

**North Dakota State Water Commission
Meeting To Be Held At
Best Western Ramkota Hotel - Lamborn Room
Bismarck, North Dakota**

**December 9, 2011
8:30 A.M., CST**

AGENDA

- A. Roll Call
- B. Consideration of Agenda *Information pertaining to the agenda items is available on the State Water Commission's website at <http://www.swc.nd.gov>*
- C. **Consideration of Draft Minutes of Following SWC Meetings:**
 - 1) **September 21, 2011 State Water Commission Meeting** **
 - 2) **October 31, 2011 State Water Commission Meeting** **
- D. State Water Commission Financial Updates:
 - 1) Agency Program Budget Expenditures
 - 2) 2011-2013 Biennium Resources Trust Fund and Water Development Trust Fund Revenues
- E. **Floodway Property Acquisition Policy** **
- F. Mouse River Enhanced Flood Control Project:
 - 1) Project Update
 - 2) **Souris River Joint Water Resource Board Funding** **
- G. **City of Valley City Flood Protection Project** **
- H. City of Lisbon and City of Fort Ransom Flood Protection Projects Updates
- I. Fargo-Moorhead Metropolitan Area Flood Risk Management Project
- J. **North Dakota Drinking Water State Revolving Loan Fund** **
- K. Consideration of Following Requests for State Cost Participation:
 - 1) **City of Harwood Flood Protection Feasibility Study** **
 - 2) **Normanna Township Improvement District No. 71** **
 - 3) **Walsh County Drain No. 4A** **
 - 4) Cost Share Policy Committee Update

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- L. Southwest Pipeline Project:
 - 1) Project Update
 - 2) ***Capital Repayment and REM Rates for 2012*** **
 - 3) ***REM Expenditure - Rectifiers and Anode Beds for Taylor and Gladstone and Dickinson Water Treatment Plant Repairs*** **
 - 4) ***Killdeer Transmission Line*** **

- M. Western Area Water Supply (WASA):
 - 1) Project Update
 - 2) ***Phase II - Tier I Projects Approval*** **

- N. Devils Lake Projects Reports

- O. Northwest Area Water Supply Update

- P. Missouri River Update

- Q. Garrison Diversion Conservancy District Report

- R. Other Business

- S. Adjournment

**** BOLD, ITALICIZED ITEMS REQUIRE SWC ACTION**

To provide telephone accessibility to the State Water Commission meeting for those people who are deaf, hard of hearing, deaf and/or blind, and speech disabled, please contact Relay North Dakota, and reference ... TTY-Relay ND ... 1-800-366-6888, or 711.

MINUTES

North Dakota State Water Commission Bismarck, North Dakota

December 9, 2011

The North Dakota State Water Commission held a meeting at the Best Western Ramkota Hotel, Bismarck, North Dakota, on December 9, 2011. Governor Jack Dalrymple, Chairman, called the meeting to order at 8:30 A.M., and requested Todd Sando, State Engineer, and Chief Engineer-Secretary to the State Water Commission, to call the roll. Governor Dalrymple announced a quorum was present.

STATE WATER COMMISSION MEMBERS PRESENT:

Governor Jack Dalrymple, Chairman
Arne Berg, Member from Devils Lake
Maurice Foley, Member from Minot
Larry Hanson, Member from Williston
Jack Olin, Member from Dickinson
Harley Swenson, Member from Bismarck
Robert Thompson, Member from Page
Douglas Vosper, Member from Neche

STATE WATER COMMISSION MEMBER ABSENT:

Doug Goehring, Commissioner, North Dakota Department of Agriculture, Bismarck

OTHERS PRESENT:

Todd Sando, State Engineer, and Chief Engineer-Secretary,
North Dakota State Water Commission, Bismarck
State Water Commission Staff
Approximately 75 people interested in agenda items

The attendance register is on file with the official minutes.

The meeting was recorded to assist in compilation of the minutes.

CONSIDERATION OF AGENDA

The agenda for the December 9, 2011 State Water Commission meeting was presented; there were no modifications.

It was moved by Commissioner Berg, seconded by Commissioner Thompson, and unanimously carried, that the agenda be accepted as presented.

CONSIDERATION OF DRAFT MINUTES OF SEPTEMBER 21, 2011 STATE WATER COMMISSION MEETING - APPROVED

The draft minutes of the September 21, 2011 State Water Commission meeting were approved by the following motion:

It was moved by Commissioner Olin, seconded by Commissioner Foley, and unanimously carried, that the draft minutes of the September 21, 2011 State Water Commission meeting be approved as prepared.

CONSIDERATION OF DRAFT MINUTES OF OCTOBER 31, 2011 STATE WATER COMMISSION MEETING - APPROVED

The draft minutes of the October 31, 2011 State Water Commission meeting were approved by the following motion:

It was moved by Commissioner Olin, seconded by Commissioner Foley, and unanimously carried, that the draft minutes of the October 31, 2011 State Water Commission meeting be approved as prepared.

STATE WATER COMMISSION BUDGET EXPENDITURES, 2011-2013 BIENNIUM

In the 2011-2013 biennium, the State Water Commission has two line items - administrative and support services, and water and atmospheric resources expenditures. The allocated program expenditures for the period ending October 31, 2011, reflecting 17 percent of the 2011-2013 biennium, were presented and discussed by David Laschkewitsch, State Water Commission accounting manager. The expenditures, in total, are within the authorized budget amounts. **SEE APPENDIX "A"**

The Contract Fund spreadsheet, attached hereto as **APPENDIX "B"**, provides information on the committed and uncommitted funds from the Resources Trust Fund, the Water Development Trust Fund, and the general fund project dollars. The total amount allocated for projects is \$306,732,772, leaving a balance of \$47,263,810 available to commit to projects in the 2011-2013 biennium.

**RESOURCES TRUST FUND
AND WATER DEVELOPMENT
TRUST FUND REVENUES,
2011-2013 BIENNIUM**

Oil extraction tax deposits into the Resources Trust Fund total \$43,645,094 and are currently \$12,088,358 or 38.3 percent above budgeted revenues.

No deposits have been received for the Water Development Trust Fund (tobacco settlement) in the 2011-2013 biennium. The first planned deposit is for \$10,300,000 in April of 2012.

**PROPOSED FLOODWAY PROPERTY
ACQUISITION COST SHARE POLICY
(SWC Project No. 1753)**

2011 Senate Bill 2371 was passed by the Sixty-second Legislative Assembly of North Dakota in special session commencing on November 7, 2011;

Governor Dalrymple executed Senate Bill 2371 on November 11, 2011:

SECTION 18. STATE WATER COMMISSION - FLOODWAY PROPERTY ACQUISITION AND CONSTRUCTION FUNDING. In its future plans, the state water commission shall place a high priority on providing for floodway acquisitions and construction. The funding must be used to supplement federal hazard mitigation grant funds or other federal funds for acquiring property and for the construction of flood control projects in qualifying political subdivisions, including necessary funding for any state or local match requirements. For purposes of this section, qualifying political subdivisions are cities or counties that are eligible for federal emergency management agency hazard mitigation grant funding or other comparable federal programs for flood mitigation and have received, or are located within counties that have received, an individual assistance designation by the federal emergency agency as a result of a flood event occurring during 2011.

SECTION 19. APPROPRIATION - STATE WATER COMMISSION - RESOURCES TRUST FUND. There is appropriated out of any moneys in the resources trust fund, not otherwise appropriated, the sum of \$50,000,000, or so much of the sum as may be necessary, to the state water commission for the purpose of defraying the expenses of that agency, for the period beginning with the effective date of this Act and ending June 30, 2013. As provided in section 4 of chapter 46 of the 2011 Session Laws, expenditures pursuant to this section require budget section approval.

The counties receiving individual designation by FEMA include Barnes, Benson, Burleigh, McHenry, Morton, Ramsey, Renville, Richland, and Ward. To allow eligible political subdivisions to apply for state cost share assistance, the following proposed floodway property acquisition cost share policy was presented for the State Water Commission's consideration:

- The cost share shall be 75 percent state - 25 percent local to acquire right-of-way for proposed temporary or permanent levees. All third party costs associated with the acquisition will be considered eligible for cost share.
- The local sponsor shall adopt a right-of-way acquisition plan that will be similar or identical to an acquisition plan that would be funded with federal Hazard Mitigation Grant Program funds.
- The deed will include a perpetual restrictive covenant stating that the land may only be utilized for a flood control structure or green space (i.e., no residential or commercial structures may be built on the parcel).
- Costs eligible for federal funding will be submitted for federal funding prior to use of these resources.
- To be considered for funding, the local sponsor shall provide the Commission with a plan that shows the property to be acquired, the estimated cost of the acquisition, a long-term flood protection plan showing the necessity of acquiring the properties, and showing the ineligibility for Hazard Mitigation Grant Program funding.

Cost share for construction of permanent flood control on the property acquired will be subject to approval under the existing State Water Commission cost share policy.

Representatives of the following proposed flood protection projects addressed the State Water Commission members (report summaries are provided individually within these minutes for each project): City of Minot/Ward County, City of Valley City, City of Lisbon, and the City of Fort Ransom.

Howard Swanson, who served as the city attorney for Grand Forks in 1997, and is currently providing legal assistance to the City of Minot and Ward County, offered technical guidance/recommendations as the floodway property acquisition cost share policy is developed.

Governor Dalrymple addressed the proposed policy as presented, and specifically alluded to the 75 percent state/25 percent local cost share. Governor Dalrymple explained that this "is a very significant step for the State Water Commission - this is a major policy that will probably last for quite some time and could eventually involve a significant sum of money." Governor Dalrymple emphasized that "we need to do this right."

The Commission discussed at length the proposed property acquisition policy, and it was the general agreement of the Commission members that because of the significant and complex factors involved, the development of a formal floodway property acquisition cost share policy was required. The Commission recommended that the secretary to the State Water Commission be directed to convene the Commission's cost share policy committee to develop the floodway property acquisition cost share policy for the Commission's future consideration.

It was moved by Commissioner Swenson and seconded by Commissioner Thompson that the State Water Commission's cost share policy committee convene for the purpose of developing the floodway property acquisition cost share policy for the Commission's consideration.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

(Note: Based on the directive of December 9, 2011, the State Water Commission's cost share policy convened on December 16, 2011.)

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT UPDATE (SWC Project No. 1974)

The City of Minot intends to develop a flood control project that would provide the city and communities/developments outside of the city limits with protection from the magnitude of flood events experienced in 2011. Because the proposed project is located outside of the city of Minot limits, the Souris River Joint Water Resource Board agreed to sponsor the project.

Resolution No. 3004, adopted by the Minot City Council on August 1, 2011, requested that the State Water Commission sponsor improvements to the Mouse River flood control system that would control floods of the magnitude of the 2011 flood, and that the State Water Commission search for and retain an engineering firm to design the project improvements.

The goal of the project is to provide protection for the Mouse River basin from a flood of the magnitude experienced in 2011. The first objective is levee alignment for Minot and Burlington of sufficient quality and accuracy to guide the owners of flood-damaged homes in their decision making. The second objective is a preliminary engineering report that will identify alternatives and features for the entire basin. On August 17, 2011, the State Water Commission passed a motion to proceed with the project and conduct an engineering selection process. On

September 7, 2011, the Commission authorized the Secretary to the State Water Commission to execute the engineering agreement with Barr Engineering, Minneapolis, MN. The conceptual plan and the preliminary alignment plan were available in November, 2011.

The total cost of the preliminary engineering work was estimated at \$2,500,000. On September 7, 2011, the State Water Commission approved an allocation not to exceed \$750,000 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020) to Barr Engineering for the preliminary engineering work for the Mouse River Enhanced Flood Control project; and on October 31, 2011, the Commission approved an additional allocation of \$1,750,000 for the preliminary engineering work. Due to the magnitude and unique nature of this project, a cost share percentage for the local sponsor has not been determined to date.

Public workshops relating to defining the alignment for the Mouse River project were held in October, 2011; the initial alignment was defined and released on November 3, 2011; and public meetings were held on November 8, 9 and 10, 2011 in Minot. Recommended modifications in the alignments related to flood bypass diversions that would reduce the number of road closures and the length of the dike alignment, and reduce the number of acquisitions required. The November meetings produced comments from people in the upstream and downstream areas of the project. The alignment in its final form was released on November 30, 2011. This information can be used for individuals in making decisions regarding their homes, and will be necessary for communities to have in preparation of applications for federal Hazard Mitigation Grant Program funds.

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT - APPROVAL OF ALLOCATION TO SOURIS RIVER JOINT WATER RESOURCE BOARD FOR LOCAL SPONSOR RESPONSIBILITIES (\$50,000) (SWC Project No. 1974)

include federal Hazard Mitigation Grant Program application assistance, coordination of acquisitions, maintaining the local activities necessary for planning developments up to and including construction, and interacting with the U.S. Fish and Wildlife Service in refuge management matters. This effort is required not only in the communities, but in all areas throughout the loop of the Mouse River.

A request from the Souris River Joint Water Resource Board was presented for the State Water Commission's consideration for state cost participation to support its responsibilities as the local sponsor of the Mouse River Enhanced Flood Protection project. The activities

To support and continue these efforts, the Board estimated funding in the amount of \$250,000. At this point, \$50,000 is needed to move into a more active phase of project sponsorship to implement the various processes and work tasks required to provide the coordinated and consensus approach at the local level. The request before the State Water Commission is for an allocation of \$50,000.

It was the recommendation of Secretary Sando that the State Water Commission approve an allocation not to exceed \$50,000 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020), to the Souris River Joint Water Resource Board to support their responsibilities as the local sponsor for the Mouse River Enhanced Flood Protection project.

It was moved by Commissioner Berg and seconded by Commissioner Hanson that the State Water Commission approve an allocation not to exceed \$50,000 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020), to the Souris River Joint Water Resource Board to support their responsibilities as the local sponsor for the Mouse River Enhanced Flood Protection project. This action is contingent upon the availability of funds.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**CITY OF VALLEY CITY FLOOD
PROTECTION PROJECT, PHASE I -
APPROVAL OF STATE COST
PARTICIPATION
(2011 SENATE BILL 2371 - \$3,000,000)
(SWC Project No. 1504)**

A request from the City of Valley City was presented for the State Water Commission's consideration for state cost participation in their project to acquire property for permanent flood control. The city is proposing to acquire 32 properties in Phase I of the acquisition program. The estimated purchase price for these properties is \$3,600,000.

The city plans to construct permanent flood control on these properties that would make these properties ineligible for the federal Hazard Mitigation Grant Program funds. Acquisition of these properties would also clear areas for temporary flood control measures if needed before completion of the permanent flood control project. The city has provided the information required under the proposed floodway property acquisition cost share policy. The request before the Commission is for a 75 percent state cost participation in the amount of \$3,000,000.

It was the recommendation of Secretary Sando that the State Water Commission approve state cost participation at 75 percent of the eligible costs, not to exceed an allocation of \$3,000,000 from the funds appropriated to the State Water Commission in 2011 Senate Bill 2371, to the City of Valley City to support the city's flood protection project, Phase I. Because the proposed floodway property acquisition cost share policy has not been finalized and adopted by the State Water Commission, it was the recommendation of Secretary Sando that state cost participation be subject to the city adopting a right-of-way acquisition plan that will be similar or identical to an acquisition plan that would be funded with federal Hazard Mitigation Grant Program funds, and placing a perpetual restrictive covenant in the deed stating that the land may only be utilized for a flood control structure or green space (i.e., no residential or commercial structures may be built on the parcel).

It was moved by Commissioner Thompson and seconded by Commissioner Berg that the State Water Commission approve state cost participation at 75 percent of the eligible costs, not to exceed an allocation of \$3,000,000 from the funds appropriated to the State Water Commission in 2011 Senate Bill 2371, to the City of Valley City to support the city's flood protection project, Phase I. This action is contingent upon the availability of funds; the city's adoption of a right-of-way acquisition plan that is similar or identical to an acquisition plan that would be funded with federal Hazard Mitigation Grant Program funds; and placing a perpetual restrictive covenant in the deed stating that the land may only be utilized for a flood control structure or green space (i.e., no residential or commercial structures may be built on the parcel).

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**CITY OF LISBON FLOOD
PROTECTION REPORT
(SWC Project No. 1299)**

Representatives of the City of Lisbon addressed the State Water Commission to provide an update on the flooding that occurred during the past three years and the damages that the city of Lisbon experienced. Heavy rain and snowfall combined with frozen and/or saturated ground caused excessive runoff into the Sheyenne River. Temporary levees were constructed and removed in each of the three years.

The city has several areas where a permanent levee could be put in place and has developed a preliminary plan for these levees. In order for all permanent flood protection to be constructed, an additional 30

properties must be acquired. The city is planning on implementing the use of permanent earthen levees, concrete flood walls, storm sewers, storm water lift stations, and slope protection to protect the city from the Sheyenne River flooding. Acquisition of these properties would also clear areas for temporary flood control measures if needed before completion of the permanent flood control.

The estimated cost for the remaining property acquisition is \$2,610,000. The city is ineligible for the federal Hazard Mitigation Grant Program funds because the levees will be permanent. The flood-related demands on the physical and financial resources have resulted in the city's budget constraints. A request from the City of Lisbon for 100 percent of state cost participation for property acquisition was presented for the State Water Commission's consideration. Although the Commission did not act on the request at this meeting, Governor Dalrymple expressed appreciation for the detailed information, and offered assurance that the state will continue to work with the city in their efforts toward permanent flood control.

***CITY OF FORT RANSOM ENGINEERING
FEASIBILITY STUDY - REQUEST FOR
ADDITIONAL STATE COST SHARE
(SWC Project No. 275)***

On October 31, 2011, the State Water Commission approved an allocation of \$40,000 (50 percent of the eligible costs) to the City of Fort Ransom to support its engineering feasibility study.

Unprecedented flooding occurred during the past three years, and the city is considering options for permanent flood control mitigation measures. The study would address a permanent levee system and a bypass/diversion channel to control the Sheyenne River within the downtown area. The project engineer's total cost estimate for the engineering feasibility study is \$80,000.

Because of the flood-related demands on the city's physical and financial resources, a request from the City of Fort Ransom was presented for the State Water Commission's consideration for additional financial assistance (\$40,000) for funding 100 percent of the costs associated with the engineering feasibility study for the construction of permanent levees and a bypass/diversion channel. Although the Commission did not act on the request at this meeting, Governor Dalrymple expressed appreciation for the detailed information, and offered assurance that the state will continue to work with the city in their efforts toward permanent flood control.

**FARGO-MOORHEAD METROPOLITAN
AREA FLOOD RISK MANAGEMENT
PROJECT UPDATE
(SWC Project No. 1928)**

Flood Risk Management project. The 30-day public comment period on the FEIS began on October 7 and ended on November 7, 2011. The Corps of Engineers Chief's Report is expected in December, 2011 endorsing the Corps' Final Feasibility Report and Environmental Impact Study on the project. By signing the report, the Chief is recommending that the diversion project be authorized as described in the final report prepared by the Corps for the Fargo-Moorhead Metropolitan Area Flood Risk Management project. The signed report and the study will be submitted to the Assistant Secretary of the Army for Civil Works, who will coordinate with the Office of Management and Budget before transmitting a formal, final recommendation to Congress.

Project representatives provided an update to the design of the outlet structure and the first channel reach, which are currently underway. The proposed revisions to the north alignment would: 1) reduce the channel length by approximately 5,000 feet; 2) reduce the number and severity of channel bends; 3) less impacts on residences; 4) the potential for \$60-\$80 million dollars in savings; and 5) will aggressively pursue other opportunities for savings. Studies allowing for additional flow through the city would: 1) provide early flood protection benefits to the City of Fargo prior to completion of the diversion project; 2) reduces the frequency of need to operate the diversion channel; 3) reduce the duration of water in a staging/storage area; 4) provide the ability to handle historic summer peak runoff events without operation of the diversion channel; 5) without additional in-town flood protection structures, significant flood risk above the river stage of 30.8 will continue even after completion of the diversion channel; and 6) goodwill associated with tangible efforts to minimize impacts in staging/storage area and construction of early protection for the Fargo-Moorhead area.

**SAFE DRINKING WATER ACT -
APPROVAL OF PROJECT
PRIORITY LIST IN FY 2012
INTENDED USE PLAN,
DATED NOVEMBER 21, 2011
(SWC File AS/HEA)**

The Drinking Water State Revolving Loan Fund was authorized by Congress in 1996 under the Safe Drinking Water Act with the intention of assisting public water systems in complying with the Act. Funding in North Dakota for public water systems is in the form of a loan program administered by the Environmental Protection Agency through the North Dakota Department of Health. North Dakota Century Code ch. 61-28.1, Safe Drinking Water Act, gives the Department the powers and duties to administer and enforce the Safe Drinking Water program and to administer the program.

Section 1452(b) of the Safe Drinking Water Act requires each state to annually prepare an Intended Use Plan. The plan is to describe how the state intends to use the funds to meet the program objectives and further the goal of protecting public health. A public review period is required prior to submitting the annual plan to the Environmental Protection Agency as part of the capitalization grant application process. The North Dakota Department of Health held public hearings on the draft Intended Use Plan on November 18, 2011; no comments were received.

The State Water Commission's role in the program is defined in subsections 3 and 4 of ch. 61-28.1-12. Subsection 3 states that the Department shall administer and disburse funds with the approval of the State Water Commission. Subsection 4 states that the Department shall establish assistance priorities and expend grant funds pursuant to the priority list for the Drinking Water State Revolving Loan Fund after consulting with and obtaining the approval of the State Water Commission.

Charles Abel, North Dakota Department of Health, presented the Fiscal Year 2012 Intended Use Plan for the North Dakota Drinking Water Revolving Loan Fund, dated November 21, 2011, for the State Water Commission's consideration. The 2012 Intended Use Plan is attached hereto as **APPENDIX "C"**. The comprehensive project priority list includes 151 projects, with a cumulative total project cost of \$530,000,000 for Fiscal Years 1997 through 2012. The fundable list for Fiscal Year 2012 includes 18 projects at a cost of \$62,000,000.

It was the recommendation of Secretary Sando that the State Water Commission approve the project priority list for Fiscal Year 2012 as listed in the Intended Use Plan, dated November 21, 2011, and authorize the North Dakota Department of Health to administer and disburse Fiscal Years 1997 through 2012 program funds pursuant to the Fiscal Year 2012 Intended Use Plan.

It was moved by Commissioner Foley and seconded by Commissioner Thompson that the State Water Commission approve the project priority list for Fiscal Year 2012 as listed in the Intended Use Plan, dated November 21, 2011, and authorize the North Dakota Department of Health to administer and disburse Fiscal Years 1997 through 2012 program funds pursuant to the Fiscal Year 2012 Intended Use Plan.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**CITY OF HARWOOD ENGINEERING
FEASIBILITY STUDY - APPROVAL OF
STATE COST PARTICIPATION (\$62,500)
(SWC Project No. 1983)**

many sources such as overland flow from the Sheyenne River and the Red River of the North, and Clay County Drains 40 and 45. For the past three years, the city has undertaken emergency measures to protect the lives and property of its citizens, resulting in budget constraints at the local level and required multiple applications to state and federal agencies for possible reimbursement of disaster relief expenses.

The flood threat to the city has been experienced mostly during spring runoff, and requires emergency authorization and action from the North Dakota Department of Transportation to work within the right-of-way for the construction of ditch blocks, dikes, and pumps, which interrupts traffic and rail transportation.

The project engineer's estimated cost of the City of Harwood's engineering feasibility study is \$125,000, all of which is determined eligible for state cost participation as an engineering feasibility study at 50 percent of the eligible costs (\$62,500). The request before the State Water Commission is for a 50 percent state cost participation in the amount of \$62,500.

It was the recommendation of Secretary Sando that the State Water Commission approve state cost participation as a feasibility study at 50 percent of the eligible costs, not to exceed an allocation of \$62,500 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020), for the City of Harwood engineering feasibility study.

It was moved by Commissioner Berg and seconded by Commissioner Thompson that the State Water Commission approve state cost participation as a feasibility study at 50 percent of the eligible costs, not to exceed an allocation of \$62,500 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020), for the City of Harwood engineering feasibility study. This action is contingent upon the availability of funds.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**NORMANNA TOWNSHIP IMPROVEMENT
DISTRICT NO. 71 (CASS COUNTY) -
CONDITIONAL APPROVAL OF STATE
COST PARTICIPATION (\$287,900)
(SWC Project No. 1918)**

A request from the Maple River Water Resource District was presented for the State Water Commission's consideration for state cost participation for their project to develop a new legal assessment drain that will serve as a legal lateral to

the existing Cass County Drain No. 34. The purpose of the project is to improve agricultural lands and provide a better outlet for drainage from the City of Kindred, which constitutes 5 percent of the watershed area.

The proposed project area is located northwest of the City of Kindred and will include the improvements of approximately 3 miles of existing ditch. Construction will create a channel with a low water profile, the gradient of the channel will be relatively flat to mitigate future channel bottom erosion, and a culvert through the railroad and new section line culverts will be installed that will be designed to a 10-year standard. The culverts through Cass County Highway 35 will be designed to a 25-year standard. The drain improvements will begin in Section 29 of Normanna Township and continue downstream to Cass County Drain No. 34.

The project engineer's cost estimate is \$1,010,000, of which \$639,700 is determined as eligible for state cost participation as a rural flood control project at 45 percent of the eligible costs (\$287,900). The proposed project was submitted for conditional approval pending an assessment vote and the required drain permit. The State Water Commission's cost share policy provides for conditional approval of rural flood control projects subject to satisfaction of these conditions. The request before the State Water Commission is for a 45 percent state cost participation in the amount of \$287,900.

It was the recommendation of Secretary Sando that the State Water Commission approve conditional state cost participation as a rural flood control project at 45 percent of the eligible costs, not to exceed an allocation of \$287,900 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020) for construction of the Normanna Township Improvement District No. 71 project.

It was moved by Commissioner Thompson and seconded by Commissioner Vosper that the State Water Commission approve conditional state cost participation as a rural flood control project at 45 percent of the eligible costs, not to exceed an allocation of \$287,900 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020), to the Maple River Water Resource District to support the Normanna Township Improvement District No. 71 project. This action is contingent upon the availability of funds, a positive assessment vote, satisfaction of the required drain permit, and receipt of the final engineering plans.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**WALSH COUNTY ASSESSMENT
DRAIN 4A CONSTRUCTION PROJECT -
APPROVAL OF ADDITIONAL STATE
COST PARTICIPATION (\$9,758.54)
(SWC Project No. 1941)**

On June 28, 2006, the State Water Commission approved a request from the Walsh County Water Resource District for state cost participation at 35 percent of the eligible costs not to exceed an allocation of \$81,594 from the

funds appropriated to the State Water Commission in the 2005-2007 biennium (H.B. 1021), for the Walsh County Assessment Drain 4A construction project to address sheetwater flooding from cropland and reduce flood damage to agricultural properties.

The project engineer's revised cost estimate is \$404,732.68, of which \$261,007.25 is determined eligible for state cost participation as a rural flood control project at 35 percent of the eligible costs (\$91,352.54). The cost overage is a result of increased construction costs. A request from the Walsh County Water Resource District was presented for the State Water Commission's consideration for an additional state cost participation in the amount of \$9,758.54 (eligible costs of \$91,352.54 less \$81,594.00 approved on June 28, 2006). The request before the State Water Commission is for a 35 percent state cost participation in the amount of \$9,758.54.

It was the recommendation of Secretary Sando that the State Water Commission approve state cost participation at 35 percent of the eligible costs, not to exceed an additional allocation of \$9,758.54 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020) to support the Walsh County Assessment Drain 4A construction project cost overrun. The Commission's affirmative action would increase the total state cost allocation to \$91,352.54.

It was moved by Commissioner Berg and seconded by Commissioner Swenson that the State Water Commission approve state cost participation as a rural flood control project at 35 percent of the eligible costs, not to exceed an additional allocation of \$9,758.54 from the funds appropriated to the State Water Commission in the 2011-2013 biennium (S.B. 2020), to the Walsh County Water Resource District to support the Walsh County Assessment Drain 4A construction project cost overrun. This action is contingent upon the availability of funds.

This action increased the total state cost allocation to \$91,352.54 for construction of the Walsh County Assessment Drain 4A project.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

STATE WATER COMMISSION COST SHARE POLICY - STATUS REPORT ON APPROVED PROJECTS OVER THREE YEARS WITHOUT PAYMENT (SWC File AS/SWC/POL) (SWC Project No. 1753)

The State Water Commission's cost share policy committee and others met on October 31, 2011. Items of discussion included cost share request submission deadlines, State Engineer cost share authority, storm water vs rural flood control, ring dikes relating to date of eligibility, and multi-dwelling dikes.

update on approved cost share projects over three years without payment; the status report is attached hereto as **APPENDIX "D"**.

The Commission requested a status

SOUTHWEST PIPELINE PROJECT - CONTRACT AND STATUS REPORT (SWC Project No. 1736)

The Southwest Pipeline Project contract and construction reports were presented which are detailed in the staff memorandum, dated November 21, 2011, and attached hereto as **APPENDIX "E"**.

SOUTHWEST PIPELINE PROJECT - APPROVAL OF CAPITAL REPAYMENT RATES, AND REPLACEMENT AND EXTRAORDINARY MAINTENANCE RATES FOR 2012 (SWC Project No. 1736)

Under the Agreement for the Transfer of Management, Operations, and Maintenance Responsibilities for the Southwest Pipeline Project, the Southwest Water Authority is required to submit a budget to the State Water Commission's secretary by December 15 of each year. The

budget is deemed approved unless the Commission's secretary notifies the Authority of his disapproval by February 15. The Southwest Water Authority submitted its proposed budget in December, 2011.

On October 19, 1998, the State Water Commission approved an amendment to the Transfer of Operations Agreement, which changed the Consumer Price Index (CPI) date used for calculating the project's capital repayment rates from January 1 to September 1. This amendment was necessary to bring the transfer of operations into line with the water service contracts and stream-

line the budget process. The agreement specifies that the water rates for capital repayment be adjusted annually based on the Consumer Price Index; the September 1, 2009 CPI was 215.8 versus 219.1 on September 1, 2008. The State Water Commission has the responsibility of adjusting the capital repayment rates annually.

The rate for replacement and extraordinary maintenance was approved by the State Water Commission at its February 9, 1999 meeting at \$0.35 per thousand gallons. The original rate of \$0.30 per thousand gallons was approved in 1991. The rate of \$0.35 per thousand gallons is satisfactory and, therefore, no change was recommended at this time.

At the June 22, 2005 meeting, the State Water Commission approved the 2005 capital repayment rate for rural users in Morton county receiving water through the Missouri West Water system transmission pipelines at \$22.00 per month. Applying the Consumer Price Index adjustment to this figure results in a 2012 rate for these users of \$26.31 per month.

In preparation of the budget for 2012, the Southwest Water Authority approved an \$18.00 per thousand gallons water rate for oil industry contracts. This is an increase from the \$10.00 per thousand gallons rate approved in 2011. The capital repayment rate for oil industry contracts, other than the proposed Dickinson water depot to be built by the Southwest Water Authority, increased to \$6.09 per thousand gallons, and retains the REM rate at \$0.85 per thousand gallons.

The capital repayment for the Dickinson water depot is proposed at \$2.18 per thousand gallons with the REM rate at \$0.85 per thousand gallons. The proposed capital repayment rate at the Dickinson water depot is to assist the Authority recover the cost of the infrastructure that is borne by the Authority to build the depot, build the Authority's reserve to help meet the cost of a new office building, and to promote the cooperative effort between the State Water Commission, the Southwest Water Authority, and the City of Dickinson to reduce the traffic within the city limits and enhance the city's safety. This will be achieved by the city agreeing to close their water depot in return for sharing the cost and revenue with the Authority at the new proposed water depot.

It was the recommendation of Secretary Sando that the State Water Commission concur with the proposed 2012 Southwest Pipeline Project water rates as follows:

Contract users	\$ 1.09 per thousand gallons
Rural users	\$33.22 per month
Morton county users receiving water through Missouri West water system	\$26.31 per month
City of Dickinson water depot	\$ 2.18 per thousand gallons
Replacement and extraordinary maintenance	\$ 0.35 per thousand gallons
Oil industry contracts:	\$18.00 per thousand gallons
Capital Repayment	\$ 6.09 per thousand gallons
Replacement and extraordinary maintenance	\$ 0.85 per thousand gallons

It was moved by Commissioner Foley and seconded by Commissioner Olin that the State Water Commission approve the proposed 2012 water rates for the Southwest Pipeline Project as recommended.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

***SOUTHWEST PIPELINE PROJECT -
RECTIFIERS AND ANODE BEDS
NEAR TAYLOR AND GLADSTONE,
AND DICKINSON WATER TREATMENT
PLANT SCRAPER DRIVE REPAIR -
APPROVAL OF REM FUNDS (\$171,567.61)
(SWC Project No. 1736)***

The Southwest Water Authority collects and maintains a reserve fund for replacement and extraordinary maintenance. This fund exists because over the life of the project there will occur replacement and maintenance items that will exceed annual budgeted amounts. These items need to be prefunded.

Expenditures from this fund are required to be authorized by the State Water Commission.

The anode beds for Taylor and Gladstone were budgeted items for the replacement and extraordinary replacement fund for 2011, of which \$165,000 was previously approved in the budgeting process. The work has been completed and the vendors have been compensated in the amount of \$84,840.46.

The scraper drive for the Dickinson water treatment plant rehab project was a budgeted item for the replacement and extraordinary replacement fund for 2011, of which \$175,000 was previously approved in the budgeting process. The equipment was purchased and the vendor has been compensated in the amount of \$86,727.15.

A request from the Southwest Water Authority was presented for the State Water Commission's determination that the rectifiers and anode beds for Taylor and Gladstone, and the Dickinson water treatment plant scraper drive repairs are extraordinary maintenance and that \$84,840.46 for the rectifiers and anode beds and \$86,727.15 for the scraper drive, for a total reimbursement of \$171,567.61 be reimbursed from the reserve fund for replacement and extraordinary maintenance. The Southwest Water Authority approved the request at its October 3, 2011 meeting.

It was the recommendation of Secretary Sando that the State Water Commission concur in the determination that the rectifiers and anode beds for Taylor and Gladstone, and the Dickinson water treatment plant scraper drive repairs are extraordinary maintenance and that \$84,840.46 for the rectifiers and anode beds and \$86,727.15 for the scraper drive, for a total reimbursement of \$171,567.61, be reimbursed from the reserve fund for replacement and extraordinary maintenance.

It was moved by Commissioner Swenson and seconded by Commissioner Berg that the State Water Commission concur in the determination that the rectifiers and anode beds for Taylor and Gladstone, and the Dickinson water treatment plant scraper drive repairs are extraordinary maintenance, and that \$84,840.46 for the rectifiers and anode beds and \$86,727.15 for the scraper drive, for a total reimbursement of \$171,567.61, be reimbursed from the reserve fund for replacement and extraordinary maintenance.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**SOUTHWEST PIPELINE PROJECT -
REQUEST FOR ALLOCATION OF
FUNDS FOR TRANSMISSION LINE TO
KILLDEER (SWC DEFERRAL OF ACTION)
(SWC Project No. 1736)**

under construction to west of Killdeer. The cost estimate for the main transmission line to Killdeer is \$11,800,000.

A request from the Southwest Water Authority was presented for the State Water Commission's consideration for approval of the Dunn Center service area main transmission line that extends from the water treatment plant currently

The funding allocated in the 2011-2013 biennium includes service to the Zap and Center rural distribution areas. The request for the main transmission line to Killdeer, in addition to the work planned for the rural distribution system, would require funding in the amount of \$61,000,000 this biennium, with an additional \$12,400,000 in upgrades to existing infrastructure to provide long-term capacity to this area.

The contracts for the water treatment plant north of Zap, the main transmission line to Hazen, Stanton and Center, associated reservoirs, and the south Zap service area rural distribution system have been awarded and construction is under progress. It is anticipated that the main transmission lines and the water treatment plant contracts will be completed in the spring of 2012. There is approximately \$10,700,000 in obligations from the state funding and \$17,800,000 in federal funding for these awarded contracts in the 2011-2013 biennium.

With the construction of the main transmission line through the Center and Zap regions nearing completion, the next phase was planned for the rural distribution in this area. The current estimate of costs for this rural distribution is \$20,400,000 (2012 - north Zap service area rural distribution system - \$5,600,000; 2013 - west Center service area rural distribution system - \$7,000,000; and 2014-2015 - east Center service area rural distribution system - \$7,800,000). Funding has not been finalized for these rural distribution projects.

It was the recommendation of Secretary Sando that based on the current factors with funding and construction scheduling, the State Water Commission defer action at this time on the request from the Southwest Water Authority to allocate funding for the main transmission line to Killdeer. It was also the recommendation of Secretary Sando that the staffs of the Commission and the Authority discuss prioritization of the rural distribution system needs and the main transmission line needs, with a report provided to the Commission.

It was moved by Commissioner Olin and seconded by Commissioner Berg that the State Water Commission:

- 1) defer action at the December 9, 2011 meeting on the request from the Southwest Water Authority to allocate funding for the main transmission line to Killdeer; and***
- 2) that the staffs of the State Water Commission and the Southwest Water Authority discuss prioritization of the main transmission lines and the distribution system needs, with a report provided to the Commission.***

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

**WESTERN AREA WATER SUPPLY
(WAWS) PROJECT - APPROVAL OF
PHASE II - TIER I PROJECTS
(SWC Project No. 1973)**

2011 House Bill 1206 created the Western Area Water Supply (WAWS) project, under chapter 61-40 of the North Dakota Century Code.

On June 21, 2011, the State Water Commission passed a motion to approve the Western Area Water Supply project, Phase I, an allocation not to exceed \$25,000,000 authorized in 2011 House Bill 1206 from the funds appropriated to the State Water Commission in the 2011-2013 biennium for project construction, and that the Commission staff be delegated to review the specific plans and specifications.

The Western Area Water Supply project status report was provided, which is detailed in the staff memorandum, dated November 29, 2011, and attached hereto as **APPENDIX "F"**. In order for the Authority to access the remaining loans of \$85,000,000, the Bank of North Dakota's letter of conditions, dated September 16, 2011, requires the State Water Commission's approval of Phase II, Tier I for the following projects:

- Williston water treatment plant expansion from 10 million gallons per day (MGD) to 14 MGD;
- Thirty (30) miles of 20" to 24" pipeline heading north and east of Williston to Ray;
- Thirty-two (32) miles of 16" to 20" pipeline from south of Williston heading south and east to Watford City;
- Five (5) reservoirs which include three (3) 0.5 MGD reservoirs and two (2) MGD reservoirs;
- Four (4) pump stations which include a 6 MGD reservoir near 13 mile corner, a three (3) MGD reservoir at the Ray water treatment plant, and two (2) MGD reservoirs along the pipeline heading south from Williston; and
- Approximately six (6) industrial water depots are included in this phase and will range in size from 2 to 6 fill points, with a fill point averaging delivery of 200 gallons per minute over a 24-hour period.

It was the recommendation of Secretary Sando that the State Water Commission approve the Western Area Water Supply overall plan for the Phase II - Tier I projects listed, up to a total overall plan approval of \$100,000,000.

It was moved by Commissioner Hanson and seconded by Commissioner Berg that the State Water Commission approve the Western Area Water Supply project, Phase II - Tier I projects listed, up to a total overall plan approval of \$100,000,000.

Commissioners Berg, Foley, Hanson, Olin, Swenson, Thompson, Vosper, and Governor Dalrymple voted aye. There were no nay votes. Governor Dalrymple announced the motion unanimously carried.

***DEVILS LAKE HYDROLOGIC,
AND PROJECTS UPDATES
(SWC Project No. 416-17)***

The Devils Lake hydrologic report, and project updates were provided, which are detailed in the staff memorandum, dated November 23, 2011, and attached hereto as ***APPENDIX "G"***.

***NORTHWEST AREA WATER
SUPPLY (NAWS) PROJECT -
STATUS REPORTS
(SWC Project No. 237-04)***

The Northwest Area Water Supply (NAWS) project and construction status reports were provided, which are detailed in the staff memorandum, dated October 23, 2011, and attached hereto as ***APPENDIX "H"***.

***MISSOURI RIVER REPORT
(SWC Project No. 1392)***

The Missouri River report was provided, which is detailed in the staff memorandum, dated November 23, 2011, and attached hereto as ***APPENDIX "I"***.

***GARRISON DIVERSION
CONSERVANCY DISTRICT
REPORT
(SWC Project No. 237)***

The Dakota Water Resources Act of 2000 authorized the Secretary of the Interior to conduct a comprehensive study of the water quantity and quality needs of the Red River valley in North

Dakota and possible options for meeting those needs. The Act identified two project-related studies: the *Report on Red River Valley Water Needs and Options*, and the *Red River Valley Water Supply Project Environmental Impact Statement (EIS)*. The Bureau of Reclamation completed the *Report on Red River Valley Water Needs and Options*. The State of North Dakota and the Bureau jointly prepared the EIS. Governor Hoeven designated the Garrison Diversion Conservancy District to represent the state in this endeavor.

STATE WATER COMMISSION
 ALLOCATED PROGRAM EXPENDITURES
 FOR THE PERIOD ENDED OCTOBER 31, 2011
 BIENNIUM COMPLETE: 17%

APPENDIX "A"
 DECEMBER 9, 2011

PROGRAM	SALARIES/ BENEFITS	OPERATING EXPENSES	GRANTS & CONTRACTS	JU-NOV-11 PROGRAM TOTALS
ADMINISTRATION				
Allocated	1,926,299	1,303,575		3,229,874
Expended	317,143	152,852		469,995
Percent	16%	12%		15%
			Funding Source:	
			General Fund:	446,132
			Federal Fund:	23,863
			Special Fund:	0
PLANNING AND EDUCATION				
Allocated	1,285,138	212,198	99,000	1,596,336
Expended	204,672	38,056	14,322	257,051
Percent	16%	18%	14%	16%
			Funding Source:	
			General Fund:	190,355
			Federal Fund:	45,201
			Special Fund:	21,495
WATER APPROPRIATION				
Allocated	3,949,169	446,511	1,130,000	5,525,680
Expended	648,090	97,503	14,028	759,621
Percent	16%	22%	1%	14%
			Funding Source:	
			General Fund:	745,593
			Federal Fund:	0
			Special Fund:	14,028
WATER DEVELOPMENT				
Allocated	5,634,922	9,772,937	265,000	15,672,859
Expended	849,102	982,983	186,828	2,018,912
Percent	15%	10%	71%	13%
			Funding Source:	
			General Fund:	773,763
			Federal Fund:	186,090
			Special Fund:	1,059,059
STATEWIDE WATER PROJECTS				
Allocated			325,881,750	325,881,750
Expended			40,406,900	40,406,900
Percent			12%	12%
			Funding Source:	
			General Fund:	0
			Federal Fund:	96,045
			Special Fund:	40,310,856
ATMOSPHERIC RESOURCE				
Allocated	901,205	712,307	4,694,692	6,308,204
Expended	166,813	34,595	335,742	537,151
Percent	19%	5%	7%	9%
			Funding Source:	
			General Fund:	393,000
			Federal Fund:	0
			Special Fund:	144,151
SOUTHWEST PIPELINE				
Allocated	437,264	6,201,500	38,744,857	45,383,621
Expended	84,847	468,357	8,022,439	8,575,642
Percent	19%	8%	21%	19%
			Funding Source:	
			General Fund:	0
			Federal Fund:	7,517,234
			Special Fund:	1,058,409
NORTHWEST AREA WATER SUPPLY				
Allocated	604,626	5,235,500	49,976,971	55,817,097
Expended	74,442	469,714	4,040,870	4,585,026
Percent	12%	9%	8%	8%
			Funding Source:	
			General Fund:	0
			Federal Fund:	2,013,786
			Special Fund:	2,571,240
PROGRAM TOTALS				
Allocated	14,738,623	23,884,528	420,792,270	459,415,421
Expended	2,345,110	2,244,059	53,021,128	57,610,298
Percent	16%	9%	13%	13%
FUNDING SOURCE:				
GENERAL FUND	14,995,199	2,548,843	GENERAL FUND:	875
FEDERAL FUND	53,984,383	9,882,219	FEDERAL FUND:	7,635,159
SPECIAL FUND	390,435,838	45,179,236	SPECIAL FUND:	70,543,045
TOTAL	459,415,420	57,610,298	TOTAL:	78,179,078

STATE WATER COMMISSION
 PROJECTS/GRANTS/CONTRACT FUND
 2011-2013 BIENNIUM

	<i>Oct-11</i>				
	BUDGET	SWC/SE APPROVED	OBLIGATIONS EXPENDITURES	REMAINING UNOBLIGATED	REMAINING UNPAID
CITY FLOOD CONTROL					
FARGO/RIDGEWOOD	50,941	50,941	0	0	50,941
FARGO	66,473,088	66,473,088	0	0	66,473,088
GRAFTON	7,175,000	7,175,000	0	0	7,175,000
MINOT	2,500,000	2,500,000	237,022	0	2,262,978
WAHPETON	1,013,000	1,013,000	0	0	1,013,000
FLOOD CONTROL					
RENWICK DAM	1,246,571	1,246,571	0	0	1,246,571
WATER SUPPLY					
REGIONAL & LOCAL WATER SYSTEMS	22,952,898	22,952,897	4,454,053	0	18,498,845
VALLEY CITY WATER TREATMENT PLANT	15,386,800	15,386,800	3,250,063	0	12,136,737
FARGO REVERSE OSMOSIS PILOT STUDY	15,000,000	600,000	0	14,400,000	600,000
RED RIVER WATER SUPPLY	62,224	62,224	0	0	62,224
WESTERN AREA WATER SUPPLY	25,000,000	25,000,000	5,853,708	0	19,146,292
SOUTHWEST PIPELINE PROJECT	22,369,199	22,369,199	1,058,409	0	21,310,790
NORTHWEST AREA WATER SUPPLY	19,432,008	13,932,008	0	5,500,000	13,932,008
IRRIGATION DEVELOPMENT					
	3,608,353	608,353	8,555	3,000,000	599,798
GENERAL WATER MANAGEMENT					
OBLIGATED	23,451,417	23,451,417	434,047	0	23,017,370
UNOBLIGATED	13,057,792			13,057,792	0
DEVILS LAKE					
BASIN DEVELOPMENT	92,340	92,340	4,774	0	87,566
DIKE	12,254,788	12,254,788	4,102,404	0	8,152,384
OUTLET	2,420,212	2,420,212	12,355	0	2,407,857
OUTLET OPERATIONS	6,215,627	6,215,627	1,099,864	0	5,115,762
DL TOLNA COULEE DIVIDE	4,366,720	4,366,720	4,254,838	0	111,882
DL EAST END OUTLET	71,848,290	60,542,273	10,928,957	11,306,017	49,613,316
DL GRAVITY OUTFLOW CHANNEL	17,000,000	17,000,000	0	0	17,000,000
DL JOHNSON FARMS STORAGE	125,000	125,000	0	0	125,000
WEATHER MODIFICATIONS					
	894,314	894,314	0	0	894,314
TOTALS					
	353,996,582	306,732,772	35,699,047	47,263,810	271,033,725

**STATE WATER COMMISSION
PROJECTS/GRANTS/CONTRACT FUND
2011-2013 Biennium**

PROGRAM OBLIGATION

Approve SWC By	No	Dept		Initial Approved Date	Total Approved	Total Payments	Oct-11 Balance
City Flood Control:							
SWC	1927	5000	Fargo/Ridgewood Flood Control Project	6/22/2005	50,941	0	50,941
SB 202	1928	5000	Fargo Flood Control Project	6/23/2009	66,473,088	0	66,473,088
SWC	1771	5000	Grafton Flood Control Project	3/11/2010	7,175,000	0	7,175,000
SWC	1974	5000	Minot Mouse River Enhanced Flood Control Project	9/21/2011	2,500,000	237,022	2,262,978
SWC	518	5000	Wahpeton Flood Control	7/1/2011	1,013,000	0	1,013,000
Subtotal City Flood Control					77,212,029	237,022	76,975,007
Flood Control:							
SWC	849	5000	Renwick Dam Rehabilitation	5/17/2010	1,246,571	0	1,246,571
Water Supply Advances:							
SWC	2373-09	5000	South Central RWD (Phase II)	6/23/2008	1,295,056	42,759	1,252,298
	2373-31	5000	North Central Rural Water Consortium (Anamoose/Ber)	6/23/2008	3,295,000	794,142	2,500,858
	2373-24	5000	Trails Regional Rural Water (Phase III)	8/18/2009	2,355,670	104,051	2,251,619
Water Supply Grants:							
	2373-17	5000	City of Parshall	6/23/2008	490,452	0	490,452
	2373-18	5000	Ray & Tioga Water Supply Association	12/17/2008	1,868,153	1,868,153	1
	2373-25	5000	McKenzie Phase II	6/23/2009	868,327	0	868,327
	2373-28	5000	McKenzie Phase IV	3/11/2010	2,352,244	1,395,695	956,549
	2373-29	5000	City of Wilrose - Crosby Water Supply	7/28/2010	97,218	0	97,218
	2373-32	5000	North Central Rural Water Consortium (Berthold-Carpi)	6/21/2011	3,150,000	0	3,150,000
	2373-33	5000	Stutsman Rural Water System	6/21/2011	6,800,000	0	6,800,000
Subtotal Water Supply					22,572,121	4,204,799	18,367,321
HB No. 1305 Permanent Oil Trust Fund							
	2373-21	5000	Burke, Divide, Williams Water District	6/23/2009	189,415	57,892	131,523
	2373-22	5000	Ray & Tioga Water Supply Association	6/23/2009	191,362	191,362	0
Subtotal Permanent Oil Trust Fund					380,777	249,253	131,523
	2373-26	5000	Valley City Water Treatment Plant	8/18/2009	15,386,800	3,250,063	12,136,737
	2373FAR	5000	Fargo's Reverse Osmosis Pilot Study	6/21/2011	600,000	0	600,000
	1912	5000	Red River Valley Water Supply Project	3/17/2008	62,224	0	62,224
	1973	5000	Western Area Water Supply	7/1/2011	25,000,000	5,853,708	19,146,292
	1736-05	8000	Southwest Pipeline Project	7/1/2011	22,369,199	1,058,409	21,310,790
	2374	9000	Northwest Area Water Supply	7/1/2011	13,932,008	0	13,932,008
Subtotal Water Supply					77,350,231	10,162,180	67,188,051
Irrigation Development:							
SWC	1389	5000	BND AgPace Program	10/23/2001	98,907	8,555	90,352
SWC	AOC/IRA	5000	ND Irrigation Association	8/16/2011	100,000	0	100,000
SWC	1968	5000	2009-11 McClusky Canal Mile Marker 7.5 Irrigation Pr	6/1/2010	409,446	0	409,446
Subtotal Irrigation Development					608,353	8,555	599,798
General Water Management Hydrologic Investigations:							
					900,000		
SWC	1400/12	3000	Houston Engineering Water Permit Application Review	10/10/2010	8,500	6,372	2,128
	862	3000	Aretta Herman	6/1/2011	872	1,092	(220)
	967	3000	Holly Messmer - McDaniel	6/1/2011	0	0	0
	1690	3000	Holly Messmer - McDaniel	6/1/2011	936	1,248	(312)
	1703	3000	Neil Flaten	6/1/2011	1,044	1,392	(348)
	1707	3000	Neil Flaten	4/26/2011	682	909	(227)
	1761	3000	Gloria Roth	6/1/2011	233	345	(113)
	1761	3000	Fran Dobits	6/1/2011	0	0	0
	1395	3000	US Geological Survey, US Dept. Of Interior Upgrade o	4/14/2011	2,670	2,670	0
	1395	3000	US Geological Survey, US Dept. Of Interior Investigati	8/15/2011	431,807	0	431,807
Hydrologic Investigations Obligations Subtotal					463,744	14,028	449,716
Remaining Hydrologic Investigations Authority					436,257		
Hydrologic Investigations Authority Less Payments							

**STATE WATER COMMISSION
PROJECTS/GRANTS/CONTRACT FUND
2011-2013 Biennium**

PROGRAM OBLIGATION

Approve SWC			Initial	Total	Total	Oct-11	
By	No	Dept	Approved Date	Approved	Payments	Balance	
General Projects Obligated				22,407,560	276,162	22,131,398	
General Projects Completed				143,857	143,857	0	
Subtotal General Water Management				23,451,417	434,047	23,017,370	
<hr/>							
Devils Lake Basin Development:							
SWC	416-01	5000	Devils Lake Basin Joint Water Resource Manager	6/15/2011	60,000	0	60,000
SWC	416-02	5000	City of Devils Lake Levee System Extension & Raise	7/1/2011	12,254,788	4,102,404	8,152,384
SWC	416-05	2000	Devils Lake Outlet Awareness Manager	6/16/2011	32,340	4,774	27,566
SWC	416-07	5000	Devils Lake Outlet	7/1/2011	2,420,212	12,355	2,407,857
SWC	416-10	4700	Devils Lake Outlet Operations	7/1/2011	6,215,627	1,099,864	5,115,762
SWC	416-13	5000	DL Tolna Coulee Divide	7/1/2011	4,366,720	4,254,838	111,882
SWC	416-15	5000	DL East End Outlet	7/1/2011	60,542,273	10,928,957	49,613,316
SWC	416-17	5000	DL Emergency Gravity Outflow Channel	9/21/2011	17,000,000	0	17,000,000
SWC	416-18	5000	DL Johnson Farms Water Storage Site	6/10/2011	125,000	0	125,000
Devils Lake Subtotal					103,016,960	20,403,191	82,613,769
<hr/>							
SWC		7600	Weather Modification	7/1/2011	894,314	0	894,314
<hr/>							
TOTAL					306,732,772	35,699,047	271,033,725
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**STATE WATER COMMISSION
PROJECTS/GRANTS/CONTRACT FUND
2011-2013 Biennium
Resources Trust Fund**

GENERAL PROJECT OBLIGATIONS

Approved SWC By	No	Dept	Approved Biennium		Initial Approved Date	Total Approved	Total Payments	Oct-11 Balance
HB 1020	1932	5000	2005-07	Michigan Spillway Rural Flood Assessment Drain	8/30/2005	500,000	0	500,000
HB 1020	322	5000	2009-11	Long-Term Red River Flood Control Solutions Study (AOC/RRC)	6/23/2009	7,720	0	7,720
HB 2305	1963	5000	2009-11	Beaver Bay Embankment Feasibility Study	8/10/2009	258,406	0	258,406
SB 2020	1131	5000	2009-11	Nelson Co. WRD Flood Related Water Projects	6/1/2011	250,000	28,378	221,622
SB 2020	XXXX	5000	2011-13	USDA-APHIS North Dakota Wildlife Services - animal control/beaver mgmt	6/1/2011	250,000	0	250,000
SE	568	5000	2007-09	Sheyenne River Snagging & Clearing Project	4/11/2008	5,000	0	5,000
SE	1842	5000	2009-11	SCWRD Wild Rice River Snagging & Clearing	5/28/2009	4,331	0	4,331
SE	985	5000	2009-11	Kolding Dam Emergency Action Plan	5/29/2009	9,600	0	9,600
SE	847	5000	2009-11	Absaraka Dam Safety Analysis	8/31/2009	5,719	0	5,719
SE	PBS	5000	2009-11	PBS Documentary on Soil Salinity/Lake Agassiz RC & D	1/29/2010	1,000	0	1,000
SE	1785	5000	2009-11	Sweetbriar Dam EAP	2/17/2010	15,200	0	15,200
SE	1625	5000	2009-11	Sovereign Lands Rules - ND Game & Fish	2/23/2010	6,788	0	6,788
SE	269	5000	2009-11	Fordville Dam Emergency Action Plan/GF CO.	3/3/2010	9,600	0	9,600
SE	AOC/ARB/ND	5000	2009-11	NDSU Dept of Soil Science - NDAWN Center	3/8/2010	3,000	0	3,000
SE	642	5000	2009-11	Morton Co/Sweetbriar Dam Emergency Action Plan	5/17/2010	15,200	0	15,200
SE	AOC/RRBC	5000	2009-11	Red River Basin "A River Runs North"	6/30/2010	5,000	0	5,000
SE	1577	5000	2009-11	Burleigh Co - Fox Island 2010 Flood Hazard Mitigation Evaluation	8/9/2010	11,175	0	11,175
SE	1396	5000	2009-11	Dale Frink Consultant Services Agreement	10/26/2010	18,600	0	18,600
SE	1291	5000	2009-11	Mercer County WRD Knife River Snagging & Clearing	11/1/2010	20,000	0	20,000
SE	1431	5000	2009-11	NDDOT Aerial Photography - Missouri River	11/19/2010	39,279	39,279	0
SE	1967	5000	2009-11	Grand Forks County Legal Drain No. 55 2010 Construction	11/30/2010	9,652	0	9,652
SE	839	5000	2009-11	Elm River Detention Dam No. 3 EAP	12/6/2010	12,160	0	12,160
SE	1131	5000	2009-11	Elm River Detention Dam No. 2 Emergency Action Plan	12/6/2010	12,160	0	12,160
SE	839	5000	2009-11	Elm River Detention Dam No. 1 EAP	1/10/2011	12,160	0	12,160
SE	571	5000	2009-11	Oak Creek Snagging & Clearing Project	1/28/2011	5,000	0	5,000
SE	1842	5000	2009-11	Richland Co. - Ph 2 - Wild Rice River Snagging & Clearing	2/1/2011	15,000	0	15,000
SE	1301	5000	2009-11	City of Lidgerwood Engineering & Feasibility Study for Flood Control	2/4/2011	15,850	0	15,850
SE	929	5000	2009-11	Walsch Co. -Soukop Dam EAP	3/2/2011	10,000	0	10,000
SE	1289	5000	2009-11	McKenzie Co. Weed Control on Sovereign Lands	3/4/2011	11,705	0	11,705
SE	1433	5000	2009-11	Whitman Dam Emergency Action Plan	4/14/2011	10,000	0	10,000
SE	501	5000	2009-11	Pheasant Lake Dam Emergency Action Plan	4/20/2011	9,600	0	9,600
SE	929	5000	2009-11	Walsch Co. -Chyle Dam EAP	5/6/2011	10,000	0	10,000
SE	1607	5000	2011-13	Flood Inundation Mapping of Areas Along Souris & Des Lacs River	6/15/2011	13,011	0	13,011
SE	PSAWRD/USR	5000	2011-13	Upper Sheyenne River WRB Administration (USRJWRB)	6/15/2011	8,000	0	8,000
SE	1965	5000	2011-13	ND Silver Jackets Team Charter & Action Plan	7/1/2011	1,276	1,275	0
SE	1971	5000	2011-13	DES Purchase of Mobile Stream Gages (2 temporary stream gages)	7/19/2011	8,000	0	8,000
SE	PSAWRD/MRJ	5000	2011-13	Missouri River Joint Water Board, (MRJWB) Start up	8/2/2011	20,000	0	20,000
SE	266	5000	2011-13	Toina Dam 2011 EAP, Nelson County WRD	8/23/2011	9,600	0	9,600
SE	1378	5000	2011-13	Clausen Springs Dam Emergency Action Plan /Barnes Co. WRD	8/23/2011	20,000	0	20,000
SE	1301	5000	2011-13	City of Wahpeton Water Reuse Feasibility Study/Richland Co.	9/8/2011	2,500	0	2,500
SE	1303	5000	2011-13	Shortfood Creek Watershed Feasibility Study/ Sargent Co. WRD	9/15/2011	7,500	0	7,500
SE	1313	5000	2011-13	Ward Co. 2011 LIDAR Review & Data Creation Products	10/11/2011	16,311	0	16,311
SE	391	5000	2011-13	Silver Lake Dam Emergency Repairs, Sargent Co. WRD	10/12/2011	2,800	0	2,800
SWC	1932	5000	2005-07	Michigan Spillway Rural Flood Assessment	8/30/2005	1,012,219	0	1,012,219
SWC	1093	5000	2007-09	Cass Co. Drain No. 45 Extension Project	3/17/2008	124,757	0	124,757
SWC	928/988/1508	5000	2007-09	Southeast Cass WRD Bois, Wild Rice, & Antelope	6/23/2008	60,000	0	60,000
SWC	620	5000	2007-09	Mandan Flood Control Protective Works (Levee)	9/29/2008	125,396	0	125,396
SWC	PSAWRD/MRJ	5000	2007-09	Missouri River Joint Water Board, (MRJWB) Start up	12/5/2008	14,829	10,857	3,972
SWC	642-05	5000	2007-09	Sweetbriar Creek Dam Project	3/6/2009	26,356	0	26,356
SWC	1921	5000	2007-09	Square Butte Dam No. 6/(Harmon Lake) Recreation Facility	3/23/2009	852,251	0	852,251
SWC	528	5000	2009-11	McGregor Dam Emergency Action Plan	6/23/2009	25,000	0	25,000
SWC	1638	5000	2009-11	Red River Basin Non-NRCS Rural/Farmstead Ring Dike Program	6/23/2009	424,262	26,018	398,244
SWC	327	5000	2009-11	White Earth Dam EAP	8/18/2009	25,000	0	25,000
SWC	1068	5000	2009-11	Cass County Drain No. 12 Improvement Reconstruction	8/18/2009	741,600	0	741,600
SWC	1069	5000	2009-11	Cass County Drain No. 13 Improvement Reconstruction	8/18/2009	122,224	0	122,224
SWC	1070	5000	2009-11	Cass County Drain No. 14 Improvement Recon	8/18/2009	423,855	55,665	368,190
SWC	1088	5000	2009-11	Cass County Drain No. 37 Improvement Recon	8/18/2009	84,423	0	84,423
SWC	1232	5000	2009-11	Trall Co. Drain No. 13 Channel Extension Project	8/18/2009	23,575	0	23,575
SWC	1785	5000	2009-11	Maple River Dam EAP	8/18/2009	25,000	0	25,000
SWC	1953	5000	2009-11	Walsh County Drain No. 73 Construction Project	8/18/2009	109,919	96,990	12,929
SWC	1960	5000	2009-11	Puppy Dog Flood Control Drain Construction	8/18/2009	796,976	0	796,976
SWC	1882-01	5000	2009-11	(ESAP) Extended Storage Acreage Program	8/18/2009	63,554	0	63,554
SWC	1401	5000	2009-11	International Boundary Roadway Dike Pembina	9/21/2009	227,431	0	227,431
SWC	1942	5000	2009-11	Walsh County Assessment Drain 10, 10-1, 10-2	9/21/2009	37,267	0	37,267
SWC	1964	5000	2009-11	Hydraulic Effects of Rock Wedges Study- UND	11/12/2009	11,651	0	11,651
SWC	847	5000	2009-11	Swan Creek Diversion Channel Improvement Reconstruction	12/11/2009	76,528	0	76,528
SWC	1792	5000	2009-11	SE Cass Wild Rice River Dam Study Phase II	12/11/2009	130,000	0	130,000
SWC	322	5000	2009-11	ND Water: A Century of Challenge	2/22/2010	36,800	0	36,800
SWC	1180	5000	2009-11	Richland Co. Drain No. 7 Improvement Reconstruction	3/11/2010	71,933	0	71,933
SWC	1244	5000	2009-11	Trall Co. Drain No. 27 (Moen) Reconstruction & Extension	3/11/2010	678,485	0	678,485
SWC	1313	5000	2009-11	City of Minot/Ward Co. Aerial Photo & LIDAR	3/11/2010	186,780	0	186,780
SWC	1331	5000	2009-11	Richland Co. Drain No. 14 Improvement Reconstruction	3/11/2010	116,988	0	116,988
SWC	1344	5000	2009-11	Southeast Cass Sheyenne River (Horace Diversion Channel Site A)	3/11/2010	1,762,380	0	1,762,380
SWC	1444	5000	2011-13	City of Pembina's Flood Control FEMA Levee Certification	3/11/2010	16,936	0	16,936
SWC	1577	5000	2009-11	Hazen Flood Control Levee (1517) & FEMA Accreditation	3/11/2010	449,500	0	449,500
SWC	1932	5000	2009-11	Peterson Slough into Dry Run Emergency	5/28/2010	32,150	0	32,150
SWC	1966	5000	2009-11	City of Oxbow Emergency Flood Fighting Barrier System	6/1/2010	188,400	0	188,400
SWC	847	5000	2009-11	Swan-Buffalo Detention Dam No. 12 Flood Control Dam Safety Project	7/28/2010	114,783	0	114,783
SWC	1299	5000	2009-11	City of Fort Ransom Riverbank Stabilization	9/1/2010	60,803	0	60,803
SWC	1413	5000	2009-11	Trall Co/Buffalo Coulee Snagging & Clearing	9/1/2010	26,000	0	26,000
SWC	1667	5000	2009-11	Trall Co/Goose River Snagging & Clearing	9/1/2010	12,890	0	12,890
SWC	1882-07	5000	2009-11	NDSU Development of SEBAL	9/1/2010	15,244	0	15,244

**STATE WATER COMMISSION
PROJECTS/GRANTS/CONTRACT FUND
2011-2013 Biennium
Resources Trust Fund**

GENERAL PROJECT OBLIGATIONS

Approved SWC By No	Dept	Approved Biennium		Initial Approved Date	Total Approved	Total Payments	Oct-11 Balance
SWC 281	5000	2009-11	Three Affiliated Tribes/Fort Berthold Irrigation Study	10/26/2010	37,500	0	37,500
SWC 646	5000	2009-11	Christine Dam Recreation Retrofit Project	10/26/2010	184,950	0	184,950
SWC 646	5000	2009-11	Hickson Dam Recreation Retrofit Project	10/26/2010	44,280	0	44,280
SWC 1378	5000	2009-11	Clausen Springs Dam Emergency Spillway Repair	10/26/2010	746,992	0	746,992
SWC 568	5000	2009-11	SCWRD Sheyenne River Snagging & Clearing Project	12/10/2010	362,250	0	362,250
SWC 1164	5000	2009-11	Pembina County Drain No. 64 Outlet Area Improvement	12/10/2010	41,480	0	41,480
SWC 1842	5000	2009-11	SCWRD Wild Rice River Snagging & Clearing	12/10/2010	100,625	0	100,625
SWC 1878-02	5000	2009-11	Maple-Steele Upper Maple River Dam PE & PD	12/10/2010	187,710	0	187,710
SWC 347	5000	2009-11	City of Velva's Flood Control Levee System Certification	3/28/2011	102,000	0	102,000
SWC 1161	5000	2009-11	Pembina Co. Drain 55 Improvement Reconstruction	3/28/2011	88,868	0	88,868
SWC 1245	5000	2009-11	Trail Co. Drain No. 28 Extension & Improvement Project	3/28/2011	336,007	0	336,007
SWC 1344	5000	2009-11	Southeast Cass Sheyenne Sheyenne Pump Station	3/28/2011	60,750	0	60,750
SWC 1438	5000	2009-11	Mulberry Creek Drain Partial Improv Phase III	3/28/2011	226,118	0	226,118
SWC 1842	5000	2009-11	Richland Co. Wild Rice River Snagging & Clearing Project - Reach 2	3/28/2011	47,500	0	47,500
SWC 1969	5000	2009-11	Construction of Walsh Co. Legal Assessment Drain # 71	3/28/2011	304,141	0	304,141
SWC 1970	5000	2009-11	Construction of Walsh Co. Legal Assessment Drain # 72	3/28/2011	144,807	0	144,807
SWC PS/IRR/NES	5000	2009-11	NDSU Williston Research Extension Center - purchase of irrigation equip	3/28/2011	60,050	0	60,050
SWC 1705	5000	2011-13	Red River Basin Flood Control Coordinator Position	6/10/2011	36,000	0	36,000
SWC AOC/WEF	5000	2011-13	ND Water Education/North Dakota Water Magazine	6/10/2011	36,000	0	36,000
SWC 1344	5000	2011-13	Southeast Cass Sheyenne River Diversion Low-Flow Channel Areas 3 & 4	6/14/2011	2,802,000	0	2,802,000
SWC 1671	5000	2011-13	Dead Cold Creek Dam 2011 Emergency Action Plan	6/14/2011	22,800	0	22,800
SWC 1392	5000	2011-13	U. S. Geological Hydrographic Survey of the Missouri River Bis - Washburn	6/15/2011	55,000	17,700	37,300
SWC 1878-02	5000	2011-13	Upper Maple River Dam Project Development & Preliminary Engineering	7/19/2011	187,710	0	187,710
SWC AOC/RRBC	5000	2011-13	Red River Basin Commission Contractor	8/2/2011	200,000	0	200,000
SWC PS/WRD/MRJ	5000	2011-13	Missouri River Joint Water Board (MRRIC) T. FLECK	8/2/2011	40,000	0	40,000
SWC 1968	5000	2011-13	Absaraka Dam Improvement Rehabilitation Project	8/12/2011	114,783	0	114,783
SWC 568	5000	2011-13	Sheyenne River Snagging & Clearing Reaches 1-3 , Southeast Cass WRD	9/21/2011	255,750	0	255,750
SWC 829	5000	2011-13	Rush River Dam Preliminary Soils & Hydraulic Study/Rush River WRD	9/21/2011	57,500	0	57,500
SWC 980	5000	2011-13	Maple River Watershed Food Water Retention Study/ Maple River WRD	9/21/2011	82,500	0	82,500
SWC 1101	5000	2011-13	Dickey Co. WRD, Yorktown-Maple Drainage Improvement Dist No. 3	9/21/2011	242,795	0	242,795
SWC 1101	5000	2011-13	Brokke Drain No. 30, Ervin Township, Trail Co.	9/21/2011	23,660	0	23,660
SWC 1101	5000	2011-13	Riverdale Township Improvement District #2 - Dickey -Sargent Co. WRD	9/21/2011	500,000	0	500,000
SWC 1219	5000	2011-13	District Drain No. 4 Reconstruction Project/ Sargent Co. WRD	9/21/2011	60,620	0	60,620
SWC 1219	5000	2011-13	City of Forman Floodwater Outlet - Sargent Co. WRD	9/21/2011	348,070	0	348,070
SWC 1252	5000	2011-13	Walsh Co. Reconstruction Drain No. 97	9/21/2011	50,551	0	50,551
SWC 1413	5000	2011-13	Trail Co/Bufalo Coulee Snagging & Clearing	9/21/2011	25,000	0	25,000
SWC 1603	5000	2011-13	Rush River Drain No. 69, Armenia Township, Cass Co.	9/21/2011	313,500	0	313,500
SWC 1667	5000	2011-13	Trail Co./Goose River Snagging & Clearing	9/21/2011	48,000	0	48,000
SWC 1705	5000	2011-13	Red River Joint WRD Watershed Feasibility Study - Phase 2	9/21/2011	60,000	0	60,000
SWC 1806	5000	2011-13	City of Argusville Flood Control Levee Project	9/21/2011	25,432	0	25,432
SWC 1842	5000	2011-13	SCWRD Wild Rice River Snagging & Clearing	9/21/2011	99,000	0	99,000
SWC 1968	5000	2011-13	McClusky Canal Mile Marker 7.5 Irrigation Project Phase 1, GDCCD	9/21/2011	489,039	0	489,039
SWC 1975	5000	2011-13	Walsh Co. Drain No. 31 Reconstruction Project	9/21/2011	111,116	0	111,116
SWC 1977	5000	2011-13	Jackson Township Improvement Dist. #1/Dickey-Sargent Co WRD	9/21/2011	500,000	0	500,000
SWC XXXX	5000	2011-13	ND Dept of Health Non-Point Source EPA Pollution Program Priority Project	9/21/2011	200,000	0	200,000
SWC CON/WILL-CA	5000	2011-13	Garrison Diversion Conservancy - Will Carlson Project	10/17/2011	70,000	0	70,000
SWC 275	5000	2011-13	City of Fort Ransom Engineering Feasibility Study	10/19/2011	40,000	0	40,000
SWC 829	5000	2011-13	Rush River WRD Berlin's Township Improvement District No. 70	10/19/2011	500,000	0	500,000
SWC 1224	5000	2011-13	Trail Co. WRD Preston Floodway Reconstruction Project	10/19/2011	208,570	0	208,570
SWC 1267	5000	2011-13	Bottineau County LiDAR Collect	10/19/2011	90,000	0	90,000
SWC 1978	5000	2011-13	Richland & Sargent WRD RS Legal Drain No. 1 Extension & Channel Improvem	10/19/2011	245,250	0	245,250
SWC 1296	5000	2011-13	Pembina County WRD Cook Bridge Riverbank Stabilization	10/21/2011	36,649	0	36,649
SWC 1979	5000	2011-13	Southeast Cass WRD Wild Rice Riverbank Stabilization Project	10/21/2011	149,568	0	149,568
TOTAL					22,412,937	276,162	22,136,775

**STATE WATER COMMISSION
PROJECTS/GRANTS/CONTRACT FUND
2011-2013 Biennium
Resources Trust Fund**

COMPLETED GENERAL PROJECTS

Approved SWC By	No	Dept	Approved Biennium		Initial Approved Date	Total Approved	Total Payments	Oct-11 Balance
SWC	1088	5000	2009-11	Cass County Drain No. 37 Improvement Recon	8/18/2009	84,423	0	84,423
SWC	846	5000	2009-11	Morton Co. Square Butte Dam No. 5 EAP	12/10/2010	24,000	20,930	3,070
SWC	1971	5000	2009-11	DES Purchase of Mobile Stream Gages	3/28/2011	16,457	16,457	0
TOTAL						124,880	37,387	87,493

**2012 INTENDED USE PLAN
FOR THE
NORTH DAKOTA DRINKING WATER STATE REVOLVING LOAN FUND**

**PREPARED BY THE
DRINKING WATER STATE REVOLVING LOAN FUND PROGRAM
MUNICIPAL FACILITIES DIVISION
ENVIRONMENTAL HEALTH SECTION
NORTH DAKOTA DEPARTMENT OF HEALTH**

November 21, 2011

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ATTACHMENTS

- Attachment 1- Eligible and Ineligible Projects and Project-Related Costs Under the Drinking Water State Revolving Loan Fund (DWSRF) Program**
- Attachment 2- Comprehensive Project Priority List And Fundable List**
- Attachment 3- Priority Ranking System for Financial Assistance Through the Drinking Water State Revolving Loan Fund (DWSRF) Program**
- Attachment 4- Nonproject Set-Aside and Loan Fee Activity Table**
- Attachment 5- Sources and Uses Table**

A. Introduction

On August 6, 1996, President Clinton signed into law the Safe Drinking Water Act (SDWA) Amendments of 1996 (P.L. 104-182). Section 1452 of the SDWA authorizes a Drinking Water State Revolving Loan Fund (DWSRF) program. It further requires the U.S. Environmental Protection Agency (EPA) to enter into agreements with and make capitalization grants to eligible states to assist public water systems (PWSs) in financing the costs of infrastructure needed to achieve or maintain compliance with the SDWA and to protect public health.

North Dakota's DWSRF allotments for fiscal years (FY) 1997 through 2010 totaled \$135,424,767, the allotment for FY 2011 is \$9,418,000, and the anticipated 2012 allotment is \$8,000,000. Allotted funds are provided by the EPA through capitalization grants and matched 20% by North Dakota.

DWSRF funds may be used for: loans, loan guarantees, as a source of reserve and security for leveraged loans (the proceeds of which must be placed in the DWSRF), to buy or refinance existing local debt obligations (publicly-owned systems only) where the initial debt was incurred and construction started after July 1, 1993, and to earn interest prior to disbursement of assistance. To the extent that there are a sufficient number of eligible projects, at least 15 percent of the funds available for construction must be annually used to provide loan assistance to PWSs that serve fewer than 10,000 persons. Up to 30 percent of the funds available for construction may also be used to provide subsidized loans to disadvantaged communities. A portion of the DWSRF allotments may also be used for nonproject set-aside activities such as: administration (up to 4 percent), state program assistance (up to 10 percent), small system technical assistance (up to 2 percent), and local assistance and state programs including the delineation and assessment of source water protection areas (up to 10 percent for any one activity with a maximum of 15 percent for all activities combined).

PWSs eligible for DWSRF assistance include community water systems, both publicly- and privately-owned, and nonprofit noncommunity water systems. Federally-owned PWSs are not eligible to receive DWSRF assistance. Attachment 1 depicts the types of projects and project-related costs that are eligible and ineligible for DWSRF assistance.

Section 1452(b) of the SDWA requires each state to annually prepare an Intended Use Plan (IUP). The IUP must describe how the state intends to use the DWSRF funds to meet the objectives of the SDWA and further the goal of protecting public health. The IUP must be made available to the public for review and comment prior to submitting it to the EPA as part of the capitalization grant application. Specifically, the IUP must include:

1. A priority list of projects, including a description of the projects and the present size of the PWSs served.
2. A description of the criteria and methods to be used for the distribution of funds.

3. A description of the financial status of the DWSRF program, including the use of set-asides along with funds reserved, and the amount of funds that will be used to assist disadvantaged communities; and,
4. A description of the short- and long-term goals of the DWSRF program, including how the capitalization grant funds will be used to ensure compliance and protect public health.

This document is intended to serve as the state of North Dakota's IUP for 2012 and will stay in effect until superseded by a subsequent IUP. As per the authority granted to the North Dakota Department of Health (NDDH) under NDCC Chapter 61-28.1, this document, as amended based on comments received from the public, will be incorporated into a capitalization grant application and submitted to the EPA to further capitalize the state's DWSRF program in the amount of \$17,418,000 (\$9,418,000 from FY2011 allocation and \$8,000,000 from FY2012 allocation). State match bonds were issued in 2011 to provide the 20 percent match for capitalization grants from FY 2012- FY 2017.

B. Priority List of Projects

Background

States are required to develop and maintain a comprehensive priority list of eligible projects for funding and identify projects that will receive funding in the first year after the capitalization grant award. In determining funding priority, states must ensure, to the maximum extent practicable, that priority for the use of funds be given to projects that: 1) address the most serious risks to human health, 2) are necessary to ensure compliance under the SDWA, and 3) assist systems most in need on a per household basis (i.e., affordability).

Development Process

As part of the IUP development process, all potential DWSRF loan recipients were requested to notify the NDDH if they had a drinking water project not presently on the list for which they were interested in pursuing DWSRF financial assistance. Systems with already ranked and listed projects were requested to provide the NDDH with a written update for each project either not yet under construction, or under construction using other than DWSRF funds. The updates were to include a detailed project description and cost estimate, the amount of DWSRF funds needed, and, as applicable, the anticipated construction start date. In lieu of this information, systems were asked to inform the NDDH if they no longer intended to complete a project, or no longer intended to complete a project using DWSRF assistance. Systems requesting ranking of new projects were provided ranking questionnaires. Requests for project reranking or deletion were evaluated on a case-by-case basis, with ranking questionnaires provided as needed. Several projects were deleted due to completion (with or without DWSRF assistance) or the acquisition of other funding sources.

Comprehensive Project Priority List

See Attachment 2.

Fundable List

The fundable list represents those projects from the comprehensive project priority list anticipated to receive loan assistance this year. The list of projects is based on anticipated start dates, projected funding needs, and expected available loan funds (see Section E). The list will change if such information or assumptions vary, if higher ranked projects not on the list become ready to proceed, or if projects on the list are bypassed (see Section C). The NDDH is prepared to issue leveraged bonds if the near-term loan demand exceeds funds available.

C. Criteria and Methods for the Distribution of Funds

Background

A DWSRF may provide assistance only for expenditures (excluding operation, maintenance, and monitoring) of a type or category which will facilitate compliance or otherwise significantly further health protection under the SDWA. Projects eligible for DWSRF financial assistance include investments to: address present SDWA exceedances, prevent future SDWA exceedances (of regulations presently in effect), replace aging infrastructure, restructure or consolidate water supplies, and buy or refinance existing debt obligations (publicly-owned systems only) where the initial debt was incurred and construction started after July 1, 1993. Attachment 1 provides additional information concerning the types of projects and project-related costs that are eligible for DWSRF financial assistance.

To the maximum extent possible, states are required to prioritize projects needed for SDWA compliance, projects that provide the greatest public health protection, and those projects that assist systems most in need based on affordability. The information below describes the process used by the NDDH to select projects for potential DWSRF assistance.

Priority Ranking System

The priority ranking system was developed by the NDDH, the state agency with primary enforcement authority for the SDWA. The priority ranking system is designed to ensure that DWSRF funds are focused on projects that address the most serious risks to human health, rectify SDWA compliance problems, and assist those systems most in need based on affordability considerations. The priority ranking system has received both EPA Region VIII and Headquarter concurrence. The priority ranking system will be amended as needed to reflect the changing nature of the SDWA and the DWSRF Program. Any significant amendments will be presented for public review and comment in an IUP.

Ranking and Project Bypass Considerations

It is the intent of the NDDH that DWSRF funds are directed towards North Dakota's most pressing SDWA compliance problems and public health protection needs. To this end, the NDDH reserves the right to require the separation, if feasible, of project components into separate projects if necessary to focus on critical water supply problems. Project components which are separated will be ranked independently. Projects for existing PWSs, including refinancing projects, will be given preference over projects for the development of new water systems.

Under the SDWA, DWSRF funds may be used to buy or refinance existing local debt obligations (publicly-owned systems only) where the initial debt was incurred and construction started after July 1, 1993. DWSRF assistance requests of this type, if eligible, will be ranked based on the original purpose and success of the constructed improvements. In the event of a tie in project rankings, new projects for existing systems will be given preference over refinancing projects.

The NDDH reserves the right to fund lower-ranked projects ahead of higher-ranked projects based on the considerations below. To the maximum extent possible, the NDDH will work with bypassed projects to ensure that they will be eligible for funding in the following fiscal year. Criteria reviewed in bypassing a project included:

1. Readiness to proceed
2. Willingness to proceed (i.e., applicant withdraws project from consideration, obtains other funding sources, or is nonresponsive)
3. Emergency conditions (i.e., an unanticipated failure occurs requiring immediate attention to protect public health)
4. Financial (includes inability to pay and loan repayment issues), technical, or managerial capability
5. Meet the 15 percent requirement (i.e., funding lower-ranked project would satisfy the requirement that at least 15 percent of the funds available for construction be annually used to provide loan assistance to PWSs that serve fewer than 10,000 persons)
6. Meet the Green Project Reserve requirement
7. Initial ranking score cannot be verified

The NDDH, without going through a public review process, reserves the right to fund unanticipated, non-ranked emergency projects determined to require immediate attention to protect public health. Such assistance will be limited to eligible PWS types

and project features, and to situations involving acute contaminants, loss or potential loss of a water supply in the near future, or that otherwise represent an unreasonable risk to health.

Capacity

Section 1452 of the 1996 SDWA Amendments precludes states from providing DWSRF assistance to any eligible PWS that lacks the capacity to maintain SDWA compliance unless the PWS owner or operator agrees to undertake feasible and appropriate changes to ensure compliance over the long term. States are also precluded from providing DWSRF assistance to any eligible PWS that is in significant noncompliance with any requirement of a National Primary Drinking Water Regulation (NPDWR) or variance unless such assistance will ensure compliance. PWS capacity, in the context of the SDWA, refers to the overall technical, managerial, and financial capability of a PWS to consistently produce and deliver drinking water meeting all NPDWRs. The NDDH has the legal authority and responsibility under NDCC Chapter 61-28.1 to ensure PWS capacity.

The NDDH will use the DWSRF loan application as the principal control point for capacity assessment. Information from the loan application, and other available and relevant information (such as SDWA compliance data, sanitary survey reports, and operator certification status), will be evaluated to assess capacity at present and for the foreseeable future. The North Dakota Public Finance Authority (PFA), as financial agent for the DWSRF Program through formal agreement, will evaluate the financial information requested in the loan application. Based upon input provided by the DWSRF Program regarding technical and managerial capability, the PFA will make recommendations to the DWSRF Program concerning financial capability. The final decision regarding overall capacity will be made by the DWSRF Program.

As required by the SDWA, DWSRF assistance will be denied to applicants that are in significant noncompliance if it is determined that the project will not ensure compliance. Likewise, DWSRF assistance will be denied to applicants that lack capacity if they are unwilling or unable to undertake feasible and appropriate changes to ensure capacity over the long term. The lack of capacity at the time of loan application will not preclude DWSRF assistance if the project will ensure compliance, or the applicant agrees to implement changes that will rectify capacity problems. On a case-by-case basis, special conditions may be included in loan agreements to rectify compliance and/or capacity problems. As needed and appropriate, the NDDH will utilize other specific legal authorities as control points to ensure capacity. This includes the review and approval of plans and specifications. Under North Dakota Century Code Chapter 61-28.1 and North Dakota Administrative Code Chapters 33-03-08 and 33-18-01, the NDDH is both empowered and required to review and approve plans and specifications for all new or modified drinking water facilities prior to construction.

D. Set-Aside and Fee Activities

Background

Under the SDWA, states are required to set aside a certain percentage of their available DWSRF loan funds to provide financial assistance to small systems. States at their option may also set aside a portion of their federal DWSRF allotment for certain other project and nonproject activities, and assess fees on loans to help support administration costs. A description of the different set-asides and past/proposed activities related to both set-asides and fees follows.

Mandatory Small System Project Set-Aside

States must annually use at least 15 percent of all funds credited to the DWSRF loan fund to provide loan assistance to PWSs that serve fewer than 10,000 people to the extent that there are a sufficient number of eligible projects to fund. States that exceed the 15 percent requirement in any one year are permitted to bank the excess toward future years.

One hundred fifty two (152) loans totaling \$288,631,302 have been approved to date. One hundred twenty nine (129) of these loans (totaling \$142,655,362 or 49 percent of loan total) represent PWSs that serve fewer than 10,000 people. The NDDH envisions that additional loans will be made to small PWSs based on the comprehensive project list and fundable list (See Attachment 2).

Mandatory Additional Subsidization Set-Aside

Continuing in the 2011 DWSRF capitalization grant is the requirement that at least 30 percent of assistance provided be in the form of additional subsidies. The DWSRF program will provide these additional subsidies as loan forgiveness. The NDDH has the authority under state law, N.D.C.C. Chapter 61-28.1, to provide financial assistance through the DWSRF as authorized by federal law and the USEPA.

It is unknown at time if this requirement will apply to the FY2012 allotment. If this is required for FY2012 funds, the project priority list will be updated at that time to meet this requirement.

Criteria for determining the amount of loan forgiveness is on a project specific basis. Loan forgiveness will be based on the relative future water cost index (RFWCI). The RFWCI is defined as the ratio of expected average annual residential user charge for water service resulting from the project, including costs recovered through special assessments, to the local annual median household income (based on 2000 census data).

Projects with a RFWCI of 2.0 percent or greater will qualify for 60 percent loan forgiveness. Projects with a RFWCI of 1.5 percent to 1.9 percent will qualify for 30

percent loan forgiveness. Projects with a RFWCI less than 1.5 percent will not qualify for any loan forgiveness. Projects that do not qualify for loan forgiveness still qualify for a traditional DWSRF loan. The loan forgiveness cap for any one project is \$1.0 million.

Timely progression of additional subsidization projects is required. To ensure this, there will be an application deadline and a binding commitment deadline. If projects identified as receiving additional subsidization do not meet these deadlines the additional subsidization set-aside will be used to fund lower rank projects on the project priority list.

The attached Fundable Project Priority List shows that at least 30 percent (\$2,825,400) of the available federal FY2011 allotment for projects is provided through loan forgiveness. Any subsequent revision to this Fundable Project Priority list will likewise show that at least 30 percent of the available FY2011 allotment for projects will be provided with loan forgiveness. The project priority list will be updated if this is also a requirement of the FY2012 allotment.

Mandatory Green Project Reserve (GPR) Set-Aside

Continuing in the FY2011 DWSRF capitalization grant is the requirement that, to the extent there are sufficient eligible project applications, not less than 20 percent of the funds provided for projects be used for water efficiency, energy efficiency, green infrastructure, or other environmentally innovative activities. Where it is not clear that a project or component qualifies to be included as counting towards the 20 percent requirement, the files for such projects will contain documentation of the business case on which the project was judged to qualify, as described in the 2011 DWSRF capitalization grant requirements. Projects on the PPL meeting one or more objectives are designated as GPR.

The Fundable List has sufficient projects with qualifying components. Five projects listed on the attached Fundable List appear to contain components qualifying as green infrastructure projects for purposes of this requirement, based upon USEPA guidance. These projects and project components that qualify towards the green project reserve total \$4.2 million. The 20 percent requirement of the FY2011 allotment is \$1,883,600. The DWSRF program has met this requirement. Eligibility of these components will be verified prior to award of financial assistance.

It is unknown at time if this requirement will apply to the FY2012 allotment. If this is required for FY2012 funds, the project priority list will be updated at that time to meet this requirement.

Optional Project Set-Asides

States may provide additional loan subsidies (i.e., reduced interest or negative interest rate loans, principal forgiveness) to benefit communities meeting the definition of "disadvantaged" or which the state expects to become disadvantaged as the result of the project. A disadvantaged community is one in which the entire service area of a

PWS meets affordability criteria established by the state following public review and comment. The value of the subsidies cannot exceed 30 percent of the amount of the federal capitalization grant for any fiscal year. The EPA is required to provide guidance to assist states in developing affordability criteria.

The NDDH has not developed a disadvantaged community program, and is not proposing to do so in this IUP. This decision is based primarily upon majority opinions obtained during initial development of the DWSRF Program, and the NDDH's desire to maximize the long-term availability of funds for construction purposes.

Optional Nonproject Set-Asides

States may use a portion of their federal DWSRF allotment (up to specified ceilings) for the following nonproject set-aside activities:

- DWSRF Administration - up to 4 percent
- State Program Administration - up to 10 percent
 - Public Water Supply Supervision (PWSS) Program, source water protection program(s), capacity development program, and operator certification program
- Small System Technical Assistance (serving 10,000 or fewer people) - up to 2 percent
- Local Assistance and Other State Programs - up to 10 percent for any one activity with a maximum of 15 percent for all activities combined
 - Loans to PWSs to acquire land or conservation easements for source water protection programs
 - Loans to community water systems to implement source water protection measures, or to implement recommendations in source water petitions
 - Assist PWSs in capacity development
 - Assist states in developing/implementing an EPA-approved wellhead protection program

States may transfer funds among the nonproject set-aside categories, or between the loan fund and such set-aside categories, provided that the statutory set-aside ceilings are not exceeded. Nonproject set-aside funds may be transferred at any time to the loan fund. However, loan commitments must be made for the transferred funds within one year of the transfer if payments have already been taken for the set-aside funds. Monies intended for the loan fund may be transferred to nonproject set-asides only if no payments have yet been taken for the monies to be transferred. Otherwise, funds in or transferred to the loan fund must remain in the loan fund. Transfers may be done only if described in an IUP and approved by the EPA as part of a capitalization grant agreement or amendment.

Nonproject Set-Aside and Fee Activity

Attachment 4 depicts nonproject set-aside and fee activity through 2011. The FY 2011 federal DWSRF allotment for North Dakota is \$9,418,000 and FY2012 is assumed to be \$8,000,000. The NDDH intends to set aside \$1,480,080 (\$825,080 from FY2011 and \$655,000 from FY2012) of the allotment for non-project activities. The state program administration (PWSS Program) set-aside is \$535,000 (\$260,000 from FY2011 and \$275,000 from FY2012). The 2 percent set-aside is for small system technical assistance is \$248,360 (\$188,360 from FY2011 and \$60,000 from FY2012). The 4 percent set-aside is for DWSRF administration is \$696,720 (\$376,720 from FY2011 and \$320,000 from FY2012). The 4 percent set-aside will be held for ongoing and future DWSRF program administration. The 10 percent set-aside will also be held for ongoing and future PWSS administration. The 2 percent set-aside will be held for ongoing and future small system technical assistance. Should the FY2012 capitalization grant be different from \$8,000,000, the set-aside for DWSRF program administration will be adjusted to 4 percent of the actual capitalization grant awarded.

The NDDH has limited and will continue to limit the usage of set-asides to maximize funds available for construction. Set-aside usage has been restricted to that necessary to administer the program (4 percent set-aside), provide technical assistance to small PWSs (2 percent set-aside), to provide state program administration (10 percent set-aside), and to complete source water assessments mandated under the SDWA (15 percent set-aside).

The 4 percent set-aside is inadequate to cover the cost of administering the DWSRF Program. Also, Congress will choose at some point to no longer capitalize the program, at which time no new funds will be available for program administration. Based on these considerations, the NDDH considers it both prudent and necessary to set-aside and hold the full 4 percent from each grant, and to hold accumulated loan administration fees to enable ongoing and future administration of the program.

Funds from the 2 percent set-aside have been used to assist small PWSs in capacity development, financial capacity, operator certification, managerial capacity and source water protection. Funds from this set-aside will continue to be used for these purposes and for new initiatives such as assisting communities determining compliance with the new disinfection byproduct rules. The NDDH closely monitors demand and need for this set-aside to avert over-accumulation of funds.

The 10 percent state program administration set-aside will be used to help fund administration of the PWSS program in pursuit of its mission. This set-aside requires 1:1 match by the state. One of the sources of funds for this 1:1 match is the 0.5 percent loan administration fee. Another source of funding for the 1:1 match is credit for state match funds spent in 1993 on administration of the PWSS program. This credit is good for up to half of the 1:1 match with a maximum credit of \$167,240 per year. This match credit does not represent spendable funds.

Under the SDWA, states are permitted to assess fees on loans to support DWSRF administration costs. North Dakota DWSRF loan recipients are required to pay an annual loan administration fee presently set at 0.5 percent of the outstanding loan principal balance. This loan administration fee is payable semiannually on each loan payment date. The fees are held under the master trust indenture and are available to pay DWSRF program administration costs allowable under the SDWA. To enable continued management of the DWSRF once it is no longer annually capitalized through federal grants, loan administration fees will be held and used for loan-bond servicing and DWSRF Program administration as allowed under the SDWA. Also, starting in 2008 the loan administration fees are used as a source of 1:1 match that is required when using the state program administration set-aside to administer the PWSS program.

E. Financial Status

Background

States are required to provide a description of the financial status of their DWSRF Program. The information presented below describes the financial structure of the North Dakota DWSRF, the method used to generate the required state match, transfers between SRF's (State Revolving Loan Funds), the basis for approving loans, loan assistance terms including a discussion concerning market interest rates in North Dakota, sources and intended use of funds, and special considerations for State and Tribal Assistance Grants.

Financial Structure

Bonds for the 20 percent state match are issued by the PFA under a master trust indenture adopted by the Industrial Commission of North Dakota. The PFA may also issue leveraged bonds under the master trust indenture, the proceeds of which can be used to fund loans.

The current demand for DWSRF loan assistance in North Dakota exceeds authorized federal DWSRF allotments and the required state match for those allotments. Under the financial structure initially established for the DWSRF, excess leveraging and higher loan interest rates would be needed to satisfy this excess demand.

A modified financial structure within the existing master trust indenture has been implemented to better satisfy the continuing high demand for DWSRF financial assistance, yet avert excessive leveraging and higher loan interest rates. Under the modified structure, DWSRF allotments and state match bond proceeds will be used first to fund loans. Leveraged bonds will be issued only if loan demand exceeds the amount of DWSRF allotments and state match available for loans or if deemed in the best interest of the program. If leveraged bonds are issued, they will be sized, together with DWSRF allotments and state match, to satisfy current cash flow needs as represented by the projected annual construction costs of eligible projects. This funding approach will expedite loan assistance to more projects that are ready to proceed to construction,

avert premature or unnecessary bond issuances, and ensure a more reliable loan repayment stream to satisfy both bond debt service requirements and future loan demand. It is the intent of the NDDH to issue bonds in FY 2012, if needed, to meet high loan demand.

The master trust indenture for the DWSRF provides that, in the event there are insufficient amounts available to make scheduled principal and interest payments on outstanding DWSRF bonds when payments are due, the trustee may transfer available excess revenues from the Clean Water State Revolving Fund (CWSRF) to the DWSRF bond fund to meet the deficiency. Following such a transfer, the DWSRF has an obligation to reimburse the CWSRF with future available DWSRF excess revenues.

State 20 Percent Match Requirement

Under the SDWA, states are required to match their DWSRF allotment at an amount at least equal to 20 percent. North Dakota has issued state match bonds to satisfy the FY 1997 through 2017 match requirements.

Anticipated Proportionality Ratio

Bonds were sold in late 2011 to provide the required 20 percent state match for 2012 through 2017. Payments will be made using 100 percent state match funds until all of the match funds are disbursed. The program will be in an over-matched condition at that time. The disbursement of 100 percent federal or leveraged funds will start once the state match funds are disbursed.

Transfer of Funds Between DWSRF and CWSRF

At the governor's discretion, a state may transfer up to 33 percent of its DWSRF capitalization grant to the CWSRF or an equal amount from the CWSRF to the DWSRF. Transfers could not occur until at least one year after receipt of the first capitalization grant, which was August 24, 1998. This transfer authority was effective through fiscal year 2001. One-year extensions of this transfer authority were granted through the Veterans Administration, Housing and Urban Development, and Independent Agencies Appropriation Bill for fiscal years 2002 - 2005. This provision was made permanent in the FY06 appropriation bill. In addition to transferring grant funds, states can also transfer state match, investment earnings, or principal and interest repayments between SRF programs. These types of transfers were authorized by the Governor in 2002 and 2004. A combined total of \$14.0 million was transferred from the CWSRF to the DWSRF and \$10.0 million was transferred back from the DWSRF to the CWSRF.

Due to strong drinking water project demand, NDDH received authorization to transfer up to an additional \$20.0 million from its CWSRF to its DWSRF in 2007. These funds will be transferred to the DWSRF program on an as needed basis. A total of \$8,577,672 of this \$20.0 million authorization has been transferred into the DWSRF program as of December 31, 2010. The source of CWSRF funds to be transferred will be unrestricted

Table 1 - Amounts Available to Transfer between State Revolving Fund Programs (\$ millions)

Year	Transaction Description	Banked Transfer Ceiling	Transferred from DWSRF to CWSRF	Transferred from CWSRF to DWSRF	DWSRF Funds Available for Transfer	CWSRF Funds Available for Transfer
1998	DW Grant	\$4.1	---	---	\$4.1	\$4.1
1998	DW Grant	6.5	---	---	6.5	6.5
2000	DW Grant	9.0	---	---	9.0	9.0
2000	DW Grant	11.5	---	---	11.5	11.5
2001	DW Grant	14.1	---	---	14.1	14.1
2002	DW Grant	16.7	---	---	16.7	16.7
2002	Transfer		10.0	3.0	9.7	23.7
2003	DW Grant	19.4	---	---	12.4	26.4
2003	Transfer		-0-	5.9	18.3	20.5
2004	DW Grant	22.1	---	---	21.0	23.2
2004	Transfer		-0-	2.6	23.6	20.6
2005	DW Grant	24.8	---	---	26.3	23.3
2005	Transfer		0	.1	26.4	23.2
2006	DW Grant	27.5	---	---	29.1	25.9
2006	Transfer		0	1.5	30.6	24.4
2007	DW Grant	30.3	---	---	33.4	27.2
2007	Transfer		0	4.9	38.3	22.3
2008	DW Grant	33.0	---	---	41.0	25.0
2008	Transfer		0	3.0	44.0	22.0
2009	DW Grant	35.7	---	---	46.7	24.7
2009	Transfer		0	0.7	47.7	24.0
2010	DW Grant	40.1	---	---	52.1	28.8
2010	Transfer		0	0.8	52.9	28.0
2011	DW Grant	43.2	---	---	55.2	31.1
2011	Transfer		0	0.0	55.2	31.1
2012	DW Grant	45.8	---	---	57.8	33.7
2012	Transfer		0	0.1	57.9	33.6

cumulative excess, restricted cumulative excess, FCLA, and grant funds. Since prior transfers have occurred between the two SRFs, NDDH will transfer funds on a net basis, as described by the table below. With this transfer, the DWSRF Program will be able to fund additional drinking water projects during 2012. Transferring funds will not impact DWSRF set-aside funding. The long-term impact to the DWSRF with a \$20.0 million transfer from the CWSRF authorized in 2007 is estimated to be an average revolving level increase of \$2 million/year (from \$19 million/year to \$21 million/year) over the next 20 years. Table 1 itemizes the amount of funds transferred to and from the DWSRF program, and the planned transfer for 2012 shown in **bold**.

Funding Process

Projects may be submitted to the NDDH each year for consideration and inclusion into an IUP. A new IUP is developed for public review and comment in the fall of each year.

New and eligible projects for which ranking questionnaires are submitted are evaluated, ranked (if possible), and included on the comprehensive project priority list. Requests for reranking of already-listed and ranked projects are evaluated on a case-by case basis, and may require the completion of an updated ranking questionnaire.

Loan approvals are based on project ranking, readiness to proceed, and availability of funds based on cash flow considerations including projected disbursements under already approved and potential new loans. The NDDH is prepared to issue leveraged bonds if the loan demand exceeds the amount of available DWSRF allotments and state match or if it is in the best interest of the program.

Loan Assistance Terms

The maximum repayment period for DWSRF loans under the SDWA is 20 years following project completion. The NDDH may utilize shorter repayment periods on a project-by-project basis. Candidate projects include low-cost projects for which minimal water rate increases will be required to retire the loan debt. The present loan interest rate is 2.5 percent for PWSs that qualify for tax-exempt financing, and 4 percent for those that do not qualify for tax-exempt financing, with the exception of projects that use leveraged bond proceeds. Leveraged bonds will be discussed later in this section. As discussed under Section D, an annual loan fee of 0.5 percent is assessed on all loans to support DWSRF administration.

The SDWA requires that the interest rate for a loan be less than or equal to the market interest rate. The NDDH will monitor compliance with this requirement by establishing as the market interest rate the average interest rate received by the North Dakota political subdivisions on bond issues with twenty-year maturity sold on a competitive or negotiated basis during the prior quarter. This rate will be calculated and updated quarterly based upon the prior quarter bond sales. If there are no qualified bond sales, the market rate for that quarter will be calculated using comparable regional bond issues. Based upon fourth quarter 2010 North Dakota twenty-year competitive bond sales, the current market interest rate is 3.94 percent

Leveraging the fund is appropriate where financing needs significantly exceed available funds; however, it impacts the DWSRF by reducing the interest rate subsidy provided or reducing future loan capacity. By continuing to leverage, the program will be able to assist more communities currently on the priority list and help those communities achieve or remain in compliance with the SDWA. Loans necessitating leveraging will be subject to a loan interest rate (including the 0.5 percent administration fee) of 75 percent of the current market interest rate. The interest rate on these loans will be more than regular DWSRF interest rate, which currently is 3.0 percent (which includes the 0.5 percent administration fee).

Sources and Uses of Funds

Attachment 5 depicts a detailed breakdown of sources and uses of funds from FY1997 through FY2012. Sources of funds include \$53,386,832 in funds available from prior years. An additional \$16,037,920 of funds are anticipated to become available in 2012. Thus \$61,988,496 of funds are available for projects. All of the funds are allocated to projects as shown in the Comprehensive Project Priority List and Fundable List (Attachment 2).

State and Tribal Assistance Grants

State and Tribal Assistance Grants (STAG grants) are grants that pass through EPA and go straight to drinking water systems. These grants are for 55 percent of the project. The system must provide the remaining 45 percent of the project as a local match. To avoid the higher cost of issuing municipal bonds, most systems wish to utilize DWSRF loan funds to satisfy the match requirement for these grants. By EPA policy, only non-federal DWSRF funds may be used toward the match. Non-federal funds are limited to loan repayments, earnings, bond proceeds in excess of the capitalization grants, and other state contributions in excess of the required 20 percent state match. Initially the North Dakota DWSRF had insufficient non-federal funds to satisfy match requirements for these grants. Consequently, the NDDH in the past has transferred \$14.0 million from the CWSRF to the DWSRF to acquire sufficient non-federal funds to assist systems in this matter. The DWSRF has transferred back \$10 million in federal funds to the CWSRF.

Grafton, South East Water Users District, Washburn, BDW, Valley City, and Stutsman Rural Water have received STAG grants and must provide a 45 percent local match. Systems in North Dakota have received a combined \$28.7 million in STAG grants since 1999 and must provide a combined \$20.6 million in matching funds. The NDDH will fund loans to these and other systems that are awarded STAG grants as long as the program has non-federal funds available. Should the program not have non-federal funds to make loans, loans will be made in future years as these funds become available.

F. Short- and Long-Term Goals

Background

The 1996 SDWA Amendments authorize a DWSRF Program to assist PWSs finance the costs of infrastructure needed to achieve or maintain compliance with SDWA requirements and to protect public health. The objectives of the NDDH's DWSRF Program include addressing public problems and priorities, ensuring compliance with the SDWA, assisting systems to ensure affordable drinking water, and maintaining the long-term viability of the fund. To address these objectives, the DWSRF Program will help ensure that North Dakota's public water supplies remain safe and affordable through prioritized financial assistance, enhanced source water protection activities, and increased technical assistance to small systems. The short- and long-term goals set forth below are established to accomplish these objectives.

Short-Term Goals

1. On December 9, obtain North Dakota State Water Commission approval of this IUP.
2. Continue to implement the DWSRF program for the state of North Dakota by funding projects for systems that are having problems maintaining compliance with the ground water treatment rule, the arsenic rule, the disinfection byproduct rule series and the surface water treatment rule series.

Long-Term Goals

1. Help North Dakota PWSs achieve and maintain compliance with the SDWA. This is accomplished by coordinating with the PWSS Program and targeting those rules that systems in the state are having problems maintaining in compliance. These include ground water treatment rule, arsenic, disinfection byproduct rule series and the surface water treatment rule series.
2. Assist the PWSS Program meet their goals. The DWSRF program assistance includes providing technical support on infrastructure issues, capacity reviews and small system technical assistance. Through the small system technical assistance set-aside the DWSRF Program helps operators become certified, systems return to compliance, ensure wellhead protection plans are updated and systems maintain capacity.
3. Administer the DWSRF Program in a manner that will maximize the long-term availability of funds for eligible and needed drinking water infrastructure improvements.
4. Assist North Dakota PWSs in improving drinking water quality, quantity, and dependability by providing reduced interest rate, long-term financial assistance for eligible and needed drinking water infrastructure improvements. This infrastructure

assistance helps with compliance of drinking water rules, regionalization/consolidation and replacement of aging infrastructure.

5. Continue to integrate to the maximum extent possible DWSRF funding with other available funding to maximize the benefits to public water systems and needed drinking water projects statewide. The cooperating agencies include the United States Department of Agriculture, Community Development Block Grant Program, and the North Dakota State Water Commission.

Environmental Results

3. Loan Fund

- a. Through 9/30/11, the fund utilization rate, as measured by the ratio of executed loans to funds available for projects, was 83 percent, which is below the national average of 90 percent. For 2012, the goal of the DWSRF program is to return the fund utilization rate to 90 percent or above.
- b. Through 9/30/11, the rate at which projects progressed as measured by disbursements as a percentage of assistance provided was 84 percent. This is above the national average of 80 percent. The FY 2012 goal is to maintain to this construction pace.
- c. The DWSRF program funded 8 projects, including 3 loan increases, in 2011 totaling \$5.8 million and serving a population of 8,291. All of these loans went to systems that serve less than 3,300 people. For 2012, the goal of the DWSRF program is to fund 10 loans, totaling \$45 million and serving a population of 50,000.

4. Set asides, Small System Technical Assistance

- a. In 2011, 120 systems received training. For 2012, the goal is 120.
- b. In 2011, 120 systems received on-site technical assistance. The goal for 2012 is 85.

G. Public Participation

Background

States are required to make their annual IUP available to the public for review and comment prior to submitting it to the EPA as part of its capitalization grant application. States are also required to describe the public review process used and how it responded to major comments and concerns that were received.

Process

The public was invited to comment on the draft 2012 IUP at a public hearing held in Bismarck on November 18, 2011 and comments will be received until November 25, 2011. No comments were received at the November 18th, 2011 meeting. A written comment was received from Moore Engineering and the City of Hankinson that the two

projects the city has on the priority list be combined into one project. This update was completed as requested.

An error was discovered on the draft IUP in the Sources and Uses Table (Attachment #5). This change resulted in seven projects being dropped from the draft fundable list. The project ranking and water system dropped from the fundable list because of this change are; #22 SEWUD, #23 CPWD, #25 Lakota, #26 Medora, #28 Granville, #29 Max, and #30 Linton. This leaves 18 ranked projects on the fundable list. The DWSRF believes that not all of the 18 ranked projects will proceed and therefore will fund any project on the priority list (including any of the 7 projects dropped from the fundable list) that is ready to proceed.

ATTACHMENT 1

ELIGIBLE AND INELIGIBLE PROJECTS AND PROJECT-RELATED COSTS UNDER THE DRINKING WATER STATE REVOLVING LOAN FUND (DWSRF) PROGRAM

EXAMPLES OF ELIGIBLE PROJECTS AND PROJECT-RELATED COSTS

- ▶ Projects that address present Safe Drinking Water Act (SDWA) exceedances
 - ▶ Projects that prevent future SDWA exceedances (applies only to regulations in effect)
 - ▶ Projects to replace aging infrastructure
 - rehabilitate or develop drinking water sources (excluding reservoirs, dams, dam rehabilitation and water rights) to replace contaminated sources
 - install or upgrade drinking water treatment facilities if the project would improve the quality of drinking water to comply with primary or secondary SDWA standards
 - install or upgrade storage facilities, including finished water reservoirs, to prevent microbiological contaminants from entering the water system
 - install or replace transmission and distribution piping to prevent contamination caused by leaks or breaks, or to improve water pressure to safe levels
 - ▶ Projects to restructure and consolidate water supplies to rectify a contamination problem, or to assist systems unable to maintain SDWA compliance for financial or managerial reasons (assistance must ensure compliance)
 - ▶ Projects that purchase a portion of another system's capacity, if such purchase will cost-effectively rectify a SDWA compliance problem
 - ▶ Land acquisition
 - land must be integral to the project (i.e., needed to meet or maintain compliance and further public health protection such as land needed to locate eligible treatment or distribution facilities)
 - acquisition must be from a willing seller
- Note: The cost of complying with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act) is an eligible cost.
- ▶ Planning (including required environmental assessment reports) , design, and construction inspection costs associated with eligible projects

EXAMPLES OF INELIGIBLE PROJECTS AND PROJECT-RELATED COSTS

- ▶ Dams, or rehabilitation of dams
- ▶ Water rights, except if the water rights are owned by a system that is being purchased through consolidation as part of a capacity development strategy
- ▶ Reservoirs, except for finished water reservoirs and those reservoirs that are part of the treatment process and are located on the property where the treatment facility is located
- ▶ Drinking water monitoring costs
- ▶ Operation and maintenance costs
- ▶ Projects needed mainly for fire protection
- ▶ Projects for systems that lack adequate technical, managerial and financial capability, unless assistance will ensure compliance Projects for systems in significant noncompliance under the SDWA, unless funding will ensure compliance
- ▶ Projects primarily intended to serve future growth

Attachment 2
 State of North Dakota
 Drinking Water State Revolving Loan Fund Program
 Comprehensive Project Priority List and Fundable List for 2012

Shaded projects are on the fundable List

Priority Ranking	Priority Points	Project No.	System Name	Present Population	Project Description	Construction Start Date	Cost (\$1000)		Green Project		Eng
							Project	Cumulative	Type	Cost(\$1000)	
1	44	3100838-01	Ross*	250	Connect to R&TWSA, water tower replacement, watermain replacement, smart meters and misc appurtenances	2012	2,532	2,532	Cat, wtr effcy	374	KLJ
2	36	0700198-02	Columbus*	125	Watermain replacement, smart meters, storage reservoir	2012	1,585	4,117	Cat, wtr effcy	176	KLJ
3	32	0901530-01	Leonard	255	Consolidation of existing uses to regional water system (arsenic)	2013	3,400	7,517			Moore
4	31	3901068-10	SEWUD**	2,188	Pump station upgrades, new water reservoir, and system interconnections (arsenic)	2012	1,500	9,017			AE2S
5	27	0501001-01	Westhope	533	Water tower replacement	2012	850	9,867			Estvold
6	27	2600556-01	Lehr	114	Well and watermain replacement	2012	300	10,167	B/C, wtr effcy	230	Moore
7	28	1200211	Crosby	1,070	New water tower	2012	2,000	12,167			
8	25	5300809-03	Ray	750	WTP expansion	2012	16,000	28,167	B/C, wtr nrg effcy	230	AE2S
9	22	1000543-04	Langdon	4,300	Intake structure and raw water transmission line improvements	2013	3,052	31,219			AE2S
10	21	4100428-01	Gwinner	717	FE/MN removal equipment, membrane treatment and WTP renovation	2012	1,181	32,400			Interstate
11	21	3201072-01	TCWD	2,475	WTP rehabilitation and expansion	2013	1,040	33,440			B & W
12	20	4701303-04	SRWD	3,048	Reservoir, booster station, watermain and WTP expansion & improvements	2012	16,600	50,040			B & W
13	20	2700990-03	Watford City	1,744	Connect to rural water, looping & new pressure zone	2012	1,280	51,300			AE2S
14	20	1900162-01	Carson	320	Watermain replacement	2012	3,182	54,482	B/C, wtr effcy	3,182	Interstate
15	20	4700922-01	Streeter	170	Watermain replacement	2012	1,000	55,482			Interstate
16	20	2500956-01	Upham	155	Water tower rehabilitation	2012	101	55,583			KLJ
17	19	0900217-01	Davenport	261	New transmission main, increased storage and control replacement	2012	399	55,982			Interstate
18	19	4900482-04	Hillsboro	1,563	New water source, WTP, storage, transmission main and rural water connection	2012	12,272	68,254			AE2S
19	19	4800152-01	Cando	1,450	Replacement well and interconnection to raw water transmission; WTP modifications-air stripping	2012	443	68,697			Interstate
20	19	2300535-02	Kulm	422	Water tower replacement	2012	670	69,367			Moore
21	19	3700876-01	Sheldon	120	Pump and control replacement	2012	157	69,524			Moore
22	18	3901068-11	SEWUD	2,188	Compliance with Stage 2 (DBP rule). Disinfection and storage modifications	2012	1,500	71,024			AE2S
23	18	5201309-03	CPWD	2,607	Booster station improvements and back up generation	2012	1,270	72,294			Interstate
24	18	5101189-02	NPRWD	2,327	Water storage rehabilitation	2013	1,820	74,114			Interstate
25	18	3200536-02	Lakota	781	WTP renovation and new water tower	2012	2,035	76,149			B & W
26	17	0400638-02	Medora	112	Water reservoir replacement	2012	600	76,749			
27	17	5200338-01	Fessenden	479	Watermain and pumphouse replacement	2014	1,240	77,989			Moore
28	17	2500415-01	Granville	286	Water tower rehabilitation	2012	200	78,189			Estvold
29	17	2800619-01	Max	278	Water tower rehabilitation, water meter replacement and misc appurtenance	2012	279	78,468			Estvold

Priority Ranking	Priority Points	Project No.	System Name	Present Population	Project Description	Construction Start Date	Cost (\$1000)		Green Project		Eng
							Project	Cumulative	Type	Cost(\$1000)	
30	17	1500571-03	Linton	1,321	Watermain replacement	2012	2,659	81,127			Interstate
31	17	3100898-01	Stanley	1,796	Reservoir, transmission main and watermain	2012	2,300	83,427			ATEC
32	17	5000773-04	Park River	1,535	Water tower replacement	2013	1,188	84,615			AE2S
33	16	2900074-01	Beulah	3,500	WTP improvements and water storage	2012	1,096	85,711			Interstate
34	16	0900999-02	West Fargo	24,000	New SW/GW WTP	2013	51,150	136,861			Moore
35	16	0201058-03	BRWD	4,020	WTP rehabilitation and expansion	2016	4,000	140,861			Interstate
36	16	1801062-03	GF-Traill WD	5,413	Water system expansion	2012	5,658	146,519			AE2S
37	16	3900703-01	Mooreton	204	Replace gate valves and add bladder tank	2012	148	146,667			Interstate
38	16	0900387-01	Gardner	80	Watermain replacement and looping	2012	310	146,977			Moore
39	16	2000203-05	Cooperstown	984	Reservoir replacement	2012	600	147,577			Moore
40	16	3800877-02	Sherwood	255	Water tower rehabilitation	2012	198	147,775			Estvold
41	15	0900134-02	Buffalo	225	Replace existing watermains, gate valves and hydrants	2012	1,115	148,890			Moore
42	15	0200763-01	Oriska	128	Pump house and reservoir replacement	2012	515	149,405			Moore
43	14	3900183-02	Christine	153	Watermain replacement and looping	2012	515	149,920			Moore
44	14	0900524-01	Kindred	641	Water tower and watermain replacement	2013	1,000	150,920			Moore
45	14	3000596-07	Mandan	23,827	WTP optimization, high service pump upgrade, and admin office improvements	2015	7,708	158,628			AE2S
46	14	1600159-02	Carrington	2,600	Watermain replacement	2014	3,016	161,644			Interstate
47	14	2901054-01	Zap	231	Water storage rehabilitation	2012	117	161,761			Interstate
48	14	2900402-01	Golden Valley	183	Water storage rehabilitation	2012	97	161,858			Interstate
49	14	3900567-01	Lidgerwood	652	Transmission main replacement	2013	505	162,363			Moore
50	14	0201032-02	Wimbledon	216	Water tower replacement	2012	745	163,108			Interstate
51	14	2601055-01	Zeeland	141	Watermain replacement	2012	1,200	164,308			Toman
52	14	0900769-03	Page	225	Water tower rehabilitation	2012	415	164,723			Moore
53	13	5000408-03	Grafton	5,116	Filtration, backwash recycle, and misc WTP improvements	2013	6,039	170,762			AE2S
54	13	5000408-05	Grafton	5,116	Pretreatment and advanced oxidation WTP improvements	2016	7,750	178,512			AE2S
55	13	3700574-08	Lisbon	2,292	Upgrade to well #1	2012	130	178,642			Moore
56	16	3900443-03	Hankinson	919	Watermain looping	2012	535	179,177			Moore
57	13	2000446-02	Hannaford	181	Water tower replacement	2013	600	179,777			Moore
58	13	1100758-05	Oakes	1,979	WTP expansion	2012	1,500	181,277			Moore
59	13	1100758-04	Oakes	1,979	Water tower replacement	2013	1,000	182,277			Moore
60	13	1100758-03	Oakes	1,979	Watermain replacement	2013	3,000	185,277			Moore
61	13	3700314-06	Enderlin	1,082	New lime softening WTP & storage	2012	7,600	192,877			Moore
62	12	3900333-03	Fairmount	406	Water tower replacement	2013	775	193,652			Moore
63	12	5300936-03	Tioga	1,300	Reservoir, transmission main and watermain replacement	2012	7,500	201,152			ATEC
64	12	0900999-01	West Fargo	24,000	Transmission main from new WTP	2013	27,500	228,652			Moore
65	12	5200458-04	Harvey	1,783	Water reservoir replacement	2013	1,000	229,652			Moore
66	12	2801400-02	McLean-SRWD	1,199	Water system expansion	2012	2,260	231,912			AE2S
67	12	3401128-03	NVWD	7,837	Transmission main capacity improvements and meter replacement	2012	2,119	234,031			AE2S
68	12	2000203-06	Cooperstown	984	Well relocation	2012	300	234,331			Moore
69	12	1100758-06	Oakes	1,979	Well and well house replacement	2012	350	234,681			Moore
70	12	4600487-02	Hope	304	Service to west side of railroad tracks	2013	155	234,836			Moore
71	11	0800080-02	Bismarck	71,600	West End Reservoirs expansion for SWTR and DBP rule compliance & clearwell expansion	2014	11,253	246,089			AE2S
72	11	1000768-01	Osnabrock	160	Watermain rehabilitation	2013	200	246,289			
73	11	0900030-03	Argusville	300	Watermain replacement and looping	2014	860	247,149			Moore
74	11	3900196-01	Colfax	121	Watermain replacement, looping, and new watermain	2013	360	247,509			Moore

Priority Ranking	Priority Points	Project No.	System Name	Present Population	Project Description	Construction Start Date	Cost (\$1000)		Green Project		Eng
							Project	Cumulative	Type	Cost(\$1000)	
75	11	3900973-05	Wahpeton	8,600	Well upgrades, new well and raw water transmission main	2013	1,062	248,571			Interstate
76	11	5001075-03	Walsh RWD	2,800	Reservoir expansion	2012	1,368	249,939			AE2S
77	11	4900465-01	Hatton	707	Water tower replacement	2012	670	250,609			Moore
78	11	4900803-01	Portland	550	Water tower replacement	2012	670	251,279			Moore
79	11	5201309-02	CPWD	2,607	Meter replacement	2012	200	251,479			Interstate
80	11	3601424-02	GRWD	3,508	Water system expansion	2013	4,000	255,479			B & W
81	11	1000543-03	Langdon	4,300	Rehabilitation of existing 0.25MG water towers	2013	400	255,879			AE2S
82	11	1000543-02	Langdon	4,300	Water main replacement	2012	646	256,525			AE2S
83	11	5101189-03	NPRWD	2,327	Distribution, storage & pumping improvements	2012	1,600	258,125			Interstate
84	11	1100758-07	Oakes	1,979	Water tower rehabilitation 0.25MG	2013	250	258,375			Moore
85	11	3800877-01	Sherwood	255	Install operating controls for NAWS	2012	50	258,425			Estvold
86	11	0501057-03	ASWUD	754	Water system expansion	2013	27,919	286,344			B & W
87	11	3900567-02	Lidgerwood	652	Water reservoir demolition	2012	60	286,404			Moore
88	10	3400269-02	Drayton	913	Replace clearwell, replace chemical feed and rehab water tower	2013	1,453	287,857			AE2S
89	10	3000596-06	Mandan	23,827	Mandan water transmission line replacement	2012	5,080	292,937			AE2S
90	10	2900789-03	Pick City	166	Replace undersized watermains, eliminate dead ends, and install additional hydrants	2012	94	293,031			Interstate
91	10	4700498-06	Jamestown	16,000	Phase 3 - Transmission line	2015	3,277	296,308			Interstate
92	10	0900035-01	Arthur	402	Water tower replacement	2012	670	296,978			Moore
93	10	0801154-04	SCRWD	15,400	Distribution to Braddock, Kyntire & Wishek	2012	12,400	309,378			B & W
94	10	2800989-03	Washburn	1,345	Horizontal collector well	2016	3,015	312,393			AE2S
95	10	5101447-01	West River WD	400	Service line replacement (from water main to curb stop)	2012	399	312,792			Estvold
96	10	0900613-03	Mapleton	743	Watermain replacement	2014	1,530	314,322			Moore
97	10	0801031-01	Wilton	807	Watermain replacement	2012	3,359	317,681			Interstate
98	9	0900336-09	Fargo	105,549	Ground storage reservoir #2 and pump station	2029	13,600	331,281			AE2S
99	9	0900336-08	Fargo	105,549	Raw water intake and pump station	2023	12,500	343,781			AE2S
100	9	0900336-05	Fargo	105,549	Distribution Flow Control Improvements	2012	550	344,331			AE2S
101	9	3900973-04	Wahpeton	8,600	Watermain replacement and looping	2014	385	344,716			Interstate
102	9	0900336-06	Fargo	105,549	WTP improvements (sulfate)	2013	35,000	379,716			AE2S
103	9	3700314-07	Enderlin	1,082	Water tower replacement	2013	1,850	381,566			Moore
104	9	3700314-05	Enderlin	1,082	Watermain replacement-First loan in 2002	2012	725	382,291			Moore
105	9	3700574-10	Lisbon	2,292	Watermain replacement	2013	2,270	384,561			Moore
106	9	3700574-09	Lisbon	2,292	New well field (wells) and raw water transmission main	2013	515	385,076			Moore
107	9	4500891-01	South Heart	320	Water meter replacement	2012	100	385,176			KLJ
108	9	2700990-02	Watford City	1,435	Watermain replacement	2012	465	385,641			AE2S
109	9	0900945-01	Tower City	252	Water tower rehabilitation	2014	135	385,776			Moore
110	9	1100758-08	Oakes	1,979	New reservoir, pump station and transmission main	2012	700	386,476			Moore
111	8	0901060-04	CRW	7,750	System elevated tower	2013	3,584	390,060			B & W
112	8	3900333-02	Fairmount	406	Watermain replacement and looping	2012	620	390,680			Moore
113	8	0900336-11	Fargo	105,539	WTP expansion	2018	26,000	416,680			AE2S
114	8	0900999-04	West Fargo	24,000	Underground storage reservoir	2013	2,420	419,100			Moore
115	8	3901043-01	Wyndmere	429	Watermain looping	2013	310	419,410			Moore
116	8	5000408-04	Grafton	5,116	Park River water intake improvements	2014	750	420,160			AE2S
117	8	4700498-04	Jamestown	16,000	New water tower and transmission main	2012	3,485	423,645			Interstate
118	8	3900973-03	Wahpeton	8,600	Lime storage, slaker additions & misc WTP improvements	2012	1,129	424,774			Interstate
119	8	0900166-02	Casselton	2,044	Water tower replacement	2014	1,030	425,804			Moore
120	8	4100357-01	Forman	506	Water tower replacement	2013	725	426,529			Moore

Priority Ranking	Priority Points	Project No.	System Name	Present Population	Project Description	Construction Start Date	Cost (\$1000)		Green Project		Eng
							Project	Cumulative	Type	Cost(\$1000)	
121	8	0900492-01	Hunter	326	Watermain replacement	2012	415	426,944			Moore
122	8	3400170-01	Cavalier	1,537	Water tower rehabilitation	2012	271	427,215			AE2S
123	8	5100868-03	Sawyer	377	Transmission line replacement	2012	557	427,772			Estvold
124	7	0901060-01	CRW	7,750	Reservoir expansion, watermain upgrade and expansion (refinance)	2012	1,981	429,753			B & W
125	7	0900336-07	Fargo	105,549	Water tower level controls	2013	360	430,113			AE2S
126	7	3000596-08	Mandan	23,827	New raw water intake	2015	16,578	446,691			AE2S
127	7	4600341-02	Finley	515	Water tower replacement	2012	670	447,361			Moore
128	7	1800410-04	Grand Forks	55,158	WTP facility plan and design	2012	8,563	455,924			AE2S
129	7	2801430-02	Garrison RWD	1,227	Water system expansion (SW)	2012	956	456,880			Estvold
130	7	2801430-01	Garrison RWD	1,228	Water system expansion (NW) and watermain looping	2012	961	457,841			Estvold
131	6	0900999-03	West Fargo	24,000	Intake structure for SW	2013	3,784	461,625			Moore
132	6	4700498-05	Jamestown	16,000	Water meter replacement	2014	1,241	462,866			Interstate
133	6	3700314-04	Enderlin	1,082	New wells & transmission line	2012	1,550	464,416			Moore
134	6	2801430-03	Garrison RWD	1,229	New reservoir and pump station	2012	1,841	466,257			Estvold
135	6	2700990-04	Watford City	1,744	Highway 85 area extension	2012	807	467,064			AE2S
136	5	0600119-01	Bowman	1,600	Watermain replacement	2012	530	467,594			AE2S
137	5	1800410-03	Grand Forks	55,158	Water distribution improvements-24th Ave. S. (S. 12th St. to Cherry St.)	2012	1,014	468,608			AE2S
138	5	0901060-05	CRW	7,750	Increased capacity to Casselton Area - wellfield, WTP, reservoir, and transmission main improvements	2013	6,220	474,828			B & W
139	5	0900336-04	Fargo	105,549	Water tower rehabilitation 2012	2012	1,625	476,453			AE2S
140	5	0900336-03	Fargo	105,549	Radio read water metering improvements	2018	8,600	485,053			AE2S
141	5	0900336-12	Fargo	105,539	Low lift transfer pump station	2020	7,000	492,053			AE2S
142	5	0900336-13	Fargo	105,539	WTP residuals facility	2018	21,700	513,753			AE2S
143	5	3000596-05	Mandan	23,827	Mandan water meter/MXU replacement	2012	1,800	515,553			AE2S
144	5	2800953-01	Underwood	812	Water tower rehabilitation	2012	813	516,366			Toman
145	3	0400638-01	Medora	100	Watermain replacement	2012	41	516,407			Highlands
146	3	3900333-01	Fairmount	406	Replace water tower controls	2012	115	516,522			Moore
147	3	0900336-10	Fargo	105,549	Solar power system (GSR#1)	2012	305	516,827			AE2S
148	3	0900999-06	West Fargo	24,000	South side water tower	2013	2,200	519,027			Moore
149	3	0900999-05	West Fargo	24,000	North side water tower	2015	2,200	521,227			Moore
150	3	5301079-02	WRWD	2,836	Transmission capacity increase	2012	993	522,220			AE2S
151	1	2701461-01	MCWRD		Transmission, 1MG reservoir, pump station	2012	8,000	530,220			AE2S

* These projects are eligible for 60% loan forgiveness with a cap of \$1,000,000 of loan forgiveness

** This project is eligible for 60% loan forgiveness with a cap of \$825,400 loan forgiveness. If additional funds become available this project will be capped at \$1,000,000 of loan forgiveness

Abbreviations

B/C = Business Case for Green Project Reserve Required
 Cat = Categorically Approved Green Project Reserve Project
 DBP = Disinfectants/Disinfection Byproducts Rule
 GSR = Ground Storage Reservoir
 GW = Groundwater
 RWD = Rural Water District
 SW = Surface Water
 SWTR = Surface Water Treatment Rule
 WTP = Water Treatment Plant
 MG = Million Gallons

ASWUD = All Seasons Water User District
 BRWD = Barnes Rural Water District

CPWD = Central Plains Water District
 CRW = Cass Rural Water
 GRWD = Greater Ramsey Water District
 MCRWD = McKenzie County Water Resource District
 NPRWD = North Prairie Rural Water District
 NVWD = North Valley Water District
 R&TWSA = Ray & Tioga Water System Association
 SCRWD = South Central Regional Water District
 SEWUD = Southeast Water Users District
 SRWD = Stutsman Rural Water District
 TCWD = Tri-County Water District
 WRWD = Williams Rural Water District

Attachment 3

STATE OF NORTH DAKOTA

**PRIORITY RANKING SYSTEM FOR FINANCIAL ASSISTANCE THROUGH THE
DRINKING WATER STATE REVOLVING LOAN FUND (DWSRF) PROGRAM**

**DWSRF PROGRAM
DIVISION OF MUNICIPAL FACILITIES
ENVIRONMENTAL HEALTH SECTION
NORTH DAKOTA DEPARTMENT OF HEALTH**

AUGUST, 2004

The following criteria and point system is utilized by the DWSRF Program to rank eligible projects for potential financial assistance through the DWSRF Program:

1. Water Quality (Maximum Points Limited to 35)
2. Water Quantity (Maximum Points = 20)
3. Affordability (Maximum Points = 15)
4. Infrastructure Adequacy (Maximum Points Limited to 15)
5. Consolidation or Regionalization of Water Supplies (Maximum Points = 10)
6. Operator Safety (Maximum Points = 5)

Maximum Total Points = 100

DWSRF funds may be used to buy or refinance existing local debt obligations (publicly-owned systems only) where the initial debt was incurred and the construction started after July 1, 1993. DWSRF assistance requests of this type, if eligible, will be ranked based on the original purpose and success of the constructed improvements.

Creation of New Systems - Eligible projects are those that, upon completion, will create a community water system (CWS) to address existing public health problems with serious risks caused by unsafe drinking water provided by individual wells or surface water sources. Eligible projects are also those that create a new regional CWS by consolidating existing systems that have technical, financial, or managerial difficulties. Projects to address existing public health problems associated with individual wells or surface water sources must be limited in scope to the specific geographic area affected by contamination. Projects that create new regional CWSs by consolidation existing systems must be limited in scope to the service area of the systems being consolidated. A project must be a cost-effective solution to addressing the problem. Applicants must ensure that sufficient public notice has been given to potentially affected parties and consider alternative solutions to addressing the problem. Capacity to serve future population growth cannot be a substantial portion of the project.

CATEGORY

POINTS

- | | | |
|----|--|----|
| 1. | Water Quality - Select All That Apply (Maximum Points Limited to 35) ^{1,3} | |
| | A. Documented waterborne disease outbreak(s) within last 2 years | 20 |
| | B. Unresolved nitrate or nitrite maximum contaminant level (MCL) exceedance(s), OR acute microbiological MCL exceedance(s) within last 12 months | 15 |
| | C. Exceedance(s) of EPA-established unreasonable risk to health (URTH) level(s) within last 4 years for regulated chemicals or radionuclides (excludes nitrate and nitrite) | 10 |
| | D. Disinfection treatment inadequate to satisfy the Surface Water Treatment Rule (SWTR), the enhanced SWTR or ESWTR, or the groundwater disinfection rule (GWDR) once finalized, OR groundwater source(s) deemed by the DWP to be under the direct influence of surface water, OR multiple turbidity treatment technique requirement (TTR) violations within last 2 years (<u>includes</u> at least one event where the maximum allowed turbidity was exceeded) | 8 |
| | E. Multiple turbidity TTR violations within last 2 years (<u>no</u> events where the maximum allowed turbidity was exceeded), OR 3 or more <u>non-acute</u> microbiological MCL violations within last 12 months | 7 |
| | F. MCL or TTR exceedance(s) (<u>no</u> URTH level exceedances) within last 4 years (excludes microbiological contaminants, nitrate, nitrite, and turbidity) | 6 |
| | G. Potential MCL or TTR compliance problems based on most recent 4 year period (excludes microbiological contaminants and turbidity) | |
| | ● 75% to 100% of MCL or TTR | 5 |
| | ● 50% to 74% of MCL or TTR | 4 |
| | H. General water quality problem (see page 7) | |
| | ● significant general water quality problem | 4 |
| | ● moderate general water quality problem | 3 |
| | ● minor general water quality problem | 2 |
| 2. | Water Quantity - Select One If Applicable (Maximum Points = 20) ^{2,3} | |
| | A. Correction of a critical water supply problem involving the loss or imminent loss of a water supply in the near future | 20 |

B.	Correction of an extreme water supply problem Maximum water available <150 gallons per capita per day (gpcd) (community water systems only), OR continuous water shortages during all periods of operation (nonprofit noncommunity water systems only)	10
C.	Correction of a serious water supply problem Maximum water available <200 gpcd (community water systems only), OR daily water shortages, or inability to meet peak daily water demand, at a frequency of at least once per week during all periods of operation (nonprofit noncommunity water systems only)	7
D.	Correction of a moderate water supply problem Maximum water available <250 gpcd (community water systems only), OR occasional daily water shortages, or occasional inability to meet peak daily water demands, on a seasonal basis (nonprofit noncommunity water systems only)	4
E.	Correction of a minor water supply problem Maximum water available <300 gpcd (community water systems only), OR sporadic water shortages or occasional inability to meet peak water demands (nonprofit noncommunity water systems only)	2
3.	Affordability - For the Applicable Sub-Category, Select One For Each Item (Maximum Points = 15)	
A.	Community Water Systems	
1.	Relative income index - ratio of local or service area annual median household income (AMHI) to the state nonmetropolitan AMHI (based on 2000 census data)	
	<ul style="list-style-type: none"> ● < 60% ● 61% to 70% ● 71% to 80% ● 81% to 90% ● 91% to 100% 	8 7 5 3 1
2.	Relative future water cost index - ratio of expected average annual residential user charge for water service resulting from the project, including costs recovered through special assessments, to the local AMHI (based on 2000 census data)	
	<ul style="list-style-type: none"> ● >2.5% ● 2.0% to 2.5% ● 1.5% to 1.9% ● 1.0% to 1.4% 	7 6 5 3

●	0.5% to 0.9%	1
B. Nonprofit Noncommunity Water Systems		
1. Relative income index - ratio of local or service area AMHI to the state nonmetropolitan AMHI (based on 2000 census data)		
●	≤ 60%	8
●	61% to 70%	7
●	71% to 80%	5
●	81% to 90%	3
●	91% to 100%	1
2. Relative future water cost index - ratio of expected annual water service expenditures resulting from the project to total annual operating expenses		
●	>20%	7
●	15% to 20%	6
●	10% to 14%	5
●	5% to 9%	3
●	2% to 4%	1
4. Infrastructure Adequacy - Select All That Apply (Maximum Points Limited to 15)		
A.	Correction of general disinfection treatment deficiencies - excludes improvements necessary to directly comply with the SWTR, the ESWTR, or the GWDR (once finalized)	3
B.	Correction of well construction or operating deficiencies	3
C.	Correction of distribution system pressure problems (dynamic pressure <20 psi)	3
D.	Replacement of deteriorated water mains	3
E.	Replacement of deteriorated finished water storage structures	3
F.	Replacement of distribution system piping/materials shown via DWP-approved testing to contribute unacceptable levels of lead or asbestos	3
G.	Water treatment plant operating at or above design capacity	3
H.	Water treatment plant operating at or beyond useful or design life	3

- I. Correction of specific design or operating deficiencies associated with water treatment plant unit processes (excludes disinfection treatment) 2
- J. Correction of specific design or operating deficiencies associated with surface water intake facilities 2
- K. Correction of specific or design or operating deficiencies associated with finished water storage facilities 2
- L. Correction of specific design or operating deficiencies associated with raw or finished water pumping facilities 2
- M. Correction of specific design or operating deficiencies associated with raw or finished water distribution system piping 2
- N. Correction of specific design or operating deficiencies associated with chemical feed installations (excludes disinfection) 2
- O. For systems relying solely on their own groundwater supply, provision of a second well where only one functional well exists 2
- P. Replacement of inoperative, obsolete, or inadequate instrumentation or controls 2
- 5. Consolidation or Regionalization of Water Supplies - Select All That Apply (Maximum Points = 10)
- A. Correction of Safe Drinking Water Act (SDWA) compliance problem(s), or extreme to critical water supply problem(s), for 1 or more PWS through consolidation with or regionalized service by another PWS 4
- B. Correction of contamination problems (regulated contaminants), or extreme water quantity problems (no water, imminent loss of water supply, or continuous/ frequent daily water shortages), for individual residences or businesses through consolidation with or regionalized service by a PWS 3
- C. Correction of potential MCL or TTR compliance problems, general water quality problems, or moderate to serious water quantity problems for 1 or more PWSs through consolidation with or regionalized service by another PWS 2
- D. Correction of general water quality problems, or moderate water quantity problems (occasional daily or seasonal water shortages), for individual residences or businesses through consolidation with or regionalized service by a PWS 1

6. Operator Safety - Select One If Applicable (Maximum Points = 5)²

- | | |
|---|----------|
| A. Correction of a problem that poses a critical and chronic safety hazard for operators | 5 |
| B. Correction of a problem that poses an intermittent safety hazard for operators | 3 |
| C. Correction of a potential significant safety hazard for operators | 1 |

¹ Applies to community and nonprofit noncommunity public water systems only. Water quality problems must be ongoing and unresolved under the present system configuration. Analysis applies to finished water after all treatment (raw water if no treatment is provided).

² Applies to community and nonprofit noncommunity public water systems only. Projects intended mainly to increase water availability for or to improve fire protection are not eligible for DWSRF assistance. Fire protection features, in order to be eligible, must represent an ancillary project benefit or secondary project purpose.

³ Projects intended to address multiple community and/or nonprofit noncommunity public water system water quality and/or quantity problems will be ranked based on the highest level problem to be solved.

GENERAL WATER QUALITY

DEFINITIONS

Significant General Water Quality Problem (4 points) = Score of 6 or greater

Moderate General Water Quality Problem (3 points) = Score of 4 or 5

Minor General Water Quality Problem (2 points) = Score of 3 or less

All values expressed in milligrams per liter

Total Dissolved Solids (TDS)

500 - 999 Score of 1

1,000 - 1,499 Score of 2

≥1,500 Score of 3

Total Hardness as Calcium Carbonate (TH)

200 - 424 Score of 1

425 - 649 Score of 2

≥650 Score of 3

Iron (FE)

0.3 - 0.89 Score of 1

0.9 - 2.0 Score of 2

>2.0 Score of 3

Manganese (MN)

0.05 - 0.25 Score of 1

0.26 - 1.00 Score of 2

>1.00 Score of 3

Sodium (NA)

200 - 424 Score of 1

425 - 649 Score of 2

≥650 Score of 3

Sulfate (SO₄)

250 - 499 Score of 1

500 - 750 Score of 2

>750 Score of 3

Attachment 4

Nonproject Set-Aside and Fee Activity (1)

North Dakota Drinking Water State Revolving Loan Fund Program

Set-Aside	Set Aside Through 9/30/2011	Transferred To Loan Fund	Expended Through 9/30/2011	Balance Available	Planned Set-Asides For 2012 (4)	Total Set-Aside Funds Available 2012	Reserved Through 2011	Reserved From 2012 Allotment	Total Reserved Through 2012
4% Administration	5,646,324	0	5,137,771	508,553	696,720	1,205,273	0	0	0
10% State Program Assistance									
PWSS Supervision	610,000	0	528,234	81,766	535,000	616,766			
Source Water Protection									
Capacity Development									
Operator Certification									
2% Small System Technical Assistance	2,116,972	0	1,965,400	151,572	248,360	399,932	0	0	0
15% Local Assistance (2)									
Land Acquisition									
Capacity Development									
Wellhead Protection									
Source Water Petition Programs									
Source Water Protection (3)	1,255,880	820,612	435,268	0	NA	0	0	NA	0
Totals	9,629,176	820,612	8,066,673	741,891	1,480,080	2,221,971	0	0	0

Fee Type	Collected Through 9/30/11	Transferred to Loan Fund	Expended Through 09/30/11	Balance Available 09/30/11	Projected Funds 01/01/12 - 12/31/12	Total Funds Available Through 12/31/12	Total Funds Held Through 12/31/12
Loan Fee	4,540,455	0	231,612	4,308,843	852,091	5,392,546	5,160,934

(1) The set-aside amounts are based on percentages (4%, 2%, or 10%) of the respective federal DWSRF allotments. The FY 1997 through 2010 allotments have been awarded. The the allotment for FY2011 is \$9,418,000 and the anticipated allotment for FY 2012 is \$8,000,000. The FY 2011 allotment will be applied for by January 1, 2012. The FY 2012 allotment will be applied for by July 1, 2012. The funds expended and the balance available are as of September 30, 2011. The loan fee amounts reflect loans approved up to September 30, 2011. The amounts may increase based upon repayments due (if any) under loans approved after this date. (2) No more than 10% may be used for any one activity with a maximum of 15% for all activities combined. (3) Only the FY 1997 allotment may be used by states to complete the mandatory source water assessments. All funds not used by April 25, 2003, from this set aside were transferred to the Loan Fund. (4) Includes funds from FY2011 and FY2012 capitalization grants

Attachment 5
Sources and Uses Table
North Dakota Drinking Water State Revolving Loan Fund Program
Cumulative Amounts as of September 30, 2011

SOURCES

Federal Capitalization Grants	135,424,767.00
State Match	36,320,737.00
Transfers from CWSRF	22,577,672.00
Net Leveraged Bonds	107,828,128.00
Investment Earnings	23,249,058.00
Interest Payments	23,222,540.00
Principal Repayments	62,346,850.00
TOTAL SOURCES OF FUNDS	<u>\$410,969,752</u>

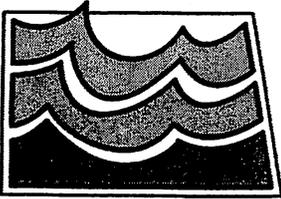
USES

4% Administration	5,646,324.00
2% SSTA	2,116,972.00
10% DW Program Set-Aside	610,000.00
15% Local Asst. Set-Aside	435,268.00
Transfers to CWSRF	10,000,000.00
Reserves	7,436,256.00
Bond Principal Repayments	18,273,675.00
Bond Interest Expense	23,898,762.00
Arbitrage	755,617.00
Closed Agreements	288,631,302.00
Loans Approved by Industrial Commission	7,215,000.00
TOTAL USES OF FUNDS	<u>\$365,019,176</u>

DWSRF Funds Available for Projects in 2012 \$45,950,576

ANNUAL SOURCES FOR 2012

FY11 Capitalization Grant (less set-asides)	8,592,920.00
FY12 Capitalization Grant (less set-asides)	7,345,000.00
State Match (if applicable)	-
Leveraged Bonds (if applicable)	-
Transfers with CW +/- (if applicable)	100,000.00
Total New 2012 Funds	<u>\$16,037,920</u>
TOTAL DWSRF FUNDS AVAILABLE FOR 2012	<u>\$61,988,496</u>
TOTAL DWSRF PROJECTS ON FUNDABLE LIST	<u>\$61,988,496</u>
AVAILABLE FUNDS	<u>\$0</u>



North Dakota State Water Commission

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APPENDIX "D"
DECEMBER 9, 2011

MEMORANDUM

TO: Governor Jack Dalrymple
Members of the State Water Commission
FROM:  Todd Sando, P.E., Chief Engineer-Secretary
SUBJECT: Cost Share Status Report on projects over 3 years without payment
DATE: November 23, 2011

As requested by the Commission, the cost share projects that were approved prior to three years ago, which have not seen payments recently, were reviewed to provide the following status update.

#	Project	Approved	Amount
1	Sheyenne River Snagging & Clearing	4/11/08	\$5,000
2	Southeast Cass WRD Bois, Wild Rice, & Antelope	6/23/08	\$60,000
3	Mandan Flood Control Protective Works (Levee)	9/29/08	\$125,396
4	Kolding Dam Emergency Action Plan	5/29/09	\$9,600
5	ND Water: A Century of Challenge	12/10/04	\$36,800

The Sheyenne River Snagging and Clearing Project is contracted with Barnes County Water Resource District, with a 25% cost share of eligible costs. The project is located in the southwest corner of Barnes (T141N R59W Sections 24, 25, and 36). A single payment was to be made upon completion of the project. During a recent phone conversation, the District indicated that the work never took place and will send an email confirming they will not be pursuing this project.

The Wild Rice and Bois de Sioux Rivers and Antelope Creek Retention Sites Study is contracted with Southeast Cass Water Resource District, with a 50% cost share of eligible costs. The project is located south of Fargo in Richland and Sargent Counties. Geotechnical investigations were completed in September 2010 and right of way activities on the Wild Rice River was worked on this spring. Single payment will be made upon completion of the project. We will work with the district to update a schedule or identify any obstacles to completing this work.

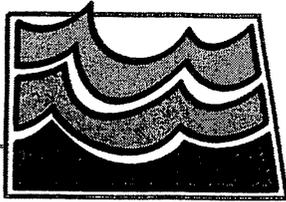
The Mandan Flood Control Protection Works is contracted with the Lower Heart Water Resource District, with a 50% cost share of eligible costs. The project is located in Mandan near the Fort Lincoln Trolley Depot. Partial payments can be made on this project. The Commission received a letter in June 2011, in which the District indicated that progress on the project was delayed by need to repair flood damage in 2009 and 2011.

The Kolding Dam Emergency Action Plan (EAP) is contracted with the Grand Forks County Water Resource District, with an 80% cost share of eligible costs. The EAP was completed in November 2009. The District was contacted and they have now submitted costs to be reviewed for payment.

JACK DALRYMPLE, GOVERNOR
CHAIRMAN

TODD SANDO, P.E.
CHIEF ENGINEER AND SECRETARY

The ND Water: A Century of Challenge is contracted with North Dakota Water Education Foundation (Foundation). The Foundation submitted a proposal in 2003 to write and publish a comprehensive history of water development and water management in North Dakota in the 20th Century. The proposal included publication of a hardcover book and a student guide available to teachers for classroom use. The cost of the proposal was \$245,511. Funding was received from the Bureau of Reclamation (\$97,425), Garrison Diversion Conservancy District (\$48,712.50), State Water Commission (\$48,800), and the Foundation (\$50,661). Partial payment of \$12,000 was made in February 2006. The project was to be completed within 24 months of execution of the January 2005 contract. Three amendments to the contract have been signed for time extensions. The Foundation hopes to have a draft available for review in 2012 and finish the project in 2013.



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MEMORANDUM

TO: Governor Jack Dalrymple
Members of the State Water Commission
FROM:  Todd S. Sando, P.E., Chief Engineer - Secretary
SUBJECT: SWPP Project Update
DATE: November 21, 2011

Oliver, Mercer, North Dunn (OMND) Regional Service Area

Contract 3-1D OMND Water Treatment Plant Building and Membrane Equipment Installation: Concrete construction for the lower level was largely completed before the Labor Day holiday and the erection of the pre-cast walls at the upper lever was completed by the first week of October. The doors and windows at the Water Treatment plant are being installed. The membrane roof has been installed. The plant has electricity from Roughrider power cooperative. The electrical and mechanical contracts are proceeding well. Estimated total project cost is \$11.1 million.

Contract 3-1C OMND Water Treatment Plant Membrane Procurement: Wigen Water Technologies Inc. delivered the membrane skids on November 1, 2011. The general contractor has started installing the skids.

Contract 3-1E OMND Water Treatment Plant Concentrate Disposal Facility:

The contract was awarded to Carstensen Contracting, Inc. on August 31st 2011 and work began on September 27th 2011. Pipeline installation started from the water treatment plant and progressed north. The majority of the pipeline installation on the Corps land has been completed. The directional drilling of the concentrate discharge line into the lake commenced early in the week of October 24th 2011. The directional drilling head emerged on the lake bottom on November 14th 2011. The pull back of the 8" HDPE line should commence the week of November 28th. Total project cost is \$4.7 million

Contract 2-8B Main Transmission Line from Hazen to Stanton and Beulah to Center Elevated Tank: This contract was awarded to Kamphuis Pipeline Company last July and work began on April 18, 2011. All pipelines are installed and tested. The booster station start up was on September 14, 2011. The pipeline from Hazen to Stanton has been chlorinated. The chlorination from Beulah to Center tank will be coordinated with the 2-8C/D contractor. Estimated total project cost is \$5.1 million.

Contract 5-15A Zap Potable Reservoir: This contract was awarded to Maguire Iron, Inc. in July 2010. Site work began in late October. The reservoir is erected and painting is complete. The inlet and outlet piping are installed and hydrotested. Site grading is in progress. Estimated total project cost is \$1.4 million.

Contract 5-16 Center Elevated Tank: Landmark Construction began work this summer. The concrete pedestal and most of the site work was complete by September. Welding of the metal

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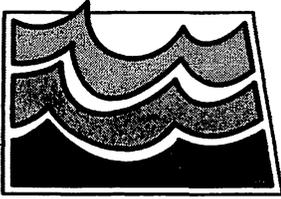
tank structure on the ground commenced in October and the steel tank structure was jacked into position on November 8th 2011. The contractor will return in spring for painting. The substantial completion date is July 15, 2012. Estimated total project cost is \$1.8 million.

Contract 2-8C/D Main Transmission Line from Center Elevated Tank to Center: This contract was awarded to Niebur Development on May 31, 2011. Construction began in July and is currently progressing very well. The installation of pipeline from the Center Elevated Tank to the City of Center is complete. Two crews are working on the line going south from Hannover to the Missouri West Water System and there is approximately 12 miles of pipe left to be installed. Substantial completion is scheduled for July 2012. Estimated total project cost is \$7.2 million.

Contract 7-9C Zap Service Area Rural Distribution Line Phase I: This project was bid August 4, 2011. The Commission approved award of the contract to Northern Improvement Co. at its August 17, 2011, conference call meeting. We received the concurrence of award from the Garrison Diversion Conservancy District and the Bureau of Reclamation. The contract documents have been executed. The contractor does not plan on starting construction until Spring 2012. Estimated total project cost is \$5.9 million.

Contract 7-9D Zap Service Area Rural Distribution Line Phase II: The SWC has received the submittal set of plans from the Engineer. This contract will consist of 140 miles of PVC pipeline serving 232 users. The fieldwork for the cultural resource work was completed in October. The report from the archaeology subcontractor, which is expected soon, will be forwarded to the Bureau of Reclamation for their approval. It is anticipated that the contract will be bid this winter. Estimated total project cost is \$5.6 million.

TSS:SSP/1736-05



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MEMORANDUM

TO: Governor Jack Dalrymple
Members of the State Water Commission
FROM: Todd Sando, P.E., Chief Engineer-Secretary
SUBJECT: Western Area Water Supply – Phase II - Tier I Approval and Project Update
DATE: November 29, 2011

Phase II - Tier I Construction Approval

The Western Area Water Supply Authority (Authority) is requesting approval for Phase II - Tier I construction of the Western Area Water Supply Project. The overall project concept requires approval by the State Water Commission, and individual contract approval by staff of the Commission, as a condition on funding. The Phase II work has been split into a Tier I, that is within the limits of state funding, and a Tier II that will be pursued and prioritized depending on funding availability.

The Phase I projects previously approved, included

- Eleven miles of 16" to 30" pipeline on the west and north side of Williston
- Five million gallon (MG) reservoir northwest of Williston
- Twenty six miles of a 12" pipeline heading west and then north from Wildrose to Crosby
- Approximately two hundred miles of 2" to 6" pipeline in McKenzie County around Alexander.

The Phase II - Tier I projects are presented on the attached map and described as the following are presented for approval. Projects include

- Williston water treatment plant expansion from 10 million gallons per day (MGD) to 14 MGD,
- Thirty miles of 20" to 24" pipeline heading north and east of Williston to Ray,
- Thirty two miles of 16" to 20" pipeline from south of Williston heading south and then east to Watford City,
- Five reservoirs which include three 0.5 MG reservoirs and two 2 MG reservoirs,
- Four pump stations which include a 6 MGD near 13 mile corner, a 3 MGD at the Ray water treatment plant, and two 4.5 MGD along the pipeline heading south from Williston.
- Approximately six industrial water depots are included in this phase and will range in size from 2 to 6 fill points, with a fill point averaging delivery of 200 gallons per minute over a 24 hour period.

Phase I and Phase II - Tier I projects and engineering costs, are estimated to date at \$96 million which is within the \$110 million legislation. The engineering firm has completed a cash flow analysis and has provided recommendation to the Authority that the break out of Tier I projects will be viable for debt repayment obligations. A December 2010 completion is expected on all pipelines, reservoirs, pump stations and depots. The Williston water treatment plant expansion completion is expected by July 2013.

JACK DALRYMPLE, GOVERNOR
CHAIRMAN

TODD SANDO, P.E.
CHIEF ENGINEER AND SECRETARY

Construction Update

State Water Commission staff reviewed and approved specific plans and specifications on the following projects.

Project	Description	Contractor	Cost	Completed	Completion
Res No. 1 to Bakken Ind. Park Pipeline	30" to 24" pipeline NW of Williston	Merryman Excavation	\$4,047,150.00	\$2,708,639.09	5/31/2012
US 2 to County Hwy No. 7 Watermain	24" to 12" pipeline west side Williston	Metro Construction	\$3,867,336.20	\$3,673,969.39	11/30/2011
26 th St Pump Station	Increase discharge pressure	John T Jones Construction	\$721,666.00	\$554,661.59	5/31/2012
Total			\$8,636,152.20	\$6,937,270.07	

Engineering services totaled \$2,829,362.87, legal services \$85,956.16, and easements \$131,100.32 to date.

Fill Depot Siting Process

The Authority is documenting the changes they are making to water depot locations and their discussions with private water sellers. Depot locations were discussed with the private water providers during the November 8, 2011 Authority meeting and additional discussion will be held at the December 13, 2011 Authority meeting.

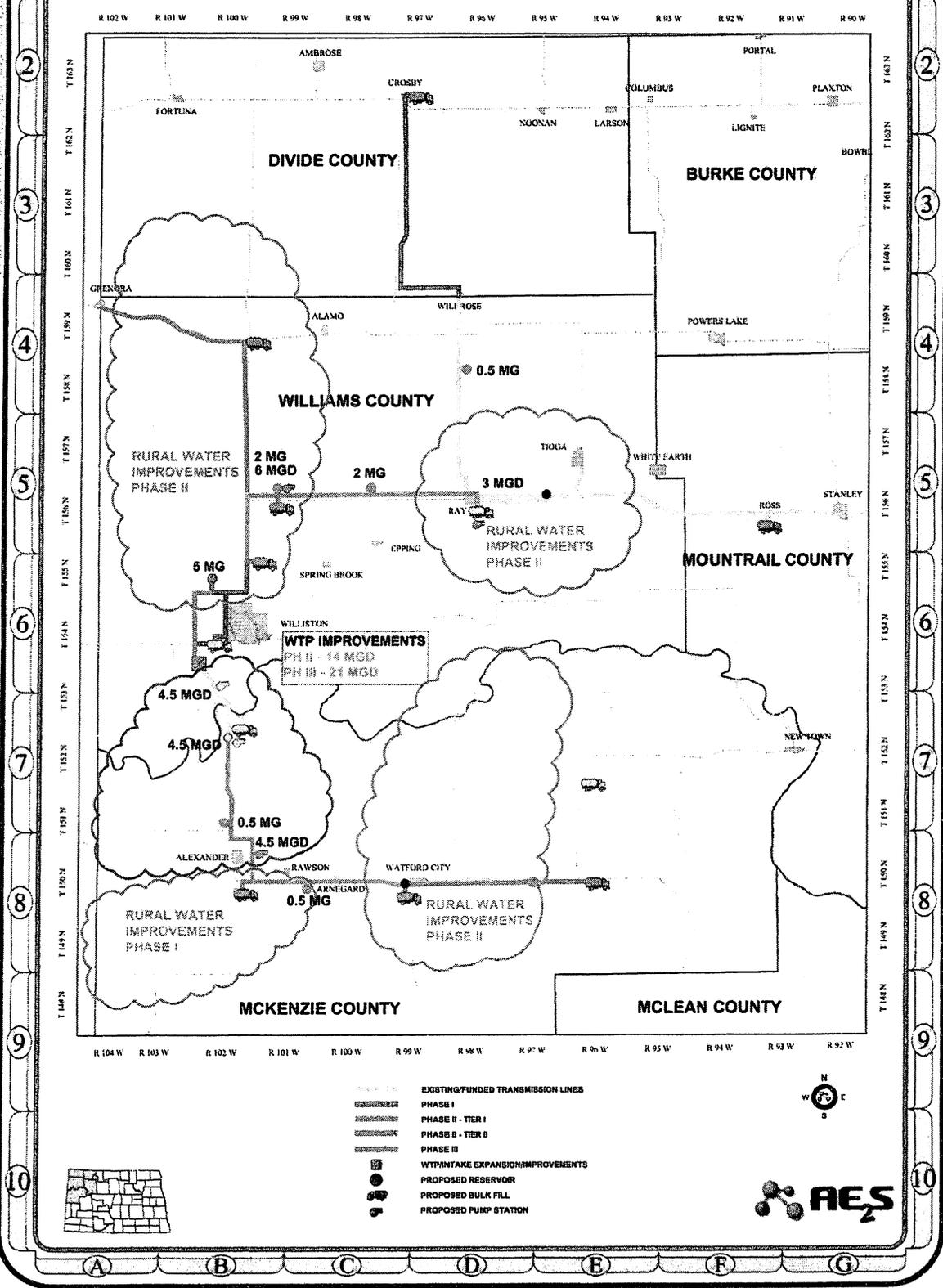
Funding

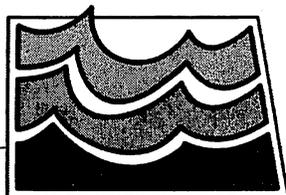
The State Water Commission has made payment on \$10.2 million of project expenses approved by the Authority.

I recommend the State Water Commission approve the overall plan for the Phase II - Tier I projects presented, upto a total overall plan approval of \$100 million.

TS:MK/1973

WESTERN AREA WATER SUPPLY PROJECT PHASE I AND II PROJECT PHASING AND PRIORITIZATION PLAN





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MEMORANDUM

TO: Governor Jack Dalrymple
Members of the State Water Commission
FROM: Todd Sando, P.E., Chief Engineer – Secretary
SUBJECT: Devils Lake – Projects and Hydraulic Update
DATE: November 23, 2011

Hydrologic Update

The Devils Lake water surface elevation has lowered slightly from the previous update.

	CURRENT	1 MONTH AGO VALUE CHANGE		1 YEAR AGO VALUE CHANGE	
Elevation (ft-msl)	1453.3	1453.5	-0.2	1451.3	+2.0
Area (acres)	197,000	199,000	-2,000	175,000	+22,000
Volume (acre-feet)	4.00 million	4.01 million	-10,000	3.60 million	+400,000

The volumes and areas above were obtained from the area-capacity table found on the Commission's website.

West End Outlet

The West Outlet was shut down for the season on November 14, 2011. The outlet pumped 125 cfs from October 14, 2011 until shutdown. The repaired 75 cfs pump was installed at the Josephine pumping station on November 22th. The other 75 cfs pump was removed and will receive maintenance prior to the 2012-pumping season; this is the 4th and only pump at the Josephine pumping station that did not have mechanical trouble this year. Repairs to the intake and canal will also be done this winter.

Below is a summary of releases for 2011.

DEVILS LAKE WEST END OUTLET RELEASES 2011

Month	Volume	Days of Operation
May	1,672 ac. ft.	6
June	12,549 ac. ft.	30
July	13,283 ac. ft.	31
August	6,117 ac. ft.	31
September	4,610 ac. ft.	30
October*	6,352 ac. ft.	31
November*	3,645 ac. ft.	14
TOTAL	48,228 ac. ft.	173

*Preliminary volumes pending verification

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CHAIRMAN

TODD SANDO, P.E.
CHIEF ENGINEER AND SECRETARY

The value of 48,228 acre-feet corresponds to 2.9 inches off the lake (Devils Lake & Stump Lake). The average release rate for the outlet in 2011 was 141 cfs.

East End Outlet

The contractors on this project continue to make good progress. The 8,040 feet of steel pipe at the west end of the route is complete, while nearly 11,300 feet of concrete pipe has been installed at the east end of the route with approximately 7,700 feet remaining as of November 18, 2011. The total route is approximately 27,000 feet long. The contractor for the intake structure is wrapping up the initial excavation for the structure and should begin drilling the foundation piers the week of November 28th. The contractor at the outfall structure has started work on stripping and excavation.

Emergency Gravity Water Transfer Channel

Most of the affected landowners oppose the project and have not allowed right of entry to their properties. The Devils Lake Joint Water Resource Board has initiated legal action to force right of entry for the investigation phase of this project, but the court hearing has been delayed, currently scheduled for December 2, 2011.

Tolna Coulee Control Structure

The contractor for this project has constructed the upstream cofferdam and started dewatering and excavation of the organic materials at the structure. Work on the access road has been completed with class 5 gravel and grading completed. Continued work on the operating plan (Standing Instructions To The Project Manager For Water Control) with the U. S. ARMY CORPS OF ENGINEERS is ongoing and should be available for public comment soon.

Re-evaluation of the Tolna Coulee Ground Elevation

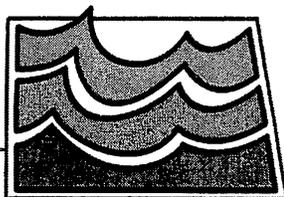
The North Dakota Geological Surveys' report on their 2011 investigation into the ground elevation at statehood at the Tolna Coulee divide has been published. In summary, no evidence was discovered by the investigation that could justify modifying the State Engineer's determination of the elevation of 1458'. The full report can be found on the SWC website (www.swc.nd.gov) under the tabs:

Devils Lake Flooding
Studies and Reports
North Dakota Geological Survey
2011 Tolna Coulee Report

Or at the following web address:

[http://www.swc.nd.gov/4dlink9/4dcgi/GetSubContentPDF/PB-2611/NDGS 2011 TOLNA COULEE PROJECT.pdf](http://www.swc.nd.gov/4dlink9/4dcgi/GetSubContentPDF/PB-2611/NDGS%202011%20TOLNA%20COULEE%20PROJECT.pdf)

TS:DN:mmb/416-17



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MEMORANDUM

TO: Governor Jack Dalrymple
 Members of the State Water Commission
FROM:  Todd Sando, P.E., Chief Engineer-Secretary
SUBJECT: NAWS – Project Update
DATE: October 23, 2011

Supplemental EIS

Reclamation held a cooperating agency meeting on September 14 for the NAWS Supplemental EIS. Agenda included purpose and need, alternative analysis, water needs and supply, transbasin effects, resource analysis, Missouri River depletion, climate change, and the schedule. When the Supplemental EIS is completed, the report will be provided to the federal court.

Manitoba & Missouri Lawsuit

The Federal Court issued an order on March 5, 2010, requiring Reclamation to take a hard look at (1) the cumulative impacts of water withdrawal on the water levels of Lake Sakakawea and the Missouri River, and (2) the consequences of biota transfer into the Hudson Bay Basin, including Canada. The most recent order dated October 25, 2010, allows construction on the improvements in the Minot Water Treatment Plant to proceed, however it does not allow design work to continue on the intake.

Design and Construction Update

Table 1 - NAWS Contracts under Construction

Contract	Contract Award	Contractor	Contract Amount	Remaining Obligations
2-2C Kenmare	10/1/08	Northern Improvement	\$4,853,166.87	\$164,764.63
5-2C Storage	3/27/09	Caldwell Tanks, KY	\$1,843,903.64	\$93,270.18
2-2D Mohall	7/24/09	American Infrastructure, CO In Default – Being taken on by the Bonding Co - EMC	\$5,196,586.13	\$128,207.84
2-3A Minot AFB	1/4/11	S.J. Louis Construction	\$5,864,000.00	\$4,243,638.88
2-3B Upper Souris/Glenburn	1/4/11	S.J. Louis Construction	\$3,747,982.00	\$1,435,782.28
7-1A Minot WTP Filter Rehab and SCADA	11/30/11	PKG Contracting, Inc. Main Electric, Inc.	\$7,892,743.00	\$7,892,743.00
Total Remaining Construction Contract Obligations				\$13,958,406.81

JACK DALRYMPLE, GOVERNOR
 CHAIRMAN

TODD SANDO, P.E.
 CHIEF ENGINEER AND SECRETARY

Table 2 – Design Work on Upcoming NAWs Construction Contracts		
	Bid Opening	Contract Cost Estimate
4-2A Westhope	Winter/Spring 2012	\$7,160,000

Contract 2-2C – The contract includes 52 miles of 10”-12” pipeline for the Kenmare-Upper Souris pipeline. The contract was awarded to Northern Improvement on October 1, 2008. The substantial completion letter was signed on November 20th. Water service to Kenmare was started on December 7, 2009. Water service to Upper Souris Water District at the Donnybrook turnout started December 22, 2009. The seeding for portions of the contract has completed, however there are several areas requiring reseeding. Contract closeout is expected following final seeding.

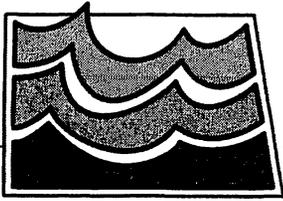
Contract 5-2C - The contract includes a 1 million gallon storage reservoir near Kenmare. The welded tank was lifted in place on the concrete pedestal on November 18, 2009. The tank is now in service. This contract should be closed out in the near future after start up of the cathodic protection system.

Contract 2-2D - The contract covers 62 miles of pipeline for the Mohall/Sherwood/All Seasons pipeline. The contract was awarded to American Infrastructure, Colorado. There remains 2000 feet of pipe to be placed. Contractor provided notice of voluntary default. The Contract Surety, EMC took over the contract and hired S.J. Louis Construction to complete the remaining work. This project was substantially complete October 27, 2011. The completion contractor is currently finishing the various punch list items.

Contract 2-3A – The contract covers 13 miles of 24” pipeline between the north side of Minot to the Minot Air Force Base. Work began in early September. The contractor, S.J. Louis, is making moderate progress and is roughly 20% complete.

Contract 2-3B – The contract covers the 13 miles of 16” pipeline north of the Minot Air Force Base along Highway 83 to provide service to Upper Souris Water District at their treatment plant and at Glenburn. Work began in late August and is over 60% complete.

Contract 7-1A – The Federal Court on October 25, 2010, approved construction in the Minot Water Treatment Plant with the piping and filters. The SCADA telemetry system for the Northern Tier has been incorporated into this contract, as well as the design and programming for the SCADA for the entire project. The contract has been awarded and a pre-construction conference was held November 22, 2011.



North Dakota State Water Commission

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MEMORANDUM

TO: Governor Jack Dalrymple
Members of the State Water Commission
FROM: *TSD* Todd Sando, P.E., Chief Engineer/Secretary
SUBJECT: Missouri River Update
DATE: November 23, 2011

System/Reservoir Status –

On November 21, system storage in the six mainstem reservoirs was 57.9 million acre-feet (MAF), 4.7 MAF above the average system storage for the end of November, and 0.5 MAF less than last year. Runoff for the calendar year is projected to reach 60.8 MAF, 245% of normal. The previous record of 49 MAF was reached in 1997. Total system storage peaked at 72.8 MAF in June. The previous storage record was 72.1 MAF in 1975.

On November 21, Lake Sakakawea was at an elevation of 1840.6 feet msl, this is 2.7 feet lower than a year ago and 5.1 feet above its average daily elevation for November. The elevation of Lake Sakakawea peaked this summer at 1854.6 feet msl, on July 2. The record elevation of Lake Sakakawea is 1854.8 feet msl, which was set in July of 1975. The maximum daily November elevation occurred in 1971 and is 1847.4 feet msl. On November 21, releases from Garrison Dam were 28,700 cfs. November will end with releases at 28,400 cfs and then will be reduced during freeze-up in December to 19,000 cfs for a few weeks and then gradually go back up to 24,000 cfs in January and February of 2012. The maximum release out of Garrison Dam this summer was 150,600 cfs on June 26. The previous maximum release was 65,200 cfs in July 1975.

The elevation of Lake Oahe was 1607.6 feet msl on November 21; this is 0.1 feet higher than last year and 8.8 feet higher than the average daily November elevation. The elevation of Lake Oahe peaked this summer at 1619.7 feet msl on June 27, setting a new record elevation. Previously, the record elevation was 1618.7 feet msl, which occurred in June 1995. The maximum daily November elevation occurred in 1997 and is 1615.9 feet msl

The elevation of Ft. Peck was 2237.3 feet msl on November 21; this is 1.5 feet higher than a year ago and 7.4 feet higher than the average daily November elevation. The elevations of Fort Peck Lake peaked this summer at 2252.3 feet msl on June 16, setting a new record elevation. Previously, the record elevation was 2251.6 feet msl, which occurred in July 1975. The maximum daily November elevation occurred in 1978 and is 2246.3 feet msl.

Missouri River Geomorphic Assessment –

The USGS has submitted the attached draft proposal, that was mentioned in the October 19 Missouri River Update Memorandum. The draft proposal is to conduct a geomorphic assessment on the Missouri River in North Dakota. Several products would result from this assessment including:

- Conceptual model of governing geomorphic processes in the Missouri River, role of dam management, and role of the 2011 flood.
 - This product will provide a comprehensive understanding of the impacts of the 2011 flood on both the river and infrastructure.
- Conceptual Model of Lake Oahe delta dynamics.
 - This product provides a comprehensive understanding of the 2011 flood impacts on the delta as well as how current delta configuration can impact upstream velocity, flow conveyance, and ice jam potential. A better understanding of the effects of the delta would have led to more decisive and precise predictions of stage trends during this summer's flood event. Having a comprehensive understanding of the delta will be conducive to future emergency strategies.
- Numerical model of the Bismarck/Mandan area of interest, prediction of channel evolution and sediment transport under certain management strategies.
 - This product will describe the methods and results of the prediction of how human infrastructure in Bismarck and Mandan will be impacted by future flows.
 - This model will have the capabilities to show where the channel will migrate over time with a given channel geometry and flows. The model will enable comparisons of predicted channel migration due to manipulated channel geometry and flow scenarios.
 - The ability to understand what areas are at risk for erosion would be an invaluable tool for infrastructure and other planning along the Missouri River in Bismarck and Mandan.
- Sediment balance.
 - This product will describe the quantification of sediment sources and sinks and verify the accuracy of the conceptual models and numerical modeling.
- Vegetation analysis.
 - This product will describe how the vegetation impacts sediment transport, island dynamics, and habitat potential as well as verify the accuracy of conceptual models.

This assessment will utilize several data sets that have been collected and maintained over the years, including the bathymetric data and aerial photography that was collected this summer and sponsored by the North Dakota State Water Commission.

Geomorphology and sediment transport processes dictate all aspects of river management. This assessment gives the North Dakota State Water Commission the chance to take the leadership position and be proactive in understanding and creating a comprehensive and sustainable approach to river management, in which solutions and common interest can be found for all stakeholders. With a more thorough understanding of the geomorphology, and sediment transport processes, informed, critical decisions can be made on river management.

North Dakota State Water Commission staff is exploring partnership options. The proposal has been sent to the Corps and other state and federal agencies in search for funding partnerships. Cost share agreements with these agencies will be discussed, and a funding request will be brought to the Water Commissioners in the future.

AOP

On October 13, I, as Chief Engineer-Secretary to the Water Commission, sent a letter to Brigadier General McMahon in Portland and Colonel Ruch in Omaha expressing concern that there was not enough consideration to the National Weather Service's long term outlook, or the persistence in wet and dry cycles in the draft AOP. My recommendation was to reduce the March 1 target elevation of Lake Sakakawea to 1835 ft, and to release the additional volume this fall before freeze-up. Reducing the March 1 target elevation would evacuate an additional 750,000 ac-ft, which is equivalent to releases of 10,000 cfs for 38 days. An additional 10,000 cfs would raise the stage in Bismarck approximately 2 feet. General McMahon responded with the attached letter on October 31, stating, "The AOP is not meant to direct, restrict or even describe procedures for operational decision making." And "I have concluded the most prudent action is not to implement your plan."

The Corps held its biannual AOP meeting on November 1 in Bismarck. At this meeting the Governor and I, reiterated the State's concerns. After completing all the basins' AOP meeting, the Corps released a press release stating its approach to Missouri River Mainstem operations as a result of the public meetings. According to the press release the "Corps will assume a more flexible posture as water is evacuated through the system for the remainder of the fall and early winter." "Second, the Corps will take an aggressive stance with winter and spring releases." And "third, the Corps will communicate more frequently and more broadly as the 2012 season unfolds."

Missouri River Investigations

Water Commission staff has completed an evaluation of alternatives to alleviate potential ice jam issues on the Heart River. Five alternatives were evaluated, including dredging, ice dusting and, physical removal of ice from the channel, that would attempt to alleviate potential ice jams. The recommendation was to 1) Monitor ice thickness on the Heart River during the 2011-2012 winter to ensure situational awareness. 2) Create an ice-dusting plan that would include material to be used, guidance on timing of application, guidance on placement of the material, and equipment that will be used to apply the material. 3) Further evaluate physical removal of ice.

Due to the timeliness, question of effectiveness, and the high cost, dredging is not recommended.

BE:KC:mmb/1392

Missouri River Geomorphic Assessment

Garrison Dam to Lake Oahe reach focus study

Background

The Garrison Dam to Lake Oahe reach is a 70 mile free-flowing (i.e., not impounded) reach of the Missouri River (Fig. 1). The reach is bounded upstream by the Garrison Dam and Lake Sakakawea and downstream by Lake Oahe and the Oahe dam. The Garrison Dam regulates flow into the reach and was completed in 1953; the Oahe dam was completed in 1959 creating the reservoir that forms the downstream boundary of the reach. The free-flowing reach is used for recreation, water supply, fisheries, and as habitat for threatened and endangered species. The reach regularly (approximately every 2 years) received annual peak flows above 100,000 cubic feet per second (cfs) prior to the completion of the Garrison dam. The highest peak of record occurred immediately before dam completion in 1952 with a peak flow of approximately 500,000 cfs. Annual peak flows following dam completion have consistently been between 30,000 and 45,000 cfs. The reach experienced its largest flood since dam regulation in 2011 following an abnormally high snow pack season and a week-long rain event in the headwaters. Flood releases from the dam began in May 2011 and peaked in June with a flow of approximately 150,000 cfs that was sustained for 2 weeks. Dam releases did not recede to normal annual peak flows at the Bismarck gage (USGS streamgage 06342500) until late September. The dam releases have had a discernible impact on the Missouri River throughout the free-flowing section in addition to effects on infrastructure within Bismarck-Mandan metropolitan area.

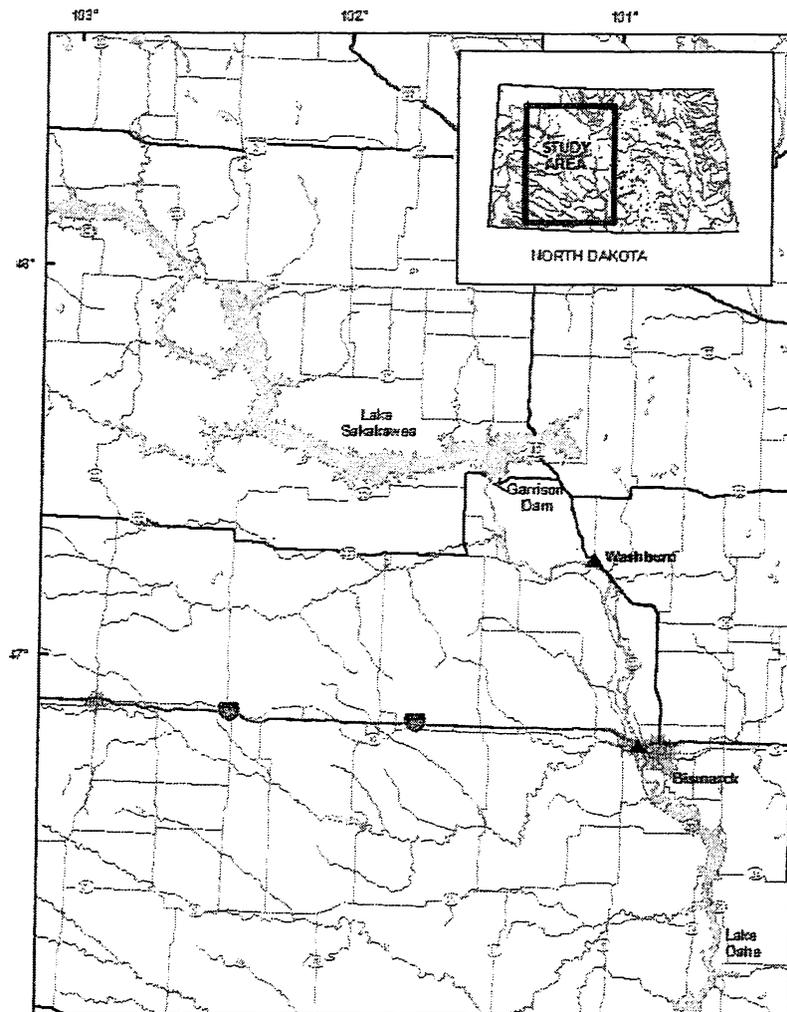


Figure 1. The Garrison Dam to Lake Oahe reach of river.

Problem Statements

What is the dynamic equilibrium of the Missouri River in the 70-mile free-flowing stretch between the Garrison Dam and Bismarck delta?

Currently it is unknown whether the Missouri River along the free-flowing stretch is in some form of equilibrium. Dynamic equilibrium refers to an open system in a steady state in which there is a continuous inflow and output of materials (in this case mainly water and sediment), in which the form or character of the system remains unchanged. The primary form of the river in this section has not changed; however, there has been an obvious flux of water and sediment through the reach. Presently, it is unclear whether or not the free-flowing stretch is in a steady state, but determining the sediment balance will yield insight into river dynamics on multiple temporal and spatial scales.

What is the trajectory of the channel response to the follow drivers: the dam closure, subsequent dam operation, and the 2011 flood?

Currently it is unknown how the channel is responding to the presence and operation of the two dams. Studies done on other rivers suggest that the impacts of dams on reaches both upstream and downstream can persist for many years (Williams and Wolman, 1974). Although this reach is considered free-flowing, there are likely long-term impacts from dam operations that have not been quantified. In order to determine the impacts of the 2011 flooding on the channel morphology and sediment dynamics, it is critical to be able to understand and quantify the impacts of the dams separate from flood effects. The recent flooding in the Upper Missouri River has highlighted the critical need for understanding the complex interaction between the regional geomorphology and human activities and interests (property, bridges, roads, etc.). Assessing the impacts of the recent flooding on human infrastructure is a critical management need. Additionally, understanding how the channel adjustments from flooding will persist is essential to predicting how the infrastructure will be affected by future managed flows. The current channel and delta configuration is the physical template through which managed flows are routed. Understanding and quantifying this interaction will determine the lifetime of physical structures in this reach.

The geomorphic assessment that is presented here is significant given the paucity of previous geomorphic studies in this reach and the importance and rarity of free-flowing sections on this river. Because of the relative lack of prior geomorphic investigations conducted on this reach, the geomorphic assessment must be comprehensive in scope. That is, there is a great deal of background system characterization that must be completed in order to progress towards predictive and numerical modeling capabilities. In order for the predictions to make sense and be reasonably evaluated, a complete understanding of the current governing processes is needed, which includes sediment sources and sinks, dam operations, vegetation impacts, historical geomorphology, and delta morphodynamics (among other things). A complete understanding of the current processes forms the conceptual models of how the system is behaving. In turn, these conceptual models are the fundamental framework upon which predictions and numerical modeling efforts can be constructed. Because of this, there is a great deal of interconnectedness between each of the proposed goals and products. Each goal informs an overall understanding of the river, which in turn enhances the predictive capabilities. As such, each goal is a critical component of the work.

Goals

The following goals represent separate, yet interconnected project elements (Fig. 2) needed to answer the problem statements and complete the geomorphic assessment of the Upper Missouri

1. Determine channel trajectory following dam closure and subsequent dam operation to provide a baseline for flood studies.
2. Determine flood impacts on islands, sand bars, and infrastructure.

3. Predict channel change through time around the Bismarck-Mandan metropolitan area as a result of different flow events through numerical modeling.
4. Predict post-flood channel variability over the 70-mile Garrison Dam to Lake Oahe reach of river in response to management and hydrologic variability (THIS IS A POTENTIAL FUTURE PROJECT BASED ON DATA ELEMENTS FROM THE OTHER 6 GOALS LISTED IN THIS PROPOSAL).
5. Assess the post-flood delta for potential ice jam issues and quantify reservoir sedimentation.
6. Determine the sources, sinks, and loads of sediment throughout the free-flowing reach.
7. Determine flood impacts on in-channel and floodplain large woody debris and standing trees for island maintenance, sediment balance, fisheries, and navigation interests.

Geomorphic assessment of the Upper Missouri River

Garrison dam to Lake Oahe (70 miles of free-flowing river)

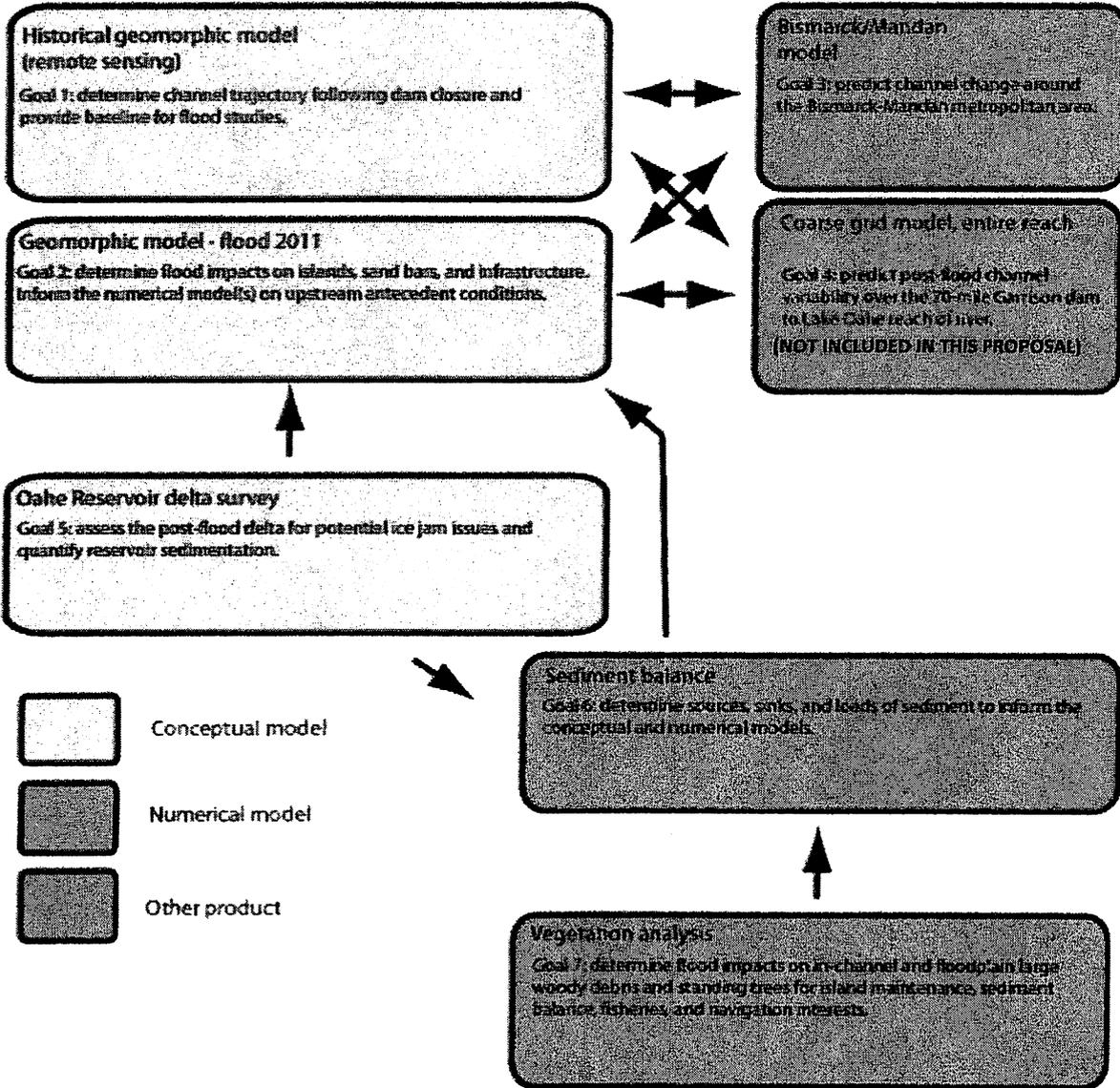


Figure 2. A graphic showing the relationship between individual project tasks (arrows indicate flow of data and scientific interpretation) and marked by model type (numerical, conceptual, and other).

Approach

Conceptual Models. A conceptual model will be created for each of the following: 1) historical geomorphic processes following dam closure, 2) flood impacts, 3) delta processes. Although these are separated into three different components, essentially they are a single spatial-temporal conceptual model of the governing fluvial processes for the reach downstream of the Garrison dam through the Bismarck-Mandan metropolitan area. Development of the first two models will assist in determining the historic and ongoing impacts of the dam closure and dam operations on the river channel separate from the magnitude of changes from the 2011 flood. The models should identify major geomorphic processes and their relative importance in shaping the channel including bank erosion, island and sand bar formation and erosion, bed erosion and accretion, and the spatial and temporal scales upon which these processes operate. The models will be framed using results from interpretation of repeat aerial photography, historical streamgage data, historical cross-sectional surveys, and ground-truthing data (sediment cores, channel surveys, dendrogeomorphic tools, etc.). The third conceptual model focuses on the delta morphodynamics. The delta formation at the head-waters of Lake Oahe has historically impacted upstream velocities through the Bismarck-Mandan reach and has provided areas for ice jams to form. The delta morphology and associated sediment transport processes have very likely been impacted by the 2011 flood. However, the effect that the current delta configuration exerts on upstream velocities, flow conveyance, and potential for ice jams is unknown. The objective will be met using repeat cross-sectional surveys, point surveys, bathymetry, and analysis of historical aerial photography. This approach will largely address elements from Goals 1, 2, and 5. The results of this effort will also inform Goals 3, 4, and 6.

Sediment Balance. The sources and sinks of sediment throughout the entire reach will be determined from the Garrison dam to the Oahe delta. The sediment balance is essentially a verification and quantification of the conceptual models described above. Depending on the outcome, the conceptual models may be revised or adjusted. This in turn informs the numerical modeling efforts. Repeat cross-sectional surveys, wind sediment traps, suspended sediment data, and remote sensing will be utilized to quantify sediment sources and sinks. This addresses Goal 6.

Numerical Modeling. Channel change through time will be predicted around the Bismarck-Mandan metropolitan area as a result of different flow events (both normal dam operation and simulated future flood events) to address Goal 3. This model will be populated by much of the data collected and utilized for the conceptual model of flood impacts and the sediment balance (described above). The forecasting will be completed using a numerical model, mostly likely under the International River Interface Cooperative (iRIC) modeling interface. In the future, this numerical model could be expanded to predict post-flood channel variability over the 70-mile Garrison Dam to Lake Oahe reach of river in response to management and hydrologic variability. The effort needed for additional data collection and model development for the larger reach was not included in the current proposed study.

Vegetation Assessment. Vegetation interacts with the flow and sediment in complex ways to impact key geomorphic processes: island development, stabilization and evolution, in-channel sediment trapping and scour, and bank stabilization and erosion. These processes are characteristic and indicative of channel evolution, and also provide key habitats for a host of riparian zone and aquatic organisms (some of which are threatened or endangered species). This goal will be met using field surveys to quantify sediment processes around vegetation and the spatial distribution of large woody debris (LWD). Historical trends will be determined using aforementioned remote sensing data processed for the conceptual models. This addresses Goal 7.

Timetable

Project elements	FY2012	FY2013	FY2014
Numerical model	Data Collection, model training, model development	Model development and refinement	Interpret results, report generation
Historical geomorphology	Collect and process remote sensing data, groundtruth	Interpret data for assisting other project elements	Report generation
Flood geomorphology	Collect and process remote sensing data, groundtruth	Interpret data for assisting other project elements	Report generation
Oahe Reservoir delta monitoring	Field surveys	Field surveys, interpret historical trends from other project elements	Interpret results, report generation
Sediment balance	Field surveys, data collection	Field surveys, interpret historical trends from other project elements	Field surveys, interpret results, report generation
Vegetation analysis	Field surveys	Interpret remote sensing trends, complete data collection	Report generation

Products

Each of the following products can be provided as either a USGS report or a peer-reviewed journal article in a scientific journal. Presentations at local and national conferences are also likely on some or all of the project tasks. In addition, at least one annual progress report/meeting will be conducted each year with all cooperators. Preliminary data or results will also be provided throughout the project to the cooperators for review.

1. Conceptual model of governing geomorphic processes in the Missouri River

- o Role of dam management
- o Role of 2011 flood

This product would describe a comprehensive understanding of the impacts of the 2011 flood on both the river and the infrastructure.

2. Conceptual model of Lake Oahe delta dynamics.

This product would describe a comprehensive understanding of the 2011 flood impacts on the delta as well as how the current delta configuration can impact upstream velocity, flow conveyance, and ice jam potential.

3. Numerical model of the Bismarck-Mandan area of interest.

- Prediction of channel evolution and sediment transport under certain management strategies.

This product would describe the methods and results of the prediction of how human infrastructure in Bismarck-Mandan will be impacted by future flows.

4. Sediment balance.

This product will describe the quantification of sediment sources and sinks and verify the accuracy of the conceptual models and numerical modeling.

5. Vegetation analysis.

This product will describe how the vegetation impacts sediment transport, island dynamics, and habitat potential as well as verify the accuracy of conceptual models.

It should be noted that the approach outlined here, while specifically developed for the Bismarck-Mandan reach of the Missouri River, would also be suitable in understanding and quantifying geomorphic change as a result of recent flooding in the Fort Peck (MT) reach and the Vermillion reach (SD). Including the two other significant free-flowing reaches of the Upper Missouri River would allow for a more complete understanding of the effects of the 2011 flood and would also provide an understanding of the geomorphic trends on these relatively under-studied reaches since the Missouri River has been regulated.

Budget

The following budget includes estimates of expenses from salary, travel and vehicle costs, equipment and supplies, laboratory analyses, and publication costs. The budget does not include in-kind salary expenses for the USGS National Research Program staff that are contributing to the project. In addition, if sources of funding for this effort come from local or State partners, the USGS can provide up to 50 percent matching funds through the Cooperative Water Program.

Task	FY2012	FY2013	FY2014	Total
<i>Historical geomorphology</i>	\$ 76,000	\$ 48,000	\$ 20,000	\$144,000
<i>Numerical modeling</i>	\$ 26,000	\$ 30,000	\$ 13,000	\$ 69,000
<i>Flood geomorphology</i>	\$ 36,000	\$ 24,000	\$ 20,000	\$ 80,000
<i>Delta monitoring</i>	\$ 36,000	\$ 48,000	\$ 17,000	\$101,000
<i>Sediment Balance</i>	\$ 43,000	\$ 54,000	\$ 30,000	\$127,000
<i>Vegetation analysis</i>	\$ 3,000	\$ 26,000	\$ 10,000	\$ 39,000
Total Project Cost	\$220,000	\$230,000	\$110,000	\$560,000



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
PO BOX 2870
PORTLAND OR 97208-2870

REPLY TO
ATTENTION OF

Missouri River Basin Water Management Division

Mr. Todd Sando
North Dakota State Water Commission
900 East Boulevard Avenue, Department 770
Bismarck, North Dakota 58505-0850

Dear Mr. Sando:

Thank you for your letter dated October 13, 2011, regarding your proposal to lower the level of Garrison reservoir to elevation 1835.0 feet at the start of the 2012 runoff season. While I agree that analysis of the 2011 flood may indicate the need for additional flood control storage and changes in the regulation of the mainstem reservoir system in the future, I have determined this would not be a prudent action for the coming year after carefully analyzing the potential benefits and risks of your suggestion. Below I have addressed the specific issues raised in your letter and have outlined some of the benefits and risks, as well as other matters, considered in arriving at this decision. Copies of this letter will be provided to Missouri basin governors.

Your letter expressed concern that in the draft Annual Operating Plan (AOP) the Corps has made no adjustments to the procedure on which operational decisions are based. The AOP is not meant to direct, restrict or even describe procedures for operational decision making. Regulation criteria are provided in the Master Manual; real time decision making is made using the best information and tools available to the Missouri River Basin Water Management Division. The Water Management Division continually adjusts its procedures to take advantage of new technology, tools and lessons learned to improve regulation of the reservoir system and will continue to do so as we enter the 2012 runoff season based on this year's historic runoff.

Your letter also states that the Corps should incorporate additional data into its forecasting including probabilistic runoff forecasts, the persistent nature of wet and dry cycles, and the National Weather Service long-range outlooks in order to introduce more flexibility and annual customization of the AOP. The AOP is not intended to be a forecast for the coming year; rather it provides a range of potential runoff scenarios which cover 80 percent of the historic record. There is still a 10 percent chance that runoff could be above the range modeled in the AOP and a 10 percent chance it could be lower. If stakeholders believe 2012 will be a wet year, we would encourage them to focus their attention on the upper quartile and upper decile runoff conditions rather than the median or lower runoff conditions as they make business and personal decisions for the coming year.

Unlike the AOP, real time reservoir regulation decisions are based on actual conditions on the ground. Monthly studies produced at the beginning of each month and the 3-week forecasts produced each Wednesday utilize runoff forecasts based on all available and relevant hydrometeorological information including, but not limited to observed runoff volumes, National Weather Service short and long-range outlooks, plains and mountain snowpack data, observed base flows, soil moistures, and frost depths. Thus the customization requested in your letter is accomplished in real time rather than in the AOP.

While we agree with your statement regarding La Nina as it concerns below normal winter and spring temperatures across Montana and North Dakota, it is the opinion of federal climate experts that the correlation between La Nina and precipitation is not nearly as strong. Data provided from the Climate Prediction Center shows that over the period of record, high precipitation has occurred in El Nino years, La Nina years, and in ENSO neutral years. The same can be said about drought periods. Since 1950 there have been five La Nina events which extended two or more years: 1949-51, 1954-57, 1970-72, 1973-76, and 1998-2001. Runoff during the second year of those five events varied widely: three were wetter than average (1975 was 10th wettest at 35.5 MAF; 1972 was 20th wettest at 32.9 MAF; and 1951 was 38th wettest at 28.8 MAF) and two were drier than average (2000 was 15th driest at 16.5 MAF and 1956 was 29th driest at 19.4 MAF). Hence there is little reason to base this decision on data that is so variable and therefore not a reliable predictor of future runoff in the upper Missouri River basin.

In addition there is no information which would predict apriori the record rainfalls which occurred across the upper basin during the late spring and summer of 2011: in essence, correlation does not equate to causation, nor does it suggest there is reliable information in advance of the occurrence of excessive precipitation. Had the record rains not occurred, the reservoir system could have managed the snowmelt runoff with normal to above normal rainfall without requiring record releases. Although the latest NWS forecast indicates the increased *probability* of above normal precipitation across the upper basin from November through February, this forecast does not provide any indication of the *magnitude* of the departure from normal. This increased probability of above normal precipitation, if it occurs, will likely manifest in terms of plains and mountain snowpack that can be observed and accommodated in the operation of the reservoir system through the winter and early spring.

Clearly, the benefits of your plan would be increased flood protection for some in the upper basin; however, it would do little for the rest of the basin and would ultimately have a negligible benefit in a repeat of the 2011 runoff. If 750,000 acre feet of additional storage had been available during 2011, peak releases could have averaged approximately 10,000 cfs lower for 38 days which would not materially change the footprint of the flood. In order to analyze the impacts and risks of lowering the target elevation at Garrison reservoir at the start of the runoff season from 1837.5 to 1835.0 ft, which would provide an additional 750,000 acre-feet of flood control storage, my staff at the Missouri River Basin Water Management Division produced a preliminary November 1 runoff forecast and updated a reservoir regulation forecast both with and without your suggested operation.

Inflows into Garrison reservoir in recent weeks have averaged slightly higher than anticipated in our October 1 runoff forecast and this trend is expected to continue as shown on attachment 1. As a result, even without implementing the State Water Commission's recommendation, releases from Garrison during November will need to be increased from 26,000 cfs to 28,000 cfs as shown in attachment 2. If the additional 2.5 feet are withdrawn from the reservoir, releases from Garrison reservoir would need to be increased to approximately 40,500 cfs for the month of November as shown in attachment 3. Several residents in the Bismarck area have expressed their concerns that releases from Garrison above 40,000 cfs would exacerbate bank erosion along the river and threaten their homes. As shown on attachment 3, implementing your proposal would necessitate releases of 40,500 cfs in November, which is slightly above the rate at which they believe they will be impacted.

At the Governor's meeting on October 17, you suggested moving the 2.5 feet of water into Oahe reservoir to avoid impacts below Gavins Point dam. While this suggestion may provide additional

flood risk mitigation to the residents of Bismarck, Mandan and other North Dakotans below Garrison dam, it would limit our ability to provide flood risk reduction for communities further downstream. Releases from Gavins Point are frequently decreased during the spring and summer in response to high downstream flows, backing up water in Fort Randall and Oahe reservoirs. If Oahe reservoir begins the runoff season 750,000 acre-feet into the flood control zone, we will have less flexibility to respond to downstream flood events. This is why the intrasystem unbalancing has not been included in the past two AOP's. Thus, if Garrison reservoir were to be drawn down to elevation 1835.0 ft, this water would need to be passed through the four downstream reservoirs and released from the system. As a result, releases from the four downstream dams would need to be increased approximately 10,000 cfs for the month of November.

These increased flows would also delay the inspection and repair of critical dam facilities including the flood tunnels at Garrison which would have to be reopened to pass the increased releases. It would also have a negative impact on public and private entities below Garrison and the four lower dams who are trying to reestablish their homes, farms and businesses prior to winter cold. Higher releases would also impact the constructability, amount of material, and cost of repairing levees below the system including the recently awarded contracts for levees L550 and L575. As recently as Wednesday, October 26 the USGS measured 5,000 cfs flowing through the breach at levee L575. Increasing releases from Gavins Point dam would only exacerbate this condition.

In addition to these increased risks, making such a change would also impact the other authorized system purposes which the Corps is required to consider. For example, hydropower generation at the mainstem dams would also be impacted by your proposal. Generating capacity at several projects is currently limited due to normal fall maintenance of hydropower units. As a result, additional releases at Garrison, Fort Randall and Gavins Point dams would need to be passed through spillways or outlet tunnels, thus producing no hydropower this fall and reducing potential generation next summer when power demands are the highest. The additional releases at Oahe and Big Bend could be passed through the hydropower units this fall if there is a sufficient demand for the power and transmission capability to move it. Based on information from Western Area Power Administration, the potential cost of implementing your proposal could be as high as \$12 million dollars in lost generating revenues.

We are also concerned that your proposal does not indicate how the deviation would be handled in future years, especially if drought returns to the basin in 2012. This includes whether or not the navigation guide curves and winter release rates would be adjusted, and whether the upper three reservoirs would be balanced at the end of 2012 or whether North Dakota was willing to carry forth the impact of this deviation through any future drought. Although several of the other basin Governors voiced their support of your plan at the meeting in Omaha, this level of detail was not discussed which has impacts on all.

On October 28, 2011, we received a letter from Governor Schweitzer, included as attachment 4, outlining the conditions for Montana's support of the proposed operation. After reviewing the conditions, we note that several of the conditions would be difficult to implement given the current status of the reservoir system, and the fourth condition would require Congressional action. Therefore, in balancing the benefits, costs and these other considerations, I have concluded the most prudent action is not to implement your plan.

I understand the importance of flood control to citizens in the State of North Dakota, and the rest of the basin as well, and appreciate your commitment to raise these issues. I can assure you the Corps is incorporating lessons learned in how to better operate the reservoir system in times of extreme runoff including any recommendations from our internal and external water management reviews. We will also continue to be vigilant as we enter this spring given the fragile condition of the entire system awaiting repairs. If you have any questions, please feel free to contact me at (503) 808-3700 or Jody Farhat, Chief of Missouri River Basin Water Management Division at (402) 996-3840.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. McMahon", with a long horizontal flourish extending to the right.

John R. McMahon
Brigadier General, US Army
Division Commander

The final EIS was available to the public on December 28, 2007. The Secretary of the Interior executed a memorandum on January 15, 2009 disclosing the following: the project selected to meet the needs of the Red River Valley is the preferred alternative, pipeline from the McClusky Canal to Lake Ashtabula; and, the identified treatment processes are adequate to meet the requirements of the Boundary Waters Treaty. The U.S. State Department requested that the Bureau of Reclamation delay executing the Record of Decision until discussions with Canada have been concluded.

Dave Koland, Garrison Diversion Conservancy District general manager, provided a status report relating to the specific efforts of the Red River Valley Water Supply project, and the District's ongoing activities.

There being no additional business to come before the State Water Commission, Governor Dalrymple adjourned the meeting at 12:10 P.M.



Jack Dalrymple, Governor
Chairman, State Water Commission

Todd Sando, P.E.
North Dakota State Engineer,
and Chief Engineer-Secretary
to the State Water Commission