N, P, TSS, FCB, fish, macroinvertebrates, and landuse
Devils Lake WRAS	7/00 - 6/03	\$72,876 in WRAS Funds	\$8,409	Due 6/03	Document/compare current water quality conditions in the subwatersheds of Devils Lake Basin and identify potential sources and causes of NPS pollutants impacting water quality. Variables being monitored include N, P, TSS, stream flow/stage, major anions/cations, and landuse practices.
Pembina River WRAS	5/00 - 6/03	\$151,572 in WRAS Funds	\$25,754	Due 6/03	Assess current beneficial use conditions and sources and causes of use impairments to establish subwatershed priorities. Also develop a basin management plan. Variables being monitored include N, P, TSS, flow/stage, and land use.
Nine Township Assessment	7/01 - 6/04	\$190,308 in Base Funds	\$17,815	Due 6/04	Assess current beneficial use (aquatic life & recreation) conditions and sources and causes of NPS pollutants impairing uses in the subwatersheds of the Knife River . Monitoring activities include water quality and biological sampling, AGNPS modeling, and riparian assessment. Variables being monitored include N, P, TSS, FCB, fish, macroinvertebrates, and flow/stage and landuse.

Project Name	Project Period	319 Allocation & Source **	319 Expenditures	NPS Report Status	Water Quality Variables and Comments *
Phase II Cannonball River Assessment	4/01 - 6/04	\$38,132 in Base Funds	\$831	Due 6/04	Assess beneficial use conditions and sources and causes of NPS pollutants impairing uses within the Cannonball River subwatersheds. Monitoring activities include water quality and biological monitoring, AGNPS modeling, and riparian assessment. Variables being monitored include N, P, TSS, FCB, macroinvertebrates, fish, flow/stage, and landuse.
Minot Stormwater Assessment	1/01 - 6/01	\$3,600 in Development Funds	\$3,600	Compl 6//01	Summarize existing water quality data for the Mouse River subwatersheds within Minot city limits. Identify monitoring activities for inclusion in the city's stormwater ordinances.

* FCB - fecal coliform bacteria; TSS - total suspended solids; N - nitrogen constituents; P - total phosphorus

** Specific 319 allocations for assessment/development projects using Base Program or WRAS funds are also listed in Table 6 in Section IV. The 319 allocations for the projects supported with "Development Phase Funds" are part of the total amount of funding listed under the Development Phase Fund in Table 6.

Currently, there are two sources of Section 319 support for assessment level projects. Generally, the short-term or small watershed assessment projects are supported with Section 319 funds available through the NPS Program's "Project Development Fund." Section 319 funds available through the Project Development Fund are unexpended funds reallocated from other NPS Program projects that were completed under budget. For the multi-year or basin-wide assessments, the local sponsors participate in the annual Section 319 grant application process to secure Section 319 support (Base or Incremental Funding) for their projects. Regardless of the source, the match to the Section 319 funding is provided by the local project sponsors. Cumulative Section 319 expenditures on local assessment/development phase projects since July 1999 are provided in Table 7 in Section IV.

A. Assessment Objective & Task Accomplishments

Objective 1. Complete periodic assessments of the eight digit hydrologic units in the state.

Task 1: Review various assessment methods and existing water quality and natural resource inventory (NRI) data to develop a strategy for completing a unified assessment of the eight digit hydrologic units in the state. [**Product:** *Data sets and process for assessing the eight digit hydrologic units; Milestone: August 1998*]

Complete - In cooperation with NRCS, existing water quality and landuse data was reviewed and a unified watershed assessment process was established in 1998.

Task 2: Conduct an assessment of the state's eight digit hydrologic units every five years. [**Product:** *Unified Watershed Assessment Reports (Appendix 6)*; **Milestone:** *October 1998, 2003, 2008, etc.*]

On Schedule - The first North Dakota Unified Watershed Assessment - FY 1999 was completed in September 1998. The assessment report can be found under "publications" on the NDDH home page (www.health.state.nd.us).

Objective 2. Develop and implement a strategy/process that will allow accurate assessment of the water quality and beneficial use conditions within the state's 12 digit hydrologic units.

Task 3: (Revised) Coordinate with the appropriate agencies and organizations to delineate and digitize the 12 digit hydrologic units in the state. [**Product:** *GIS coverage and maps of the state's 12 digit hydrologic units*; **Milestone:** *(Revised) October 2004*]

On Schedule - 12 digit HU's rather than 14 digit HU's will be delineated. Statewide coverages and maps are scheduled to be completed in 2004. The 12 digit HU delineations for 12 river basins have been completed. Delineations in five additional river basins are also scheduled to be completed in 2002.

Task 4: (Revised) Inventory existing data/information and determine data needs (land use, water quality, biological, etc.) for accurately assessing local watersheds or the 12 digit hydrologic units in the major river basins. [**Product:** *Summaries of existing data to be used for identifying and prioritizing data collection needs within local subwatersheds and/or the six major river basins*; **Milestone:** *(Revised) Data inventories for the local watersheds is an ongoing effort; Summaries for the 12 digit HU's in the first two basins will be completed by March 2005 with subsequent summaries of the other four basins completed by March 2007, at a rate of two basins per year.*]

On Schedule - During the 12 digit HU delineation process this task has been revised to utilize local feedback and information in the 1999 UWA to determine basin or watershed assessment needs. Under the revised schedule, inventories of the major river basins will be initiated upon completion of the 12 digit HU delineations in 2004.

Task 5: (Revised) Coordinate and implement monitoring and assessment activities within local subwatersheds and/or priority 12 digit HU's lacking sufficient data/information to determine beneficial use impairments. [**Product:** *Local and/or state level Sampling and Analysis Plans (SAP) and/or strategies describing monitoring and assessment goals and objectives, sampling procedures, and responsible organizations. -- 3-5 SAP's or strategies developed and implemented/year*; **Milestone:** *(Revised) The local assessment activities have been ongoing since 1999 - The first SAP's or QAPP's for 12 digit HU's will be developed and implemented October 2005; During the interim, 2-5 QAPP's or*

SAP's will be developed, annually, for locally prioritized watersheds within Category I basins]

On Schedule - Also see Task 3. All assessment project areas after 2004 will utilize the 12 digit HU to define project boundaries. During the interim, local assessment needs and projects will be based on NRCS HU boundaries, local feedback, UWA information, 303(d) priorities, etc.. Table 2 lists the active and completed assessment projects since November 1, 1999. All the assessment projects listed on Table 2 have approved SAP's.

Task 6: (Revised) Compile existing and new data to assess beneficial use support and watershed conditions within local watersheds and/or the 12 digit HU's in each major river basin. [**Product:** *NPS Assessment Reports and/or TMDL's (as appropriate) based on data collected within the local watersheds and/or 12 digit HU's in the major river basins;* **Milestone:** *(Revised) Development of NPS Assessment Reports or TMDL's for local watersheds has been ongoing since November 1999; The first NPS Assessment Reports and/or TMDL's for the 12 digit HU's will be completed in October 2006.*]

On Schedule - See Tasks 3 & 4. Table 2 indicates the report status for all the assessment projects initiated since November 1999.

Objective 3: Establish watershed specific restoration goals (e.g. TMDL goals) for the highest priority Tier II subwatersheds (e.g. 12 digit HU's) within the six major river basins and develop project implementation plans (PIP's) based on the identified pollutant reduction (e.g. TMDL endpoints) and/or beneficial use improvement goals.

Task 7: (Revised) Provide assistance to local resource managers, Project Advisory Committees, and/or Basin Management Committees to prioritize local subwatersheds and/or 12 digit HU's in the six major river basins and establish assessment strategies. [**Product:** *A priority watershed/waterbody list identifying the Tier I, II, or III waterbodies, including local plans or strategies for assessing the local subwatersheds and/or 12 digit HU's;* **Milestone:** *(Revised) Local subwatershed prioritization is an ongoing effort; Prioritization of the 12 digit HU's in the major river basins will be initiated October 2005]*

On Schedule - Current assessment strategies are focusing on local priorities and smaller watersheds based on USGS/NRCS HU boundaries. Development of strategies for the major river basins will be initiated in 2005 (See previous Tasks). To date, assessment strategies have been established and implemented in the Devils Lake Basin, Pembina River Basin, Cannonball River Watershed, and James River Headwaters watershed. Several Soil Conservation Districts (SCD) have also established assessment strategies for subwatersheds within their districts. These SCD include Bowman/Slope SCD in the Little Missouri

Watershed; Mercer SCD in the Knife River Watershed; and LaMoure/James River SCD's in the James River Watershed. Table 2 also lists the active and completed assessments projects since November 1999.

Task 8: Based on local priorities, assist local sponsors with the development of watershed specific sampling and analysis plans (SAPs) and the collection and interpretation of monitoring data to; 1) establish watershed specific goals based on identified use impairments associated with NPS pollution and; 2) determine management needs for addressing specific sources and causes of NPS pollution. [**Product:** An average of ten watershed specific assessment reports (e.g. TMDLs, watershed PIPs) annually from 1999 through 2013; **Milestone:** Ongoing effort; will be initiated in October 1999]

Behind Schedule - SAP's have been developed for all NPS assessment projects supported with Section 319 funds. Table 2 provides an update on the report status for each assessment project in the state. Given current staffing limitations, the number of reports scheduled annually has been unattainable. However, the NDDH is planning to add three additional staff by November 2001. The primary role of these individuals will be the development of TMDL's. With the addition of these new staff members, this task should be able to get back on schedule.

Objective 4: Assess/evaluate the success of local project efforts (e.g. BMP implementation) to improve water quality and restore and/or maintain the beneficial uses of waterbodies impacted by NPS pollution.

Task 9: Assist local sponsors with the development and implementation of SAPs that are based on pollutant reduction (e.g. TMDL endpoint) and/or beneficial use improvement goals for waterbodies/watersheds being targeted in project implementation plans (PIPs). [**Product:** SAPs for inclusion in watershed PIPs; 2-5 watershed PIPs/year; **Milestone:** Ongoing effort; SAP's for all "new" watershed projects will be completed by September of each year. -- 1999 through 2013.]

On Schedule - Sampling and analysis plans (SAP) have been developed and are being implemented by all watershed projects approved by the Task Force and EPA. Currently, there are 12 active watershed projects with approved SAP's.

Task 10: Compile data collected within the watersheds and evaluate progress toward the project's beneficial use restoration and/or pollutant reduction goals. [**Product:** Reports for each watershed project area describing the success of the local sponsor's efforts to achieve the project goals (e.g. reduce identified NPS pollution causes and/or restore impaired beneficial uses); 2-5 end-of-project reports per year; **Milestone:** Ongoing effort; Data will be reviewed and summarized annually; End-of-project reports will be completed by July of each year.]

On Schedule - All water quality data collected within the assessment or watershed projects has been entered in the STORET database. Baseline data collected prior to the initiation of the approved watershed projects has been summarized in watershed specific NPS assessment reports and/or incorporated into the PIP's. Final Reports for completed projects identified in this and previous reports are entered in the GRTS, as they are approved.

III. Prioritization

Prioritization Goal: Based on the most current inventory and assessment data, prioritize the state's waterbodies/watersheds for future NPS pollution assessment or abatement efforts.

Completion of the FY 99 Unified Watershed Assessment (UWA) has provided an effective tool for prioritizing waterbodies throughout the state. With the UWA the NDDH, in cooperation with the NRCS, has established general priority ratings (e.g, Category I, Category II) for the major river basins in the state. Information provided in the UWA has also allowed the NPS Program to better determine major areas needing increased attention, which has resulted in the initiation of nine Watershed Restoration Action Strategies (WRAS) in several Category I basins. Specific watersheds where a WRAS has been implemented since November 1999 are as follows:

- Griggs County Water Quality Improvement Project (Sheyenne River watershed in Griggs County)
- Cottonwood Creek Watershed (Subwatershed in James River basin)
- Beaver Creek Watershed
- Wild Rice Watershed (Addressing the headwater subwatersheds in Sargent County)
- Pembina River Basin Assessment
- Devils Lake Basin Assessment
- Cedar Creek Basin (Crooked Creek, Chanta Peta, & Mid Cedar watersheds are the subwatershed priorities in the basin)
- Maple River Watershed (Subwatershed in the Elm River basin)
- Sheyenne River Watershed in Barnes County

With the exception of the Devils Lake and Pembina River WRAS's, each WRAS is designed to restore and/or maintain specific beneficial uses by addressing identified NPS pollution impairments in the project area. The Pembina River and Devils Lake projects are focused on the assessment of basin subwatersheds to document beneficial use impairments and/or threats. Specific progress reports on the WRAS projects are provided in the GRTS.

Currently, a two step prioritization process is being used within several soil conservation districts and/or a 8 digit HU in the state. The first step involves a review of current information (i.e., obtained through local feedback; the 1999 UWA; NDDH; USGS; NRCS; etc.) to establish preliminary Tier rankings and determine the type of management or assessment needs in the targeted subwatersheds. The second phase focuses on the development of a priority schedule for

the implementation of the appropriate subwatershed assessment activities. The local sponsorships than develop and implement quality assurance project plans (according to the priority schedule) to collect the data needed to elevate the subwatersheds from a Tier II to a Tier III ranking. In some cases, a watershed may have sufficient data at the onset of the process to establish a Tier III ranking. In such cases, the local sponsors can bypass the assessment phase and seek assistance for the implementation of a comprehensive watershed management plan.

As indicated in the previous section, the NDDH is currently in the process of delineating and digitizing the 12 digit HU's in the state. This process is scheduled for completion in 2004. Upon completion, NPS Program staff will further prioritize NPS pollution management needs in the major river basins by assigning Tier I, II, or III rankings (as defined in the NPS Management Plan) to each of the 12 digit HU. This process was originally scheduled to start in October 2001. However, due to staffing limitations, the schedule for determining 12 digit HU Tier rankings has been revised and will be initiated in 2004. Completion of this process will complement and strengthen the ongoing prioritization efforts by creating more comparable evaluations of assessment and management needs within the major river basins.

A. Prioritization Objectives & Task Accomplishments

Objective 1: Categorize all of the state's waterbodies/watersheds into one of the three Priority Tiers.

Task 1: (Revised) Delineate the waterbodies/subwatersheds within each of the six major river basins at the 12 digit HU level or lower. [**Product:** *GIS coverage and maps identifying waterbodies and subwatersheds within each river basin; Milestone:* (Revised) *October 2004*]

On Schedule - The revised completion date for all the major river basins is October 2004. See Objective 2 Tasks under the Assessment Section.

Task 2: (Revised) Review the most current data/information (e.g. watershed assessment reports, 303(d) list, landuse inventories) for local watersheds targeted for prioritization and/or the 12 digit HUs' in each river basin and assign Tier rankings. [**Product:** *Inventory of existing data/information with GIS coverage and maps identifying Tier rankings for the local watersheds and/12 digit HU's in the six major river basins; Milestone:* (Revised) *Data inventories for the local subwatersheds have been ongoing since November 1999; The summaries for the first two major river basins will be completed by March 2005. Subsequent inventories and rankings of the other four basins will be completed by March 2007, at a rate of two basins per year.]*

On Schedule - The schedule for the major river basin inventories has been revised to align with the completion date for the 12 digit HU delineations (See Objective 2 Tasks under the Assessment Section). — Local watershed priorities or Tier

rankings have been or are being established in several watersheds and soil conservation districts (SCD) in the state. To date, the SCD's or watersheds that have prioritized or are currently prioritizing local subwatersheds are as follows: 1) Mercer SCD - Subwatersheds of the Knife River; 2) LaMoure & James River SCD - subwatersheds to the James River; 3) Bowman/Slope SCD - Subwatersheds to the Little Missouri River; 4) Cannonball River Watershed; 5) Pembina River Watershed; 6) Devils Lake Basin; and 7) Cedar Creek Watershed.

Objective 2: (Revised) Establish basin priority rankings for each of the Tier I, II, and III subwatersheds within local priority watersheds and/or the six major river basins in the state.

Task 3: (Revised) In cooperation with Basin Management Committees, local resource managers, etc., identify local watershed and/or basin-specific criteria for prioritizing the waterbodies/watersheds within each Tier. [**Product:** (Revised) *Prioritization processes for Tier I, II, and III waterbodies and watersheds in each local watershed and/or major river basin; **Milestone:** (Revised) *Development of prioritization criteria for local watersheds has been ongoing since November 1999; Development of criteria for the major river basins will be initiated in October 2004 and completed in 2007*]*

On Schedule - Development of criteria for the major river basins will be initiated upon completion of the 12 digit HU delineations. — Local watershed specific criteria was used in the Pembina River and Cedar Creek basins to establish subwatershed priorities and assessment schedules. Criteria used included producer interest, local support, beneficial uses, water quality impairments conditions, etc.. Due to limited water quality data, the SCD's and other watersheds listed under Task 2 have generally established a subwatershed assessment schedule based on observed water quality conditions, landuse practices and local concerns.

Task 4: (Revised) Obtain input on local priorities regarding beneficial uses, water quality and NPS pollution management needs within the local watersheds and/or the six major river basins. [**Product:** (Revised) *Two to four public meetings/project; local priority rankings of the local watersheds and/or 12 digit HU's within the major river basins (e.g. maps and/or information identifying local priorities); **Milestone:** (Revised) *Prioritization of local subwatersheds has been ongoing since November 1999; Initial prioritization meetings within each basin will be conducted from October 2004 through October 2005. Based on the outcome of these meetings, each basin will set its own schedule for subsequent meetings to complete this task. It is recognized that this task will be an ongoing effort to accommodate periodic updates to the management plan and waterbody prioritization list.*]*

On Schedule - NPS Program personnel have participated in committee meetings for all NPS assessment projects listed in Table 2. In most cases, the local

sponsors have based their priorities on observed water quality conditions in the subwatersheds, degree/type of public use, and current landuse practices.

Task 5: (Revised) Based on local input and available data, assign priority ratings (e.g. high, low, medium) for the Tier I, II, or III subwatersheds within in the local priority watershed and/or the 12 digit HU's in each major river basin. [**Product: (Revised) Local or basin-wide waterbody priority list and maps identifying priority ratings (i.e., Tier I, II, and III); Milestone: (Revised) Development of local priority ratings has been ongoing since November 1999. Prioritization of the 12 digit HU's within the major river basins will be initiated in October 2005 and conclude in October 2008, at a rate of two basins per year.]**

On Schedule - Following the assessment activities, the local sponsors of the completed projects listed in Table 2 have revised the priority rankings of the assessed watersheds. Typically, the assessed watersheds are elevated to a Tier III ranking which enables the sponsors to pursue funding to address the sources and causes of NPS pollution. If there are multiple subwatersheds involved in the assessment, the sponsors have also established a priority schedule for the implementation of watershed project implementation plans. Prioritization of the subwatersheds within the Tier III category has generally focused on the type and degree of beneficial use impairment, anticipated producer participation, and level of local support.

IV. Assistance

Assistance Goal: To provide sufficient financial and technical assistance to local resource managers (e.g. SCDs, WRBs) to ensure accurate identification of impairments to water quality originating from NPS pollution and effective initiation and completion of projects that will restore and/or maintain the beneficial uses of waterbodies impacted by NPS pollution.

The best measure for evaluating the delivery of NPS Program financial and technical assistance is the number of projects initiated and/or maintained on an annual basis. Delivery of this assistance starts with the development of the project implementation plans and continues throughout and beyond the implementation of the projects. General types of assistance delivered to local projects on an annual basis include: project oversight; sample analysis; PIP review and comment; sample collection and project management training; sampling and analysis plan development; distribution of various educational materials; biological monitoring support; and Section 319 financial support. NDDH personnel involved in the delivery of NPS Program financial and technical assistance are as follows:

- Water Quality Division Director & Surface Water Program Manager - Program Supervision (0.70 FTE)
- NPS Program Coordinator - Program Administration (1 FTE)

- Environmental Scientist - Monitoring/Assessment Assistance (2 FTE)
- Watershed Planning & Information/Education Coordinator - I/E Assistance (1 FTE)
- Microbiology and Chemistry Lab Personnel - Sample Analysis (3 FTE)
- Ground Water Program Personnel - Aquifer Assessment Project (2.5 FTE)
- Secretarial Assistance (0.5 FTE)

Specific roles of NDDH staff involved in the delivery of the NPS Program are provided in the 11/01 - 6/03 NPS Program Staffing and Support Workplan. Approximately, 10% of the NPS Program budget is utilized to support NDDH staff involved in the NPS Program. Total expenditures for NPS Program staffing and support during the period of July 1, 1999 through October 31, 2001 are provided in Table 3.

Table 3. Estimated NPS Program Staffing & Support Expenditures - 7/1/99 thru 10/31/01

Cost Category	Section 319 Funds	State Match	Total Expenditures
Personnel Salaries	\$390,763	\$260,508	\$651,271
Fringe Benefits	117,720	78,480	196,200
Travel	39,445	26,296	65,741
Equipment	12,239	8,160	20,399
Supplies	23,356	15,571	38,927
Other (phone, postage, rent, misc.)	45,967	30,645	76,612
Indirect	36,868	24,578	61,446
TOTAL	\$666,358	\$444,238	\$1,110,596

Through the assistance delivered by NPS Program staff, 45 locally sponsored projects have received Section 319 financial support under the FY99 Section 319 Grant Award (*Note: Does not include Development Phase projects.*). Seven of the local projects have been completed and 38 were still active as of October 30, 2001. Projects completed since July 1, 1999 and their final report status are listed in Table 4.

Table 4. Completed Projects Funded Under the FY 99 Grant Award - July 1, 1999 - October 31, 2001. *

Project	FY Funding	End Date	Final Report Status
Pipestem Creek Watershed	95	6/00	NPS Program staff have provided comments on the first draft in 3/01. Project staff are currently making final revisions. The final report is due 12/01.
Wells County Manure Management Demo.	96	6/00	NPS Program staff provided comments on the first draft in 3/01. Project staff are currently making final revisions. The final report is due 12/01.
Phase III Hay Creek	99	6/01	Comments on the water quality component of the draft report were forwarded to the sponsors in 10/01. The complete final report is due 2/02.
Antelope Creek Watershed	98	6/01	The project was discontinued in 6/01 due to limited producer participation. A final report on accomplishments has been received and will be entered in GRTS in 4/02. Unexpended Section 319 funds were reallocated to the Nine Township Assessment in 7/01.
Phase II Renwick Watershed	98	6/01	The final report was received in 7/01 and will be entered in the GRTS in 12/01.
Barnes Co. Livestock Waste Management & Streambank Restoration Demo.	99	6/01	The final report was received in 8/01 and will be entered in the GRTS in 12/01.
Mouse River Park Streambank Restoration	00	6/01	Due to staffing limitations, development of the final report has been delayed. The revised due date for the final report is 4/02.

* Table 4 does not include the completed projects funded with Development Phase Funds. The status of projects supported with Development Phase Funds is provided in Table 2.

Table 5 lists general information on the active projects currently funded through the FY99 Grant. Section 319 funding and local match commitments for all (active & complete) projects supported by the FY99 Grant are provided in Table 6. Total Section 319 funding allocated to the locally sponsored projects equates to approximately 90% of the federal funds obligated under the FY99 Grant Award. Annual updates and progress reports for all local projects are provided in the GRTS.

Table 5. Active State and Local Projects Under the FY99 Grant Award - July 1, 1999 thru October 31, 2001

PROJECT	PROJECT TYPE	WATERBODY TYPE	NPS CATEGORY	FISCAL YEAR(S) FUNDING
NPS Base Staffing/Support	Staffing, Project Development, & I/E Program	All Types	Crosscuts Categories	90, 91, 93, 95, 96, 97, 99 & 00
Water Education for Teachers (WET)	Education	All Types	Crosscuts Categories	92, 95, 98, 99 & 01

PROJECT	PROJECT TYPE	WATERBODY TYPE	NPS CATEGORY	FISCAL YEAR(S) FUNDING
Foster Co. Regional End. Education Series (TREES)	Education	All Types	Crosscuts Categories	92, 94, 96 & 01
Ground Water Monitoring (Staffing/Support)	Assessment	Ground water	Agriculture/Urban	92, 94 & 00
Upper Sheyenne Watershed	Watershed	Lake/River	Agriculture	96, Also requesting 02 funding
Griggs Co. Watershed (FY99 WRAS)	WRAS	River/Stream	Agriculture	96 & 99
NPS BMP Engineering Team	Watershed	All Types	Agriculture	97, Also requesting 02 funding
Beaver Creek Watershed (FY99 WRAS)	WRAS	Lake/Stream	Agriculture	97 & 99
Livestock Waste Technical Assistance & Information Program	Education	All Types	Agriculture	97, Also requesting 02 funding
Cottonwood Creek Watershed (FY99 WRAS)	WRAS	Lake/Stream	Agriculture	97, 99, Also requesting 02 funding
Statewide ECO ED Camps	Education	All Types	Crosscuts Categories	97 & 01
Southwest N. D. Information & Education Program	Education	All Types	Agriculture	97 & 00
Mirror Lake Watershed	Watershed	Lake/Stream	Agriculture	98 & 01
Phase II - Red River Riparian Project	Watershed	Rivers/Streams	Agriculture & Urban	98
Nine Township Assessment (Mercer Co.)	Assessment	River/Stream	Agriculture	98 - (Antelope Crk. Watershed reallocation funds)
ND Dept. of Agriculture Waterbank Program	Watershed	Wetlands	Agriculture	99, Also requesting 02 funding
Cedar Lake Watershed	Watershed	Lake/Stream	Agriculture	99
NDSU Deep Soil Nitrate Assessment	Education	Groundwater	Agriculture	99
Wild Rice Watershed (FY99 WRAS)	WRAS	Streams & Wetlands	Agriculture	99 & 01
UND Aquifer Denitrification Assessment	Education	Groundwater	Crosscuts Categories	99
Pembina River Assessment (FY99 WRAS)	WRAS	River/Stream	Crosscuts Categories	99
NDSU GIS Nitrate Assessment System	Education	Groundwater	Agriculture	99

PROJECT	PROJECT TYPE	WATERBODY TYPE	NPS CATEGORY	FISCAL YEAR(S) FUNDING
Tyler Coulee Watershed water Quality Improvement	Assessment	River	Urban	00
ND Dairy Pollution Prevention Program	Watershed	All Types	Agriculture	00
Satellite Image Applications to Water Quality Protection	Education	All Types	Agriculture	00
Mouse River Park Streambank Restoration	Demonstration	River	Urban	00
Kelly Creek Water Quality Improvement Project	Demonstration	Stream & Wetland	Urban	00
Upper James River/Rocky Run Watershed Assessment	Assessment	River/Stream	Agriculture	00
Maple River Watershed	WRAS	Stream	Agriculture	00
Devils Lake Basin Assessment	WRAS	Lake/Stream	Agriculture	00
Crooked Creek Watershed (Part of Cedar Creek WRAS)	WRAS	Stream	Agriculture	00
Mid Cedar Watershed (Part of Cedar Creek WRAS)	WRAS	Stream	Agriculture	00
Chanta Peta Watershed (Part of Cedar Creek WRAS)	WRAS	Stream	Agriculture	00
Phase IV Hay Creek Watershed	Watershed	Stream	Urban	01
Sheyenne River WRAS (Barnes Co.)	WRAS	River	Agriculture	01
ND Envirothon	Education	All Types	Crosscuts Categories	01
Groundwater Sensitivity Mapping	Education	All Types	Crosscuts Categories	01, Also requesting 02 funding
Digital Taxonomic Keys for Aquatic Insects	Education	All Types	Crosscuts Categories	01
Buffalo Springs/Lightening Creek Watersheds	Watershed	Stream	Agriculture	01
Phase II Cannonball River Assessment	Assessment	River/Stream, Lakes	Agriculture	01
ND Stockmen's Association Manure Management Specialist	Education	All Types	Agriculture	01
Livestock Facility Assistance Program	Watershed	All Types	Agriculture	01
Phase V Hay Creek Watershed	Watershed	Stream	Urban	Requesting 02 funding

PROJECT	PROJECT TYPE	WATERBODY TYPE	NPS CATEGORY	FISCAL YEAR(S) FUNDING
Lower Pipestem Creek Watershed	WRAS	Stream	Agriculture	Requesting 02 funding
Rocky Run Watershed (Implementation Phase)	Watershed	Stream	Agriculture	Requesting 02 funding

Table 6. Section 319 Funding and Local Match Obligations for all Projects Supported Under the FY99 Grant Award - July 1, 1999 thru October 31, 2001. (Does not include projects requesting FY02 Section 319 funding)

PROJECT NAME	SECTION 319(h) ALLOCATION	LOCAL AND/OR STATE MATCH	TOTAL
Statewide ECO ED Camp	692,378	461,585	1,153,963
SW NPS/Water Quality I/E Project	887,042	591,361	1,478,403
Foster Co. TREES	396,056	264,037	660,093
Griggs Co. Water Quality Project - FY 99 WRAS	1,213,536	809,024	2,022,560
Cottonwood Creek Watershed - FY 99 WRAS	762,572	508,382	1,270,954
Beaver Creek Watershed - FY 99 WRAS	773,165	515,444	1,288,609
NDSU Livestock Waste Management Program	262,663	175,109	437,772
NPS BMP Team	339,275	226,183	565,458
Project WET	300,022	200,015	500,037
Pipestem Creek Watershed	44,937	29,958	74,895
Upper Sheyenne Watershed	217,654	145,103	362,757
Development Phase Fund	511,529	341,019	852,548
Professional Fees	7,166	4,777	11,943
Antelope Creek Watershed	48,256	32,171	80,427
Nine Township Assessment (Mercer Co.)	114,186	76,124	190,310
Renwick Watershed - Phase II	75,763	50,509	126,272
Mirror Lake Watershed	485,937	323,958	809,895
Red River Riparian Project - Phase II	1,427,121	951,414	2,378,535
NDDA Waterbank Program	444,509	296,339	740,848
Hay Creek Watershed - Phase III	60,738	40,492	101,230
Hay Creek Watershed - Phase IV	264,000	176,000	440,000

PROJECT NAME	SECTION 319(h) ALLOCATION	LOCAL AND/OR STATE MATCH	TOTAL
Cedar Lake Watershed	613,037	408,691	1,021,728
Barnes Co. Livestock Waste Mgt. and Streambank Restoration Demonstration	84,667	56,445	141,112
NDSU GIS Nitrate Assessment System Demonstration	39,008	26,005	65,013
UND Aquifer Denitrification Assessment	71,905	47,937	119,842
Wild Rice River FY 99 & 01 WRAS	1,320,428	880,285	2,200,713
NDSU Deep Soil Nitrate Assessment	66,666	44,444	111,110
Pembina River Basin FY 99 WRAS	151,572	101,048	252,620
Tyler Coulee Watershed Water Quality Improvement	74,678	49,785	124,463
N. D. Dairy Pollution Prevention Program	695,000	463,334	1,158,334
Satellite Image Applications to Water Quality Protection	293,460	195,640	489,100
Mouse River Park Streambank Restoration Demonstration	60,000	40,000	100,000
Kelly Creek Water Quality Improvement Project	191,135	127,424	318,559
Rocky Run/Upper James River Assessment	72,000	48,000	120,000
Devils Lake Basin FY 00 WRAS	72,876	48,584	121,460
Crooked Creek Watershed (Cedar Creek Basin FY 00 WRAS)	174,229	116,153	290,382
Chanta Peta Watershed (Cedar Creek Basin FY 00 WRAS)	281,157	187,438	468,595
Middle Cedar Watershed (Cedar Creek Basin FY 00 WRAS)	445,874	297,249	743,123
Groundwater Program Monitoring Well Installation	40,500	27,000	67,500
Maple River FY 00 WRAS	1,414,064	942,709	2,356,773
Livestock Facility Assistance Program	287,927	191,951	479,878
ND Stockmen's Association - Manure Management Specialist	228,483	152,322	380,805
ND Groundwater Sensitivity Mapping	393,000	262,000	655,000

PROJECT NAME	SECTION 319(h) ALLOCATION	LOCAL AND/OR STATE MATCH	TOTAL
ND Envirothon	93,945	62,630	156,575
Digital Taxonomic Keys for Aquatic Insects in ND	100,333	66,889	167,222
Buffalo/Lightening Springs	411,240	274,160	685,400
Cannonball Assessment	38,132	25,421	63,553
Barnes Co. Sheyenne River FY 01 WRAS	1,757,700	1,171,800	2,929,500
TOTAL	18,801,521	12,534,348	31,335,869

Program staff have assisted local sponsors with the development of PIP's for 18 new or continuation projects. Four of the FY02 project proposals were not approved by the NPS Task Force. Project plans/funding requests approved by the Task Force in October 2001 included PIP's for seven new projects and seven continuation projects. Three of the approved projects were awarded FY 2001 Section 319 carryover funds and two will be funded with Development Phase funds. Projects awarded the FY 2001 carryover funds include the; 1) Livestock Facility Assistance Program; 2) ND Stockmen's Association - Manure Management Specialist; and 3) Updated Mirror Lake Watershed PIP. Approved projects that will be supported through the NPS Program Development Phase Fund include the Bear/Bonehill Watershed Assessment and the Lower Sheyenne Watershed Education & Assessment Project. The PIP's and QAPP's for the Development Phase projects are currently being reviewed by NPS Program staff. Final PIP's for the other nine approved projects will be submitted to EPA for FY 2002 Section 319 funding consideration. These PIP's are scheduled to be submitted to EPA in December 2001.

As previously indicated, 90% of NPS Program expenditures are associated with the implementation of locally sponsored projects. Estimated expenditures for the different project categories for the period of July 1, 1999 through October 31, 2001 are provided in Table 7. While the current state to local expenditure ratio is similar to previous years, it appears there is an increasing amount of funding is being directed toward local projects. One factor leading to this trend is obviously the growing number of long-term projects versus a fairly constant staffing level in the NPS Program. Another factor that may be influencing the upward trend in local expenditures is the increased emphasis on livestock manure management within many local project areas. Typically, these projects are addressing manure management through education programs and/or the installation of manure management facilities. Consequently, due to the high costs and complexities associated the installation of manure management facilities, the local projects are requiring more financial and technical assistance to effectively address identified beneficial use impairments caused by improper manure management.

Table 7. Estimated Local Section 319 Expenditures per Project Category - July 1, 1999 thru October 31, 2001.

Project Category	319 Funds	Local Match	Total	Percent of Total
Development Phase Assessments	\$231,923	\$154,615	\$386,538	4.0%
Multi-Year Assessments	232,971	155,314	388,285	4.0%
Information & Education	1,638,445	1,092,297	2,730,742	28.2%
Watershed	3,703,323	2,468,882	6,172,205	63.8%
TOTAL	\$5,806,662	\$3,871,108	\$9,677,770	100%

Local match responsibilities continue to be one of the main limiting factors when developing and implementing NPS projects in the state. To address this concern, NPS Program staff have worked with the local project sponsors to expand their partnerships and sources of financial support. Organizations currently providing financial and/or technical assistance to the local projects include entities such as Duck Unlimited, Natural Resources Trust, Water Resource Boards, Soil Conservation Districts, City Councils, Resource Conservation & Development Councils, ND Game & Fish Department, and the State Water Commission. Specific financial or technical contributions from these groups are provided in the annual project reports in the GRTS.

A “new” source of non-federal financial assistance for local Section 319 projects is the State Water Commission Trust Fund (SWC Funds). Through the 2001 legislative session, \$200,000 were appropriated under the State Water Commission’s budget to support local Section 319 projects. . Guidelines for allocating these funds were completed and approved by the NPS Task Force and State Water Commission (SWC) in August 2001. Due to the limited funding, project specific requests were limited to 10% of total project costs, not to exceed \$50,000. In addition, eligible projects were limited to the draft FY 2002 Section 319 projects approved during the August 1, 2001 NPS Task Force meeting.

During this reporting period, seven projects submitted requests for the SWC Funds. These requests were reviewed by the NPS Task Force during their October 31, 2001 meeting. Based on the information provided, the Task Force approved all the requests and forwarded the project-specific funding recommendations to the SWC for final review and approval. Project-specific funding recommendations forwarded to the SWC ranged from \$12,000 to \$50,000. Currently, the SWC is scheduled to meet in December 2001 to evaluate the Task Force recommendations. If approved, the SWC Funds will be allocated to the projects and be available for expenditure during the 2002/2003 biennium.

NPS Program staff have also completed two actions that may help meet local match needs. These actions include; 1) development of a SRF loan program to support the installation of manure management systems; and 2) completion of NPS Program policies for documenting BMP in-kind match. The guidelines and policies for the SRF loan program have been completed

and the “intended use” plan has been updated to include livestock manure management systems. The next step in the process is to coordinate with the Bank of North Dakota and the Municipal Bond Bank to finalize a review process and delivery system for the SRF loans. This final phase is tentatively scheduled to be initiated and completed in 2002. The second action, NPS Program BMP inkind match policies, was completed and made effect in January 2001. This new policy allows the use of inkind match generated from specific BMP to support local project staff. The BMP inkind match policies are described in the “NPS Program Cost Share Guidelines for NPS Pollution Control Best Management Practices. - January 2001”

A. Assistance Objective & Task Accomplishments

Objective 1: Increase the ability of potential sponsors to determine their local NPS pollution management needs and develop strategies or plans that will effectively address those NPS pollution concerns.

Task 1: Develop and distribute reference materials describing NPS pollution project development and management to soil conservation districts, water resource boards, and other potential local sponsors. [*Product: 150 NPS Project Proposal and Reference Guides; Milestone: October 1998 with updates to the Guide completed annually.*]

Complete - Project Proposal and Reference Guides have been distributed to all the SCD and WRB in the state. This document has been updated as needed.

Task 2: (Revised) Organize and conduct local workshops and/or training sessions focusing on NPS pollution management, water quality/NPS pollution assessment, and project development. The primary target audience will be local resource managers and staff (e.g. SCDs, WRBs) and NRCS field office staff. [*Product: 2-3 workshops or training sessions, annually; Milestone: (Revised) Ongoing effort initiated in August 1999.*]

On Schedule - Major workshops or training events conducted over the past two years include: 1) Manure Management Workshop; 2) Annual ND Watershed Coordinators Conference; 3) First Annual ND/SD Watershed Coordinators Meeting; and 4) Grazing Management Planning Workshop. One-on-one training has also been provided to new NPS project staff and sponsors, as needed. Several Section 319 watershed coordinators have also attended the conservation planning course provided by NRCS.

Objective 2: Provide financial and technical assistance to Basin Management Committees and local project advisory committees to develop and implement assessment projects (or TMDLs) which will elevate priority subwatersheds in each basin to a Tier I ranking.

Task 3: Based on local or basin priorities, provide technical assistance to local resource managers (e.g. SCDs, WRBs) and/or Basin Management Committees with the

development of assessment strategies and/or sampling and analysis plans (SAPs) for the highest priority Tier II and III waterbodies/watersheds in each basin. Watershed assessment strategies and/or SAPs will describe monitoring and assessment goals, objectives, and tasks, sampling procedures, responsible parties, costs, milestones, and quality assurance/quality control requirements. [**Product:** 4-6 planning meetings per year; 10 assessment strategies/SAPs per year; **Milestone:** This will be an ongoing effort. The targeted completion date for the strategies/SAPs for each sampling season is February. -- February 1999, 2000, etc.]

On Schedule - NPS Program staff have assisted local sponsors with the development of SAPs/QAPPs for 12 projects listed in Table 2 in the Assessment Section. The monitoring plan for the Minot Stormwater Assessment project was developed by a private consultant.

Task 4: Complete contractual/financial agreements with local sponsors and implement monitoring and assessment efforts as scheduled in the SAPs. [**Product:** An average of 10 development/assessment phase projects (e.g. TMDLs) per year; **Milestone:** This will be an ongoing effort. The development/assessment phase projects will be 1 -2 years in length and be initiated in March/April each year. -- March 1999, 2000, etc.]

On Schedule - Contractual and financial agreements have been developed with the sponsors for the assessment projects listed in Table 2.

Task 5: Deliver technical assistance to local sponsors to summarize monitoring and assessment data and develop the reports identifying beneficial use impairments, sources and causes of NPS pollution, and watershed specific pollutant reduction targets (e.g., TMDL targets). [**Product:** An average of 10 watershed assessment reports per year; **Milestone:** This is an ongoing effort. The first reports will be completed by December 1999.]

On Schedule - All data collected within the assessment project areas has been entered in STORET. Compilation and interpretation of the data is completed at the end of each project and provided to the local sponsors to aid in future management decisions. Table 2 lists the status of the NPS assessment reports for assessment projects currently supported under the FY99 Section 319 Grant.

Objective 3: Provide financial and technical assistance to local sponsors for the development and implementation of watershed projects addressing the highest priority Tier I waterbodies in each river basin.

Task 6: Based on watershed specific NPS assessment reports, assist local sponsors with the development of Tier I watershed project implementation plans (PIPs). [**Product:** 5-10 planning meetings per year; 3-7 watershed PIPs per year. The projected number of PIP's developed per year is based on historic Section 319 funding appropriations of

*\$100 million nationally and does not reflect the FY 1999 funding level of \$200 million. If Section 319 funding continues at the FY 1999 level of \$200 million or in the event additional financial support is received through state, federal, or local sources, the number of PIP's developed annually will likely increase. Through annual Task Force evaluations, this task as well as the others will be reviewed and adjusted accordingly to reflect any changes to the NPS Management Program's goals, objectives, and tasks resulting from increased financial and/or technical support; **Milestone:** This is an ongoing effort. Draft PIPs will be completed by July and final PIPs by October of each year. -- July/October 1999, 2000, etc.]*

On Schedule - Tables 5 & 6 list all the local projects funded under the FY99 Section 319 Grant. NPS Program staff have assisted with the development of PIP's for all the watershed projects listed in the tables.

Task 7: Submit watershed PIPs to the NPS Task Force and Region VIII EPA for review and Section 319 funding approval. [**Product:** Section 319 funding for a minimum of 3-7 PIPs per year; **Milestone:** The NPS Task Force and EPA will conduct their reviews, annually, during the period of October - January.]

On Schedule - PIPs have been developed for two new watershed projects and 4 continuation watershed projects this reporting period. These PIP's were reviewed and approved by the NPS Task Force in October 2001 and are scheduled to be submitted to EPA in January 2002 for funding approval.

Task 8: Develop contractual agreements with local sponsors and provide guidance and technical assistance to implement and manage the watershed projects. [**Product:** A minimum of 3-7 new watershed project contracts per year; 5-10 Project Advisory Committee meetings per year; 3-7 training sessions per year on the management of Section 319 and local match funds; information on potential sources of financial assistance; weekly/monthly communication with sponsors or staff; **Milestone:** Ongoing effort; Technical assistance for project management is provided, as needed, throughout the project period.]

On Schedule - Annual contracts have been developed and maintained with all projects listed in Table 6.

Objective 4: Expand sources of financial assistance for NPS pollution projects to reduce local sponsors' match responsibilities and/or the level of Section 319 assistance needed.

Task 9: Coordinate NPS Program efforts with local project sponsors, to determine current and future state/local match requirements for local NPS pollution management projects. [**Product:** Report summarizing the cumulative match commitments needed to support current and future NPS projects; **Milestone:** October 1999.]

Complete - A summary of local match needs has been developed. This summary was based on a continued Section 319 allocation of approximately \$5 million. Using this allocation rate, annual local match needs will range between \$2.1 and \$2.9 million.

Task 10: Support a state general fund appropriation dedicated to providing cost-share assistance for local Section 319 projects. [**Product:** *Biennial appropriations of state general funds to be used to match locally sponsored Section 319 projects;* **Milestone:** *The state operates on a biennium which begins on July 1st of odd numbered years. Depending on legislative approval, state general funds could be available in July 2001.*]

On Schedule - Through the efforts of several SCDs and their legislators, \$200,000 in non-federal funds were appropriated under the State Water Commission's budget to help support the match requirements of local Section 319 project sponsors. These funds will only be available for allocation and expenditure during the 2002/2003 biennium. A more detailed discussion on the distribution of these funds is provided on pages 23 - 24. Several SCD's and legislators have also indicated they will continue efforts to introduce legislation during the next session that will establish a more long-term non-federal funding source for Section 319 projects.

Task 11: (Revised) Establish a CWA SRF loan program to partially support locally sponsored NPS pollution management projects. [**Product:** *SRF low interest loan program to support a portion of local NPS project match requirements;* **Milestone:** (Revised) *December 2002.*]

On Schedule - The SRF loan program funding policies associated with the installation of manure management facilities has been completed. Livestock manure management facilities have also been included in the SRF Program's intended use plan. The final step that remains to be completed is the development of a process for reviewing and approving loan requests. This process will be developed in cooperation with the Bank of North Dakota and the Municipal Bond Bank. Due to staff time constraints, development of the review process has been postponed until March/April 2002 and the revised completion date for the loan program has been set for December 2002.

Task 12: Develop and distribute a directory of potential local, state, federal, and private sources of financial assistance to project sponsors wanting to address water quality and/or NPS pollution. [**Product:** *Financial Assistance Directory and/or information on government programs and private foundations or industries that offer financial assistance to local resource management projects;* **Milestone:** *July 1999.*]

Complete - Utilize documents developed by EPA and other agencies.

Task 13: Strengthen and expand partnerships with various commodity groups (e.g. ND Stockman's Association, ND Wheat Growers), agricultural companies (e.g. Monsanto, Concord) and other private groups or organizations (e.g. Ducks Unlimited, Certified Crop Advisors) to increase the level of financial and technical assistance available to local NPS pollution projects. [*Product: 2-5 meetings annually; direct mailings; "new" Task Force members and local project partners; Milestone: Ongoing effort; Will be initiated in October 1999.*]

On Schedule - Partnership building is an ongoing effort accomplished at the state and local levels through direct participation in meetings, mailings, personal contacts, etc.. The quarterly NPS Task Force newsletter is also used to keep potential partners informed on NPS Program activities in the state. The Stockmen's Association, Duck Unlimited, and ND Game & Fish Department are three specific groups that have most recently become actively involved in NPS projects in the state. The Stockmen's Association has received \$50,000 in state general funds and \$228,483 in FY 01 Section 319 funds to support efforts to increase livestock producers understanding of AFO/CAFO rules and manure impacts to water quality. The Save Our Lakes (SOL) Program which is administered by the ND Game & Fish Department, is currently being developed and should provide another source of non-federal funds for local NPS assessment, or watershed projects. Approximately \$800,000 will be available through the SOL Program during the 2002/2003 biennium. Ducks Unlimited is also providing financial and technical assistance to support BMP implementation and NPS project delivery in the Wild Rice WRAS.

Task 14: Assist Local Project Advisory Committees and/or Basin Management Committees with the solicitation of financial assistance from other local/state/federal programs and private foundations or companies to support local NPS pollution management efforts. [*Product: Increased support and participation from a variety of state/federal/local resource management groups, private foundations, local businesses, etc.; Milestone: Ongoing effort; Completed annually as part of the PIP development and implementation activities.*]

On Schedule - During PIP development, the local sponsors are provided information (i.e., contacts, etc.) on other state/federal partners that may be able provide support for their project. Throughout the project period, the local sponsors are also forwarded information, as it becomes available.

Objective 5: Maintain post-project NPS pollution management efforts and document long-term benefits of NPS pollution control and/or water quality improvement practices applied within the project areas.

Task 15: (Discontinued) Provide financial and technical assistance to monitor/evaluate post-project water quality trends and maintenance of restored beneficial uses for three years following the completion of a project. [*Product: Post-project data and reports summarizing trends and/or conditions within the project areas during the three year “post-project evaluation period” -- 1 - 2 reports/year; Milestone: Discontinued*]

Discontinued - NPS Program staffing limitations have prevented consistent implementation of post-project monitoring efforts. To date, the Goodman Creek watershed is the only completed project where some level of post-project monitoring has been conducted. Data collected within Goodman Creek watershed has been entered in STORET and is currently being interpreted. Because of the time demands associated with the active and new projects, post-project monitoring will be discontinued as a priority task. However, if circumstances allow for post-project monitoring, NPS Program staff will provide assistance, as needed. Long-term biological monitoring efforts conducted by the NDDH, Surface Water Program may also offer opportunities in the future to revisit the bio-monitoring sites within completed project areas to evaluate maintenance of aquatic life use.

Task 16: (Revised) Provide technical assistance to local project sponsors to maintain post-project I/E efforts. [*Product: Assistance for development and implementation of various I/E projects; Milestone: Ongoing effort; Initiated in October 1998.*]

On Schedule - Post-project assistance for various I/E activities has been primarily accomplished through ongoing educational activities (e.g., newsletter, tours, etc.) conducted by the local sponsors and/or NDDH. Due to the growing financial needs of the active and new NPS projects, support for the post-project I/E efforts is limited to technical assistance from the NPS Program. Therefore, “financial assistance” has been omitted from the task statement.

V. Coordination

Coordination Goal: Increase the effectiveness of NPS pollution management in the state by coordinating project development and implementation efforts with local, state, and federal agencies and private organizations involved with natural resource management in the state.

In nearly all cases, successful delivery of financial and technical assistance to local sponsors has involved a coordinated effort between various local/state/federal entities. As in past years, the primary local sponsors continue to be Soil Conservation Districts (SCD) and Water Resource Boards (WRB). The NRCS has also continued to be the main federal partner in most project areas. To strengthen local partnerships, NPS Program staff have continually worked with all project sponsors to include other local resource managers or community organizations in the project planning and implementation process. Through active solicitation for additional partners,

most local sponsorships have been able to establish more diverse Project Advisory Committees (PAC) to assist them in project development and management. Although the composition of the PAC's vary between project areas, groups or organizations typically represented on the advisory committees include; NRCS, City Councils, County Commissions, Extension Service, RC&D Councils, SCDs, and WRBs.

The size of the project area generally seems to be the main limiting factor associated with long-term or consistent participation in PAC's. Committees formed in hydrologic units greater than 300,000 acres seem to be more difficult to establish and the meetings are typically attended by only a small core group of members. Diverse resource priorities and financial resources appear to be the "root" of the difficulties interfering with the formation of management committees for the larger geographic areas. Given these experiences, the NPS Program has been and will continue to focus on the formation of "more localized" project advisory committees rather than basin-wide management committees. Over the long term, as the local PAC's are formed and delineation of the 12 digit hydrologic units are completed, NPS Program staff will work with the PAC's within a common river basin to establish basin management committees composed of representatives from each local advisory committee.

The NPS Task Force also serves as one of the primary means for coordinating NPS Program activities with other agencies and organizations. Membership on the Task Force consists of representatives from nearly all, if not all, state/federal natural resource agencies, several commodity/producer groups, tribal councils, and private wildlife/natural resource groups. Through periodic meetings (2-3/year), the Task Force members have; 1) provided input on the delivery of the NPS Program; 2) participated in draft project reviews; and 3) reviewed/approved the FY 2002 NPS projects forwarded to EPA. The Task Force members also participated in the NPS Program Management Plan updates by providing interim reviews and comments throughout the process.

A. Coordination Objective & Task Accomplishments

Objective 1: Expand local participation in the prioritization, development, and implementation of NPS pollution management projects

Task 1: Develop and distribute information to assist local resource managers with the formation of partnerships. [*Product: State Directory identifying agencies and organizations that can provide assistance for NPS project development and implementation - 200 copies; Milestone: August 1999.*]

Complete - Information available through EPA and other agencies regarding various assistance programs has negated the need to develop a state directory. Current information available on assistance programs and potential partners has been distributed regularly. As additional information becomes available it will also be forwarded to the appropriate local entities.

Task 2: (Revised) Coordinate the formation of “Basin Management Committees” to facilitate the prioritization, development, and implementation of NPS pollution management projects in the state’s six major river basins. [**Product:** *A minimum of six Basin Management Committees; Participate in 6-12 meetings per year; Milestone: (Revised) November 2004 through October 2007.*]

On Schedule - Formation of the basin management committees has been postponed until the delineation of the 12 digit hydrologic units is completed. This will allow for additional time to establish more local PAC’s in the river basins. The PAC’s will serve as the foundation for the development of the basin management committees.

Task 3: Assist with the development of Local Project Advisory Committees and participate in their meetings. [**Product:** *3-7 “new” Local Project Advisory Committees established per year; Participate in 2-3 Advisory Committee meetings per project per year; Milestone: This will be an ongoing effort; The “new” Advisory Committees will be established during the development of the project plans.*]

On Schedule - All the projects listed in Table 6, particularly the watershed projects, have established project advisory committees. Generally the groups or agencies represented on the watershed project advisory committees include SCD’s, WRB’s, NRCS, NDDH, Extension Service, County Commissions, and City Councils.

Objective 2: Maintain partnerships and communication with the appropriate local, state, and federal agencies, and private organizations to coordinate resources and ensure other natural resource management efforts are consistent with the state’s NPS pollution management goals.

Task 4: (Revised) Obtain input from the Task Force during the development of projects and update its members, regularly, on NPS Management Program and local NPS project activities. [**Product:** *(Revised) 2-3 Task Force meetings per year; Milestone: Annual Schedule --- Draft PIP review in July; Project area tours in August; Final PIP review in October; Local project updates/presentations in February.*]

On Schedule - The Task Force reviewed all the draft FY 2002 Section 319 PIPs on August 1, 2001. Their comments were provided to the local project sponsors to assist with recommended revisions to the PIPs before final Task Force review. In September/October 2001, the Task Force reviewed 17 PIP’s and approved 9 PIP’s for FY 02 Section 319 funding; 3 PIP’s for FY 01 Section 319 carry-over funding; and 1 PIP for Development phase funding. Four PIP’s were not approved by the Task Force. — The Task Force also reviewed and approved the project requests for the SWC Trust Funds. Project-specific SWC Trust Fund requests approved by the Task Force were forwarded to the State Water

Commission in November 2001 for final review and approval. Guidelines for the SWC Trust Fund application process were developed by a Task Force subcommittee and NPS Program staff.

Task 5: Participate in interagency meetings addressing the delivery of other state and federal natural resource management programs that may affect NPS pollution management or beneficial uses of the state's water resources. [**Product:** Annual meetings --- 5-6 NRCS State Technical Committee meetings; 2 NDASCD Water Resources Standing Committee meetings; 4 NRCS Interagency, Watershed Committee meetings; 6 Red River Basin Board meetings; and 4 Pembina River Watershed Advisory Board meetings; **Milestone:** This will be an ongoing effort.]

On Schedule - On an annual basis, NPS Program and NDDH staff participate in numerous interagency meetings conducted by other resource management agencies (e.g., NRCS, NDASCD, WRB, etc.).

Task 6: Utilize the Task Force to disseminate information to other state and federal agencies to keep them updated on NPS pollution management goals and objectives and priorities within the state. [**Product:** Materials to be distributed to Task Force members -- - Updated NPS Pollution Management Plan and Waterbody Priority List; Unified Watershed Assessment Report; Updated Section 303(d) Waterbody List; and Section 305(b) Reports; **Milestone:** This will be an ongoing effort. Distribution of the materials will be initiated in January 1999.]

On Schedule - Materials and documents such as the NPS Management Plan, UWA, NPS Program policies, 305(b) Reports, etc. have been provided to the Task Force as they are developed or updated.. The Task Force, in cooperation with the NDDH, also distributes a quarterly newsletter to approximately 1300 individuals.

Task 7: (Revised) In cooperation with federal land managers (e.g. USFWS, USFS, BLM) in the state, establish a process for conducting consistency reviews of federal projects and programs on public lands within the watersheds of impaired and/or threatened waterbodies. [**Product:** Consistency review process which includes at a minimum; review criteria, designated contacts, identification of impaired or threatened waterbodies and guidelines for addressing inconsistencies; **Milestone:** (Revised) Completion date for the process is October 2003.]

On Schedule - Agency workloads and pending policy changes have continued to delayed the initiation of this task. The revised completion date has tentatively been set for October 2003.

VI. Information and Education

Information and Education Goal: Increase North Dakota residents' understanding of the water quality and beneficial use impairments associated with NPS pollution and strengthen public support for the voluntary implementation of NPS pollution control activities.

Information and education (I/E) was recognized during the early stages of the state's NPS Pollution Management Program as a high priority. Because of the proactive nature of I/E activities and the high program priority status, the NPS Task Force has established an I/E subcommittee to assist NPS Program personnel with the development and delivery of a strategy designed to coordinate NPS Program I/E efforts across the state. The I/E subcommittee completed the development of the first NPS Management Program Information and Education Strategy in 1993. This strategy was also updated in 1998.

The current statewide I/E strategy identifies the information and education needs for the NPS Management Program and establishes goals and objectives for the implementation of state and local I/E activities. To date, 16 I/E projects have been supported with Section 319 funds awarded under the FY 99 Consolidated Grant. Four of the projects are directed toward youth education, while the other twelve projects focus on adult/producer education. Table 8 identifies the target audiences and goals of the I/E projects currently funded under the FY 99 Consolidated Section 319 Grant.

Table 8. Target audiences and goals of the information & education projects funded under the FY 99 Consolidated Section 319 Grant - July 1, 1999 - October 31, 2001.

Project Name	Project Period	Final Report Status	Primary Target Audience	Project Goal
Water Education for Teacher (WET)	10/93 - 6/03	Due 6/03	K-12 Youth & Teachers	Facilitate and deliver educational opportunities (statewide) that will increase participants' understanding and awareness of NPS pollution and water quality issues in the state.
The Regional Environmental Education Series (TREES)	11/92 - 6/06	Due 6/06	K-6 Youth	Statewide deliver of lyceum style programs that are designed to educate students on various environmental issues, with particular emphasis on water quality and NPS pollution.
Livestock Waste Technical Assistance & Information Program	3/97 - 6/02	Due 6/02	Livestock Producers	Conduct workshops, develop educational materials, and provide one-on-one assistance to educate producers throughout the state on effective manure management practices and facilities.

Project Name	Project Period	Final Report Status	Primary Target Audience	Project Goal
Statewide ECO ED Camps	3/97 - 6/05	Due 6/05	Sixth grade students	Organize and conduct one or two day camps, across the state, that provide hands-on instruction on a variety of natural resource management issues, with an emphasis on water quality and NPS pollution.
Southwestern ND I/E Program	3/97 - 6/06	Due 6/06	Ag producers	Increase producer awareness and understanding of potential NPS pollution impairments to water quality and demonstrate solutions to those impairments within the 18 counties in SW ND.
Barnes Co. Livestock Waste & Streambank Management Demo.	3/99 - 6/01	Complete 9/01	Ag producers	Establish demonstration sites and conduct tours within Barnes County to educate area producers on alternative manure management and streambank restoration practices.
NDSU Deep Soil Nitrate Assessment	4/99 - 6/04	Due 6/04	Ag producers	Establish and monitor field demonstration sites to document the benefits of variable rate fertilizer application for reducing the movement of nitrogen through the soil profile. Information will be disseminated statewide through tours, workshops, articles, etc..
UND Aquifer Denitrification Assessment	10/99 - 9/03	Due 9/03	Resource managers	Collect and disseminate information, statewide, on the denitrification rates in three ND aquifers that are vulnerable to nitrate contamination.
NDSU GIS Nitrate Assessment System	4/99 - 6/02	Due 6/02	Resource managers & Ag producers	Develop and provide training across the state on the use of a WEB based assessment system for identifying potential nitrate risks to groundwater in ND.
Satellite Image Applications to Water Quality Protection	6/01 - 6/05	Due 6/05	Resource managers & Ag Producers	Process Landsat satellite images of ND into usable GIS landuse coverages and distribute the coverages, statewide, through educational modules, training workshops, CDs, and the internet.

Project Name	Project Period	Final Report Status	Primary Target Audience	Project Goal
Mouse River Park Streambank Restoration Demo.	4/00 - 6/02	Due 6/02	General public	Establish a streambank restoration demonstration site to show Renville County residents various bioengineering techniques that can be used to address degraded streambanks.
Kelly Creek Water Quality Improvement Demo.	4/00 - 6/02	Due 6/02	General public	Establish an interpretive site and disseminate information to increase area residents understanding of the functions and the NPS pollutant reduction capabilities of wetland complexes within an urban area.
ND Envirothon	4/01 - 6/06	Due 6/06	9 th - 12 th grade students	Develop and implement a statewide Envirothon competition focusing on soils, forestry, wildlife, aquatics, and a special topic that changes annually.
Groundwater Sensitivity Mapping	4/01 - 6/05	Due 6/05	Resource managers	Complete the Soil Survey Geographical Database for the remaining soil surveys in ND to provide a management and educational tool for resource managers.
Digital Taxonomic Keys for Aquatic Insects in ND	4/01 - 6/04	Due 6/04	General public	Utilize a computer-based format to produce digital keys, taxa lists and range maps for aquatic insects in ND. These keys will be available statewide on the Web and CD-ROM to provide easily accessible keys for resource managers, teachers, and students involved in biological monitoring and/or studies.
Stockmen's Association - Manure Management Specialist	12/01 - 6/06	Due 6/06	Livestock producers	Deliver a statewide program to educate producers on current AFO/CAFO rules, cost effective manure management practices, and methods for incorporating manure into their crop fertility programs.

As indicated in Table 7 in Section IV, approximately 28% of NPS Program expenditures are dedicated to the implementation of various I/E projects. These projects represent the primary means being used to accomplish the goals and objectives described in the NPS Program I/E strategy. More detailed information and annual updates on the state or locally sponsored I/E projects is provided in the GRTS.

A. Information and Education Objective and Task Accomplishments

Objective 1: Assess the general public's knowledge of NPS pollution issues.

Task 1: Conduct fact finding surveys or public forums. [**Product:** *public surveys conducted every 5 years; Milestone:* *The first survey was completed in 1994; Subsequent surveys will be completed in 2001; 2006; etc.*]

On Schedule - A new survey will be distributed at the 2002 NPS booth and results assessed in November 2002

Objective 2: Deliver a balanced statewide I/E Program that addresses NPS pollution issues in the state and is targeted toward all age groups.

Task 2: Evaluate the various NPS pollution/water quality I/E materials developed by state, local, federal, and private organizations and obtain the most applicable materials for distribution in the state. [**Product:** *Library and directory for I/E materials; Milestone:* *Ongoing effort*]

On Schedule - The library is updated as new materials are received. A revised guide of available materials will also be included in the website in 2002.

Task 3: Conduct periodic reviews of current state and locally sponsored I/E projects to identify effectiveness of the activities and determine if a balanced program is being delivered. [**Product:** *Summaries of ongoing I/E projects and activities and list of additional educational needs; Milestone:* *Ongoing effort conducted on an annual basis.*]

On Schedule: Provided technical reviews of materials and schedules for Project WET, Statewide ECO ED, Project TREES, and ND Envirothon, as well as various I/E activities sponsored by local watershed projects.

Task 4: Meet with the appropriate public/private organizations (e.g., Soil Conservation Districts, Extension Service, etc.) to become familiar with their NPS pollution/water quality efforts and identify opportunities to coordinate similar efforts. [**Product:** *Information and contact directory for other agencies or organizations I/E activities; Milestone:* *Ongoing effort.*]

On Schedule - Have met with several SCDs, and worked with RC&Ds to integrate I/E projects. A contact directory will be published in conjunction with the new website.

Objective 3: Based on public input and reviews of existing I/E efforts, expand or develop new NPS pollution/water quality I/E activities and materials to ensure the appropriate and sufficient information is available to the residents of the state.

Task 5: Develop new educational materials , as needed, to inform the general public on the NPS Program and common NPS pollution management concerns in the state. *[Product: NPS Web site; Program brochure, information display, fact sheets, etc.;* **Milestone:** *Ongoing effort]*

On Schedule: A ND NPS Program website is under construction and will be launched in the spring of 2002. A new program brochure will also be developed in 2002 to provide potential project sponsors a brief summary of the NPS Program and Section 319 funding process.

Task 6: Distribute information during various public events, provide public presentations and organize/conduct workshops for the general public and targeted audiences. *[Product: Attendance at the ND Winter Show; West River, KFYZ, & KMOT Ag Expo's; County Fairs; school presentations; annual coordinator training workshops; etc..* **Milestone:** *Ongoing effort.]*

On Schedule - Information was distributed at several local events by program staff and project sponsors. The NPS Program's information booth appeared at the Red River Basin Board Conference, ND Winter Show, KFYZ Ag Expo, West River Ag Expo and several local/county events (e.g., county fairs, etc.).

Task 7: Distribute the quarterly Quality Water newsletter and utilize all other media types to promote NPS pollution control and improved landuse management to improve or protect the quality of the state water resources. *[Product: 4 Quality Water Newsletters annually; news articles/releases; promotional advertisements, etc.;* **Milestone:** *Ongoing effort]*

On Schedule - Three Quality Water newsletters were developed and distributed to approximately 1200 individuals and/or local resource management groups.

Task 8: Coordinate with local/private natural resource groups and schools to design and implement citizen participation projects. *[Product: Citizen monitoring programs; Envirothon programs, etc.;* **Milestone:** *Ongoing effort]*

On Schedule - A ND Envirothon Program was developed and implemented, resulting in an instant success. Program staff have also been working with local groups that have expressed interest in monitoring the Red River basin.

Objective 4: Deliver a consistent and balanced I/E Program across the state by coordinating with various federal, state, local, and private organizations and/or agencies to develop and implement I/E projects focused on priority NPS pollution management issues in the state.

Task 9: Provide financial and technical assistance to local and state sponsored I/E focusing on NPS pollution. [**Product:** *Balanced statewide educational program that includes multiple statewide and local projects targeting the general public, agriculture producers, students, teachers, resource managers, etc.*; **Milestone:** *Ongoing effort.*]

On Schedule - Table 8 list all the I/E projects funded under the FY 99 Consolidated Grant. NPS Program staff have provided technical assistance, as needed, to all the I/E projects to ensure a balanced program is being delivered. Projects targeting the general public or producers are generally designed to disseminate information on impacts of and/or solutions to NPS pollution. The projects targeting students and/or teachers are designed to increase awareness and create a foundation for future I/E efforts. The primary youth education programs being used to inform and educate students are as follows:

<u>Program</u>	<u>Primary Grade Level</u>	<u>Primary Audience</u>
Project WET	K - 12	Teachers – Materials and Training
Project TREES	K - 6	Students and Teachers
Statewide Eco Ed	6 - 8	Students, Teachers and Chaperones
ND Envirothon	9 - 12	Students and Advisors

Task 10: Attend and participate in EPA Region VIII I/E Coordinator meetings and other federal or state sponsored conferences to stay abreast of NPS I/E activities in the nation and obtain information for incorporation in to the ND I/E Program. [**Product:** *Information and materials from other states, contacts in other states, knowledge of ongoing I/E efforts across the nation, etc.*; **Milestone:** *Ongoing effort.*]

On Schedule - EPA Regional or national I/E meetings and/or conferences are attended when possible.

Task 11: Assist local I/E project sponsors with the delivery of their programs and facilitate communication and coordination between the projects. [**Product:** *Participation in local I/E activities (e.g., ECO Ed Camps, WET Institute, etc.); local project contact directory, information exchange between projects, etc.*; **Milestone:** *Ongoing effort.*]

On Schedule - I/E staff has assisted in 7 ECO ED Camps, the Project WET Summer Water Quality Institute for Teachers, and has also maintained an e-mail listing for disseminating information to all projects.

Task 12: Update and maintain the Grants Reporting and Tracking System (GRTS).
[Product: Semiannual and annual updates of all projects funded with 319 funds;
Milestone: Semiannual updates - April/May and Annual updates - December/January.]

On Schedule - With the new version of GRTS being debuted this past fall it is expected that future updates will be accomplished in a more timely manner. All required GRTS updates for 2001 are scheduled to be completed by January 31, 2002.

Objective 5: Evaluate public awareness of NPS pollution issues in the state to determine the effectiveness of the I/E Program and identify additional activities needed to strengthen the program.

Task 13: Develop feedback mechanisms that will allow the collection of broad based input from ND residents. *[Product: Surveys, questionnaires, polls, etc.; Milestone: Survey and questionnaires have been developed and are updated as needed]*

On Schedule - Surveys and questionnaires have been developed and updated as needed.

Task 14: Solicit input from ND residents to gauge their understanding of NPS issues in the state and identify the most effective means for disseminating information to the general public. *[Product: Public surveys, exit surveys for workshops, direct feedback, etc.; Milestone: Public surveys/questionnaires are conducted annually at the NPS Program display booth during the ND Winter Show; direct feedback is an ongoing effort.]*

On Schedule - Direct feedback is an ongoing effort. A random survey will be also conducted at the NPS information booth during the 2002 ND Winter Show and Ag Expos.

VII. Program Evaluation

Evaluation Goal: Evaluate the successes and failures of the NPS Management Program and identify the necessary updates to the NPS Pollution Management Program to maintain successful delivery of financial and technical assistance to local and state agencies and private organizations addressing NPS pollution.

Program evaluation is being accomplished at two different levels. One component of the Program evaluation process focuses on progression toward NPS Management Program Plan goals. The other part of the process tracks local project benefits and/or accomplishments. Through the evaluations, the delivery and implementation of the NPS Program is reviewed

annually and the appropriate adjustments are initiated to ensure priority NPS pollution concerns are addressed as effectively and efficiently as possible.

Current and future assessment reports, such as the UWA, 305(b) Report, and annual Groundwater Monitoring reports, are the primary means used to document the long-term trends in water quality, beneficial use conditions, and NPS pollution management in the state. The most recent editions of the UWA, Groundwater Monitoring reports, and 305(b) Report are provided on the NDDH web site, www.health.state.nd.us. These documents will be utilized to identify changing trends in water quality and determine specific areas where local coordination is needed to initiate NPS pollution abatement or assessment projects. As the reports are updated, NPS pollution data and information in the updated reports will be compared to similar data presented in the 1998 305(b) Report and 1999 UWA to evaluate trends on a statewide basis. The first in-depth review of NPS Program progress on a statewide basis will coincide with the next updates of the 305(b) Report and UWA, which are tentatively scheduled to occur in 2003 and 2005.

The NPS Pollution Task Force will also be involved in annual reviews of accomplishments under the updated NPS Management Plan. Annual Task Force reviews will provide the opportunity to gain input from other agencies and organizations regarding NPS Program progress as well as their recommendations on revisions to the Management Plan. The Task Force review process will focus on the status of specific program tasks, task products, and overall progression toward established goals and objectives. Since the implementation of the updated Management Plan is in the early stages, the first Task Force review is scheduled for January/February 2002. Subsequent reviews will be conducted in January or February of each year.

Local input and recommendations are also an important part of the annual NPS Program review process. Through the semiannual and annual project reports, local sponsors are provided an opportunity to voice their concerns or recommendations on Program delivery. This feedback is reviewed annually to determine if there are any shortcomings in the delivery of assistance to local projects. Input and recommendations received from the local sponsors are provided in the project-specific annual reports in the GRTS.

Within the local project areas, particularly the watershed projects, various data is collected annually to document trends in water quality and/or beneficial use conditions as well as to evaluate the benefits of project efforts and applied BMP. All data collected within in the NPS project areas is entered in the STORET database. Upon completion of the projects, all applicable monitoring data is interpreted and a summary of the results is incorporated into the final reports of the associated projects. The final reports and associated monitoring results for all completed projects are entered in the GRTS, as they become available.

NPS Program staff also conduct interim reviews of each watershed project's monitoring data to evaluate annual trends in the water quality variables targeted for reduction. When applicable, biological data is also reviewed mid-way through the project period and fully interpreted at the end of the project. When appropriate, these interim data summaries are included in the annual

reports and/or updated PIP's to reflect progress toward the original goals of the local watershed projects.

Specific evaluation methods for the local projects varies considerably between projects and is largely dependent on the type of project. In most cases, the assessment and watershed projects utilize various water quality and biological monitoring methodologies to gauge progress toward established goals. The monitoring objectives and final report status for the watershed projects funded under the FY99 Section 319 Grant are summarized in Table 9. Objective summaries and report status for the assessment/development phase projects are listed in Table 2 in Section II. Evaluation of other projects, such as information/education projects, generally focuses on the planned outputs, degree of local participation, number of events completed, and documented progress per task. Regardless of project type, all available monitoring data and other pertinent information is incorporated into the project-specific annual reports to document progress toward the goals and objectives listed in the PIP's. These reports are the primary means used by the NPS Program to track and evaluate individual project progress over the short and long term. The FY 2001 annual reports for all the projects supported with Section 319 funding are provided in the GRTS.

Table 9. Monitoring objectives and final report status for implementation phase watershed projects funded under the FY 99 Consolidated Grant - July 1, 1999 thru October 31, 2001

Project Name	Project Period	Final Report Status	Monitoring Focus/Variables Being Evaluated
Mirror Lake Watershed	3/98 - 6/05	Due 6/05	AGNPS modeling, in-lake concentration trends & eutrophic status, and in-stream loading to the lake. Variables include FCB, TSS, N, P, DO, temperature, chlorophyll a, and secchi disk.
Hay Creek - Phase III	3/99 - 6/01	Due 2/02	<u>(Note: The first draft report has been reviewed by NDDH. The due date for the final has been extended to 2/02.)</u> In-stream pollutant concentration trends, riparian condition, and macroinvertebrates. Variables include temperature, DO, pH, secchi disk, conductivity, P, N, TSS, FCB, riparian health.
Griggs Co. Water Quality Improvement	7/96 - 6/04	Due 6/04	In-stream concentration trends and acreage of applied BMP. Variables include FCB, N, P and TSS.
Cottonwood Creek Watershed	3/97 - 6/06	Due 6/06	In-stream loading to the reservoir, in-lake concentration trends & eutrophic status, pollutant discharge from the reservoir, and acreage of applied BMP. Variables include FCB, TSS, N, P, DO, temperature, secchi disk, and chlorophyll a.
Beaver Creek Watershed	7/97 - 6/04	Due 6/04	In-stream concentration trends, fish/macroinvertebrates, and acreage of applied BMP. Variables include FCB, TSS, N and P.

Project Name	Project Period	Final Report Status	Monitoring Focus/Variables Being Evaluated
Antelope Creek Watershed	7/98 - 6/01	Due 6/02	(Note: This project was discontinued, effective 7//1/01 and the final report has been received. The monitoring component of the report is in draft form and will be completed by 6/02) In-stream concentration trends, fish/macroinvertebrates, and acreage of applied BMP. Variables include N, FCB, TSS and P.
Renwick Watershed	3/98 - 6/01	Compl. 7/01	Riparian restoration and acreage of applied BMP. Photomonitoring was used to evaluate riparian site restoration.
Phase II - Red River Riparian Project	3/98 - 6/03	Due 6/03	Riparian restoration is the focus of the project. Recovery of select sites will be documented through photomonitoring and vegetation inventories (e.g., Greenline method, etc.)
Cedar Lake Watershed	3/99 - 6/04	Due 6/04	In-stream loadings to the reservoir, in-lake concentrations trends, and acreage of applied BMP. Variables include P, N, TSS, FCB, DO, temperature, secchi disk, and chlorophyl a.
Pipestem Creek Watershed	5/95 - 6/00	Compl. 6/01	In-stream concentration trends and acreage of applied BMP. Variables included N, P, TSS, and FCB.
Upper Sheyenne Watershed	7/96 - 6/05	Due 6/05	In-stream concentration trends and acreage of applied BMP. Variables include TSS, N, P, and FCB.
Wild Rice WRAS	10/99 - 6/04	Due 6/04	In-stream concentration trends, fish, macroinvertebrates, and acreage of applied BMP. Variables include TSS, N, P, and FCB
Crooked Creek Watershed	2/01 - 6/06	Due 6/06	In-stream concentration trends, stream stage/flow, fish, macroinvertebrates, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB
Chanta Peta Watershed	2/01 - 6/06	Due 6/06	In-stream concentration trends, stream stage/flow, fish, macroinvertebrates, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB
Middle Cedar Watershed	2/01 - 6/06	Due 6/06	In-stream concentration trends, stream stage/flow, fish, macroinvertebrates, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB

Project Name	Project Period	Final Report Status	Monitoring Focus/Variables Being Evaluated
Sheyenne River WRAS (Barnes Co.)	4/01 - 6/06	Due 6/06	The final QAPP is under development to ensure consistency with the pending TMDL for the Sheyenne River in Barnes Co. Water quality variables that are currently scheduled to be monitored include TSS, N, P, and FCB. The final QAPP is scheduled to be completed by 6/02.
Maple River WRAS	10/00 - 6/06	Due 6/06	In-stream concentration trends, stream stage/flow, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB
Buffalo Springs & Lightening Creek Watersheds	4/01 - 6/06	Due 6/06	In-stream concentration trends, stream stage/flow, fish, macroinvertebrates, riparian condition, and acreage of applied BMP. Water quality variables include TSS, N, P, and FCB

FCB - fecal coliform bacteria; N - nitrogen constituents; TSS - total suspended solids; P - total phosphorus

Feedback from local project sponsors has indicated that the NPS Program is successfully addressing the sources and causes of NPS pollution within several project areas. This evaluation is primarily based on annual report information related to specific task accomplishments, acreage of BMP's applied, and educational event attendance within the project areas. Preliminary reviews of interim water quality data and other monitoring data has also indicated that the local efforts may be having a positive impact on water quality within some project areas. These encouraging results are particularly evident in the watershed project areas that have been active for more than five years and addressed over 40% of the watershed acreage/priority areas. While it is still premature to state that these trends are a result of project efforts rather than climatic variations, data from "older" projects, such as, the Mirror Lake and Cottonwood Creek Watershed projects does suggest that locally lead efforts to implement BMP's can improve water quality conditions. Within these two project areas, BMP's have been applied on over 40% of the watershed acreage and preliminary reviews of the water quality data indicates that nitrogen and phosphorus concentrations have declined over the past four years. More detailed interpretation of the data at the end of these projects will provide much clearer answers regarding the success of the projects. The annual reports, in the GRTS, for these projects and the other watershed projects should be referenced for detailed discussions on the specific project activities and progress.

Currently, water quality and biological (fish & macroinvertebrates) data are the main tools being used to document reductions in NPS pollution and beneficial use improvements. Unfortunately, these methods require data collection over long periods of time to ensure accurate interpretation. To address short-term (1-6 years) reporting needs, the NPS Program and local sponsorships are also utilizing surrogate monitoring methods to track and/or estimate the benefits of applied BMP. Two alternative or complimentary monitoring methods typically being used to evaluate BMP benefits include AGNPS modeling and photomonitoring. Upstream/downstream monitoring is another method that may be used more frequently to measure direct benefits of specific practices,

such as livestock manure management facilities. When available, project-specific information on surrogate monitoring results is included in the annual reports entered in the GRTS.

Overall, the NPS Program has continued to realize an increasing number of NPS pollution control projects each year. This upward trend for NPS project start-ups is in itself significant evidence that NPS pollution management has become a priority resource issue across the state. Although sufficient data is currently not available to accurately document a statewide reduction in NPS pollution, information collected within local project areas has indicated that NPS pollution can be addressed on a watershed-by-watershed basis through the voluntary application of BMP. Consequently, as the number of local NPS projects increases, statewide NPS pollution reductions should begin to be realized. Feedback through the I/E projects and private citizens has also indicated that the general public's understanding of NPS pollution issues in the state has increased in recent years. Given the increased public awareness, local watershed project accomplishments, and anticipated improving trends within local project areas, the NPS Program is on schedule to attain its long-term goals identified in the updated NPS Management Plan.

A. Evaluation Objective & Task Accomplishments

Objective 1: Assess and document beneficial use impairments in the state's surface and ground water resources resulting from NPS pollution and, to the extent possible, identify current and future sources and causes of the use impairments or threats.

Task 1: Utilize the most current data and information to update the NPS Assessment Report and biennial Water Quality Assessment Report (i.e. Section 305(b) Report).

[Product: Updates to the NPS Assessment Report every five years and biennial updates to the Section 305(b) Report; Milestone: April 2000, 2002, etc. for the biennial Section 305(b) Report; October 1999, 2004, etc. for the NPS Assessment Report.]

On Schedule - Updates to the 305(b) Report have been completed as scheduled. With the 305(b) Report and UWA meeting Program needs for documenting NPS trends/concerns, revisions to the NPS Assessment Report have been postponed to allow time to determine if the 305(b) and UWA can adequately replace the assessment report. To better define NPS management needs, the NPS Program is also utilizing watershed-specific NPS assessment reports or TMDL's developed during the assessment phase of local projects.

Objective 2: Maintain effective delivery of the NPS Program by conducting periodic reviews of Program accomplishments.

Task 2: (Revised) Develop a process for Task Force evaluation of NPS Management Program accomplishments. *[Product: Task Force evaluation worksheets based on the goals, objectives, and tasks identified in the updated NPS Pollution Management Plan; Milestone: (Revised) December 2001.]*

On Schedule - To allow sufficient time for the full implementation and a more accurate evaluation of the updated NPS Management Plan, the first Task Force review has been rescheduled for January/February 2002. During this initial review, the Task Force members will utilize information provided in the FY 2001 Annual Report to evaluate progress and identify any necessary revisions to the current NPS Management Plan. The criteria/process for this review will be finalized in December 2001.

Task 3: Establish annual performance measures for NPS Management Program staff which are based on the goals, objectives, and tasks identified in the updated NPS Pollution Management Plan and NPS Pollution Management Base Program Workplan. *[Product: Annual performance measures for NPS Management Program Staff; Milestone: July 1999, 2000, 2001, etc.]*

On Schedule - Completed annually by the Surface Water Program Manager.

Task 4: (Revised) Provide the appropriate information to the Task Force to complete annual reviews of NPS Management Program progress related to identified goals, objectives, and tasks. *[Product: Annual reports to the Task Force on specific Program accomplishments; Annual GRTS updates on the Program; Task Force evaluation of the Program and recommendations for updates; Milestone: (Revised) Annual Task Force reports, review, and update recommendations - January; Annual GRTS updates - March/November; The first Task Force review of the NPS Management Program will occur in January/February 2002; The first GRTS updates based on the updated NPS Pollution Management Plan will be completed in November 1999.]*

On Schedule - The Task Force review is scheduled for January/February 2002.

Task 5: (Revised) Distribute the appropriate information and assessment data on future NPS pollution threats to the Task Force to obtain their recommendations on NPS Management Program Plan revisions needed to address any new threats to water quality. *[Product: Annual Task Force reviews of available information on resource management changes occurring in the state and the potential future NPS pollution threats associated with the changes. Task Force recommendations on NPS Management Program Plan updates or revisions; Milestone: (Revised) Annual Task Force reviews and update recommendations - January; The first Task Force review of the NPS Management Program will occur in January/February 2002.]*

On Schedule - All information needed to evaluate the implementation of the NPS Management Plan and current/future statewide NPS pollution concerns will be provided to the Task Force members. This may include the 2001 Annual Report, 305(b) Reports, UWA, etc..

Task 6: Solicit feedback from local project sponsors regarding delivery of NPS Program assistance. [**Product:** *Comments and recommendations through discussions during annual project sponsor and staff workshop; Milestone:* *March 1999, 2000, 2001, etc.*]

On Schedule - Local sponsor feedback is provided through the annual and semiannual project reports. Feedback received in FY2001 is provided in the project-specific reports in the GRTS.

Task 7: Update the NPS Pollution Management Program Plan every five years. [**Product:** *Management Plan updates every five years; Minor updates may also be needed more frequently to accommodate Task Force recommendations and local feedback; Milestone:* *October 1999, 2004, 2009, etc.*]

On Schedule - As indicated throughout this report, several tasks have been revised to accommodate staffing limitations, time constraints, etc.. During the Task Force review in January/February 2002, these tasks will be specifically addressed to obtain input and recommendations on the changes. Following the Task Force review, all approved revisions will be incorporated into Management Plan and the revised Plan will be forwarded to EPA for final review and approval.

Objective 3: Evaluate local NPS project progress toward goals identified in the PIP's

Task 8: Maintain an annual reporting schedule for local NPS Projects. [**Product:** *Semiannual and annual reports on project status and specific task accomplishments. -- 30 - 40 semiannual and annual project reports per year; Milestone:* *Semiannual reports are due in March; Annual reports are due in November.*]

On Schedule - Semiannual and annual project report guidelines have been developed and distributed to the local sponsors. These guidelines were developed to ensure consistent reporting from the local projects and compatibility with GRTS reporting requirements. All active projects have submitted their FY2001 annual and semiannual reports on schedule. Refer to the GRTS for specific project reports.

Task 9: Review and summarize water quality and land use data collected according to project-specific QAPPs within the watershed project areas to define pre-project conditions and evaluate progress in meeting project goals and objectives at the end of the project period and beyond. [**Product:** *For each project ---Report on baseline water quality and beneficial use conditions and a final report assessing the water quality and beneficial use improvements related to project activities. The number of reports annually will be dependant on project start-ups and completions; Milestone:* *The schedule for completing reports for each project will be identified in the milestones of each project's QAPP and/or PIP.*]

On Schedule - See information provided in Sections II and IV. All water quality data collected within the project areas has been entered in STORET.

Task 10: Provide annual and semiannual updates on local project progress to EPA Region VIII. [**Product:** *Semiannual and annual updates to the GRTS; Milestone:* *Semiannual report in March; Annual report in November.*]

On Schedule - All FY 2001 project reports have been entered in the GRTS.