EXHIBIT A: PROJECT SUMMARY SHEET
January 2010

Project Name: Upper Minnesota River Watershed Water Quality Assessment

Lead Project Sponsor: East Dakota Water Development District
132B Airport Avenue, Brookings, SD 57006
(605) 688-6741/-6744 FAX
Project Contact: Jay Gilbertson, EDWDD Manager **E-Mail**: edwdd@brookings.net

State Contact: Paul Lorenzen, SD DENR
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State: SD **Watershed**: Upper Minnesota River Basin **Hydrologic Unit Code**: 07020001
High Priority Watershed: Yes **TMDL Development [x]** and/or **Implementation** [ ]

Project Type: [] Staffing/Support **[x] Watershed** [] Groundwater [] I&E

Waterbody Type(s)	**NPS Category**	
[ ] Groundwater	[x] Agriculture	[ ] Resource Extraction
[ ] Lakes/Reservoirs	[x] Urban Runoff	[ ] Stowage/Land Disposal
[x] Rivers	[ ] Silviculture	[ ] Hydrologic Modification
[x] Streams	[ ] Construction	[ ] Other
[ ] Wetlands		

Project Location: LATITUDE N 45^{O} 20' LONGITUDE W 096^{O} 46'

Summarization of Major Goals:
The long-term goal of the Upper Minnesota River Watershed Water Quality Assessment project is to locate and document sources of nonpoint source pollution in the watersheds of the Whetstone and Yellow Bank Rivers through water quality sampling and stage and discharge measurements. Completion of the study will result in Total Daily Maximum Load (TMDL) reports for any impairments identified.

Project Description:
The Upper Minnesota River watershed consists of two naturally occurring river systems that drain the eastern flank of the Coteau des Prairies upland in Roberts, Grant and Deuel Counties in northeastern South Dakota. These rivers, along with Big Stone Lake, constitute the headwaters of the Minnesota River. The Upper Minnesota River watershed encompasses approximately 850 square miles of predominantly agricultural land in South Dakota and west-central Minnesota. The communities of Wilmot, Big Stone City, Milbank, LaBolt and Revillo are located along the rivers or major tributaries. Sources of impairment within the watershed will be documented through water quality monitoring (chemical and biological)and tributary gaging and feasible alternatives for restoration will be presented in the final project report and any requisite TMDL reports.

FY09 604(b) funds requested	$ 39,000	**Non-federal match**	$ 64,490
SD DENR Fees Funds	$ 14,260	**Total project cost**	$ 117,750
604(b) Funded Full-Time Personnel	0.5		

2.0 STATEMENT OF NEED

2.1 The purposes of this assessment are the following:

a. To determine the condition of water bodies in the Upper Minnesota River watershed (Whetstone and Yellow Bank Rivers) and record changes over a period of time;

b. To document bacterial, sediment and/or nutrient loadings to the river systems, and by extension, Big Stone Lake and the Minnesota River; and

c. To support the development of total maximum daily loads (TMDL) as necessary.

No water bodies within the Upper Minnesota River watershed are listed in the 2008 South Dakota Integrated Report Surface Water Quality Assessment as being impaired with regard to the designated beneficial uses. However, these determinations are based on limited and/or minimal water quality sampling, and local residents and stakeholder groups are quite concerned about the condition of the watershed. Recent flooding events and development of large-scale animal feeding operations have raised local interest in water quality issues.

2.2 Tributaries to the Upper Minnesota River (Whetstone and Yellow Bank Rivers) drain the eastern flank of the prominent upland known as the Coteau des Prairies in northeastern South Dakota. The surface area for the Upper Minnesota River watershed, as defined in this project, is roughly 850 square miles (544,000 acres) in size. The rivers, along with numerous tributaries, are permanent and perennial water bodies within the project area. There are also numerous intermittent tributaries which carry water only during spring snow melt or rainfall events. Upper portions of the watershed are prone to erosion due to high relief. In the lower parts of the watershed, abrupt lowering of stream gradients often results in lowland flooding.

Water movement in these watersheds can be exceptionally flashy as a result of the high relief along the flank of the Coteau des Prairies. Elevation changes in excess of 1,000 feet take place across the length of the watershed, much of which occurs within the initial third of the river system. The headwaters of most tributary streams begin at elevations over 2,000 feet above mean sea level, dropping to an elevation of roughly 960 feet where the rivers enter the Minnesota River. This elevation change takes place over as little as 30 miles.

The Whetstone River, from its origin (confluence of the North and South Forks) downstream to the Minnesota-South Dakota border, has been classified for the beneficial uses of :

5) warm water semipermanent fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

The North Fork of the Whetstone River, from SD Highway 15 downstream to its confluence with the South Fork, has been classified for the beneficial uses of :

6) warm water marginal fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

The South Fork of the Whetstone River, from its origin at Myers Lake (Section 22, Township 120 North - Range 51 West) downstream to its confluence with the North Fork, has been classified for the beneficial uses of :

6) warm water marginal fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

North Fork of the Yellow Bank River, from Section 27, Township 120 North - Range 48 West, downstream to the Minnesota-South Dakota border, has been classified for the beneficial uses of :

4) warm water permanent fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

South Fork of the Yellow Bank River, from Section 33, Township 118 North - Range 49 West, downstream to the Minnesota-South Dakota border, has been classified for the beneficial uses of :

3) cold water marginal fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

Mud Creek, from Section 22, Township 118 North - Range 48 West, downstream to its confluence with the South Fork of the Yellow Bank River, has been classified for the beneficial uses of :

6) warm water marginal fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

LaBolt Lake Creek, from the LaBolt Lake outlet downstream to the Minnesota-South Dakota border, has been classified for the beneficial uses of :

5) warm water semi-permanent fish life propagation;
8) limited contact recreation;
9) fish & wildlife propagation, recreation & stock watering; and
10) irrigation.

2.3 See Figure 1.

2.4 Land use in the study area is primarily agricultural. Significant tracts on and along the eastern flank of the Coteau des Prairies are in grass and/or pasture land. Row crops, principally corn and soybeans, dominate in the eastern portions of the watershed, with some small grains and alfalfa. Numerous animal feeding areas are located within the area, although the trend is toward fewer operations with higher numbers of animals. Several large

Figure 1. Location of Upper Minnesota River Watershed Water Quality Assessment Project and location of water quality and stage & discharge monitoring locations. See Attachment A for detailed location descriptions.

dairy operations have been built or proposed for the area in recent years. Commercial and residential development is concentrated in and near the City of Milbank, and numerous small communities in the area.

The average annual precipitation in the study area is 22 inches, of which 75% typically falls April through September. Tornadoes and severe thunderstorms strike occasionally. These storms are often of only local extent and duration, and occasionally produce heavy rainfall events. The average seasonal snowfall is 30 inches per year.

The surficial character of the watershed can be divided into four parts. The southwestern and northeastern edges of the watershed are dominated by the undrained, or poorly drained, depressions. These areas mark the location of ice-marginal deposits left behind during the last ice age. The northeast flank of the Coteau des Prairies is a well-drained area, with substantial relief. Many small tributary streams cross the area from the southwest to the northeast. The central part of the watershed is characterized by moderately well drained, low relief terrain sloping gently toward the northeast. In all three cases, the land surface is underlain by glacial till. Finally, the valleys of the Whetstone and Yellow Bank Rivers are deeply incised into the land surface. Glacial outwash is found along these valleys. Shallow wells in the saturated sand and gravel (aquifer) are the drinking water source for some private wells. Discharge from the aquifer may also help maintain river levels during dry periods.

Soils within the study area are derived from a variety of parent materials. Uplands soils are relatively fine-grained, and have developed over glacial till, often with a thin loess (wind-blown silt) cover. Coarse-grained soils are found around the valley bottoms of the river and major tributaries, and are derived from glacial outwash or alluvial sediments.

2.5 As noted above, no water bodies in the Whetstone River and Yellow Bank River watersheds are listed in the 2008 South Dakota Integrated Report Surface Water Quality Assessment as being impaired with regard to designated beneficial uses. However, these determinations are based on minimal water quality sampling, and local residents and stakeholder groups are quite concerned about the condition of the watershed. Recent flooding events and expanding development of large-scale animal feeding operations have also raised local interest in water quality issues. In particular, sediment and nutrient loading into Big Stone Lake from the watershed constitutes a serious local concern. The study will provide a better data set by which to assess the true condition of these water bodies, which can then serve to either develop appropriate remedial activities or form the basis for establishing safe guards to protect these high-use, high quality resources.

3.0 PROJECT DESCRIPTION

3.1 GOALS

The goal of this assessment project is to determine and document sources of impairments to water bodies in the Upper Minnesota River watershed in northeastern South Dakota. According to the 2008 South Dakota Integrated Report for Surface Water Quality

Assessment, the Whetstone and Yellow Bank Rivers are meeting the designated beneficial uses. However, these determinations are based on a limited data set, and local citizens and stakeholder groups are very concerned about water quality in the watershed. The proposed investigation would provide a far greater breadth of information on which to base an assessment of the condition of the watershed. The study results will provide the basis for total maximum daily load (TMDL) reports for any impairment(s) identified.

3.2 OBJECTIVES AND TASKS

OBJECTIVE 1: Estimate the sediment and nutrient loadings within the Whetstone River and Yellow Bank River watersheds, along reaches of the rivers and selected tributaries in the watershed through chemical, hydrologic and bacteriological monitoring. The information will be used to locate critical areas in the watershed(s) to be targeted for implementation of best management practices, if needed, or protection.

TASK 1 Water Quality Sampling/Analyzes: Collect water quality samples from fourteen (14) monitoring sites along the Whetstone River, Yellow Bank River and tributaries. Sample collection will take place twice each week during the sampling season (mid-April to mid-October), provided safe access to the collection sites is possible. Samples will be collected over two seasons (2010 and 2011), with an estimated total number of 1,456 samples. Sampling will begin in the spring of 2010. Monitoring sites are shown on Figure 1 and listed in Attachment A.

Field measurements of dissolved oxygen, pH, conductivity, salinity, air temperature and water temperature will be taken at the time of sample collection. Samples will be submitted to RMB Environmental Laboratories, Inc. for analyses for *Escherichia coli* (*E. Coli*) bacteria (twice per week), total suspended solids and ammonia (weekly), and total phosphorus, nitrogen (nitrate + nitrite) & total suspended volatile solids (twice per month).

TASK 2 Tributary Gaging: Install water stage recorders at eight (8) river and tributary monitoring sites and maintain a continuous stage record while water quality samples are being collected. Stage recorders will be installed by the sponsor at seven of the sites, with the Minnesota Pollution Control Agency (MN PCA) providing the eighth. The United States Geological Survey (USGS) or the South Dakota Department of Environment and Natural Resources (SD DENR) maintain continuous recording stream gaging stations at the remaining six (6) sampling/monitoring locations. See Attachment A for locations of stage recorders. Discrete discharge and tributary stage measurements will be taken on a regular schedule across a range of flow conditions.

Discharge measurements and water-level data will be used to calculate a hydrologic budget for the watershed. This information will be used in conjunction with the results of the water quality sampling to calculate nutrient and sediment loadings within the watershed.

QUALITY ASSURANCE/QUALITY CONTROL:

Approved QA/QC procedures will be utilized on all sampling and field data collection on the Upper Minnesota River Watershed Water Quality Assessment project. Refer to the South Dakota Watershed Protection Program Quality Assurance Project Plan and the Standard Operating Procedures for Field Samplers for details of the procedures to be followed.

PRODUCTS:

A watershed water quality report. Hydrologic and nutrient loads will be calculated for the entire watershed.

RESPONSIBLE AGENCIES:

Task Prioritization:	Project Personnel/EDWDD
Design/Technical Assistance:	SD DENR
	MN PCA

WORK ACTIVITIES:

Water samples will be collected with a suspended sediment sampler when possible. All sample bottles will be collected, stored and shipped to the labs using the methods described in the Standard Operating Procedures for Field Samplers by the State of South Dakota Watershed Protection Program. Nutrient and solids parameters will be sampled at fourteen (14) river/tributary sites in the Upper Minnesota River watershed. Samples will be analyzed by RMB Environmental Laboratories, Inc., of Detroit Lakes, MN. The watershed water quality data will be integrated together with the hydrologic loadings to provide an assessment of the conditions in the Upper Minnesota River hydrologic system.

COST: $ 51,920 (604(b) Funds = $ 22,620)

OBJECTIVE 2: Ensure that all water quality samples are accurate and defendable through the use of approved Quality Assurance/Quality Control procedures.

TASK 3 QA/QC Sampling: All QA/QC activities will be conducted in accordance with the Nonpoint Source Program Quality Assurance Project Plan. The collection of all field water quality data will be accomplished in accordance with the Standard Operating Procedures for Field Samplers, South Dakota Watershed Protection Program.

A minimum of 10 % of all the water quality samples collected will be QA/QC samples. QA/QC samples will consist of field blanks and field duplicate samples. An estimated 146 samples will be collected during the project.

TASK 4 QA/QC Reporting: The activities involved with QA/QC procedures and the results of QA/QC monitoring will be compiled and reported on in a section of the final project report and in all project reports.

PRODUCTS:

A Quality Assurance/Quality Control monitoring report.

RESPONSIBLE AGENCIES:

Task Prioritization: Project Personnel/EDWDD
Design/Technical Assistance: SD DENR
MN PCA

WORK ACTIVITIES:

Approved QA/QC will be utilized on all sampling and field data collected during the Upper Minnesota River Watershed Water Quality Assessment project. Please refer to the South Dakota Watershed Protection Program Quality Assurance Plan and the South Dakota Watershed Protection Program Standard Operation Procedures for Field Samplers for details of the procedures to be followed.

COST: $ 4,400 (604(b) Funds = $ 3,820)

OBJECTIVE 3: Public awareness of project goals and results will be provided for and encouraged.

TASK 5 Public Meetings: Informational meetings will be held on a regular basis for the general public and local governmental entities. The meetings will present information on the progress and results of the investigation. These meetings will also provide an avenue for input from the residents in the area.

PRODUCTS:

Information and education about the project. Public input to the project, with the involvement and/or input from the public being documented.

RESPONSIBLE AGENCIES:

Task Prioritization: Project Personnel/EDWDD
Grant and Roberts County Conservation Districts
Upper Minnesota River Watershed District
Lac qui Parle-Yellow Bank Watershed District

Design/Technical Assistance: SD DENR, MN PCA

WORK ACTIVITIES:

Informational meetings will be held on a regular basis for the general public, local governments (county commissions, township boards, conservation districts) and the media to inform them of progress on the study and provide a means of public input.

COST: $ 650 (604(b) Funds = $ 500)

OBJECTIVE 4: Data evaluation, reporting, and preparation of the final report

TASK 6 Data compilation and evaluation and reporting: As field data is collected, a concurrent review of historical data will be conducted, and project results will be integrated into a comprehensive database. Following the collection of all project data, loading calculations will be done and hydrologic, sediment and nutrient budgets will be developed.

PRODUCTS:

A summary of all water quality and water quantity information collected during the investigation, along with relevant historical data. A final report incorporating all previously described objectives.

RESPONSIBLE AGENCIES:

Task Prioritization: Project Personnel/EDWDD
Design/Technical Assistance: SD DENR
MN PCA

WORK ACTIVITIES:

Statistical evaluation of all water quality and field data produced during the course of the study. Review and compilation of historical data will be completed. Write a summary of historical water quality and compare with project data to determine any possible trends. Graphic presentations of the information will be produced. An extensive review and study of the historical and current data will be done to determine the best management practices and hydrologic restoration techniques needed to improve water quality and sediment transport in the Upper Minnesota River watersheds (as needed).

Describe the results of the surface water quality sampling and hydrologic measurement, and the subsequent loading calculations. Based on data, evaluate the hydrology of the study area and the chemical, biological, and physical condition of the river and tributaries.

Produce a summary report of all QA/QC activities conducted during the project and include in the final project report.

COST: $ 10,800 (604(b) Funds = $ 300)

3.3 **MILESTONE TABLE** - see Attachment B.

3.4 No special permits are required to do this assessment project.

3.5 The East Dakota Water Development District is the appropriate lead project sponsor for this activity. The District has led local and regional efforts to identify, develop and protect water resources. The District was most recently the primary sponsor of the Central Big Sioux River, North-Central Big Sioux River/East Oakwood Lake, School and Bullhead Lakes and Lake Campbell Watershed Assessment projects.

3.6 No best managements practices (BMPs) will be funded or implemented during this assessment project.

4.0 COORDINATION PLAN

4.1 The following groups/agencies have agreed to cooperate in the Upper Minnesota River Watershed Water Quality Assessment project. A Memorandum of Understanding will be executed between the parties.

East Dakota Water Development District - project sponsor, technical and financial assistance.
Upper Minnesota River Watershed District - financial and technical assistance.
Lac qui Parle-Yellow Bank Watershed District - financial and technical assistance.
Citizens for Big Stone lake - local support and financial assistance.

4.2 In 2008, representatives of the Roberts County and Grant County Conservation Districts met with the manager of the East Dakota Water Development District and indicated that there was local interest in the preparation of an assessment of Whetstone River watershed. Subsequent meetings between the EDWDD manager, area land owners and representatives of the Upper Minnesota River and Lac qui Parle-Yellow Bank River Watershed Districts, the Grant County Conservation District, Citizens for Big Stone Lake and other stakeholder groups have also indicated an interest in a more comprehensive assessment project.

4.3 This project will coordinate activities with state, federal, and local government agencies. Input and involvement in this assessment will be requested from the Sisseton Wahpeton Oyate Office of Environmental Protection, the South Dakota Departments of Environment and Natural Resources and game, Fish and Parks; the Minnesota Pollution Control Agency and Department of Natural Resources; United States Department of Agriculture Natural Resource Conservation Service and the United States Department of Interior Fish and Wildlife Service, Citizens for Big Stone Lake, and local government agencies.

4.4 There currently are no other agencies conducting comparable assessment project activities in the Whetstone River and Yellow Bank River watersheds. The South Dakota Department of Environment and Natural Resources (SD DENR) does maintain five (5) surface water quality monitoring (WQM) stations within the watersheds. Each of these sites also has permanent stage recorders, four by maintained by SD ENR and one by United States Geological Survey (USGS). The sites have been incorporated into this investigation, and information collected by SD DENR and USGS will be included in the study

5.0 EVALUATION AND MONITORING PLAN

5.1 The monitoring strategy is explained in Section 3. All water quality monitoring will be done in accordance with the approved South Dakota Nonpoint Source Quality Assurance/Quality Control Project Plan and the Standard Operating Procedures for Field Samplers for the South Dakota Watershed Protection Program.

Almost all of the Whetstone River watershed (over 99%) and over 85% of the watershed of the Yellow Bank River are in South Dakota. However, both rivers "end" in Minnesota as tributaries to Big Stone Lake and the Minnesota River, respectively. As a consequence, water resource management and protection agencies and stakeholder groups in both states have a vested interest in the quality of the water in each watershed. A comprehensive and thorough assessment of the waters on both sides of the border will provide each state with a sound basis for making a consistent and uniform assessment of the condition of these shared water bodies. The sampling program and protocol in this investigation complies with each states requirements. It is hoped that with completion of this study will all interested parties to consider the condition of the watersheds without regard to political boundaries.

5.2 This assessment project consists of a combination of chemical, hydrologic, and biological (bacterial) analyzes. Monitoring sites will be maintained and sampled on the Upper Minnesota River (Whetstone and Yellow Bank Rivers) watersheds and selected tributaries within the project watershed. Ambient samples will be collected on a regular schedule. Samples will be analyzed for the primary parameters (*E. coli* bacteria, conductivity, pH, dissolved oxygen, temperature, suspended solids, ammonia, nutrients, and suspended volatile solids) used to determine whether the water in the Whetstone River, Yellow Bank River and tributaries meets the numeric criteria for the assigned beneficial uses. Stream discharge will be routinely measured. Loads will be calculated.

5.3 Results from all water quality monitoring efforts under the Upper Minnesota River Watershed Water Quality Assessment will be reported in the final project report. Data will be managed by the South Dakota Department of Environment and Natural Resources and maintained in a computer database. All sample data will be entered in the US EPA WQX program. These data may be used as the foundation for future Section 319 Watershed Implementation Project proposals. It is anticipated that a follow-up watershed restoration/ implementation project will be generated as a result of this project.

5.4 No modeling efforts are to be conducted as part of this project.

5.5 No best management practices will be funded or implemented during this project.

6.0 BUDGET (Attachment C)

7.0 PUBLIC INVOLVEMENT

Public involvement activities are detailed in Section 3, Task 5. Informational meetings will be held on a regular basis for the general public and local governmental entities. The meetings will present information on the progress and results of the investigation. These meetings will also provide an avenue for input from the residents and stakeholder groups in the area.

Attachment A

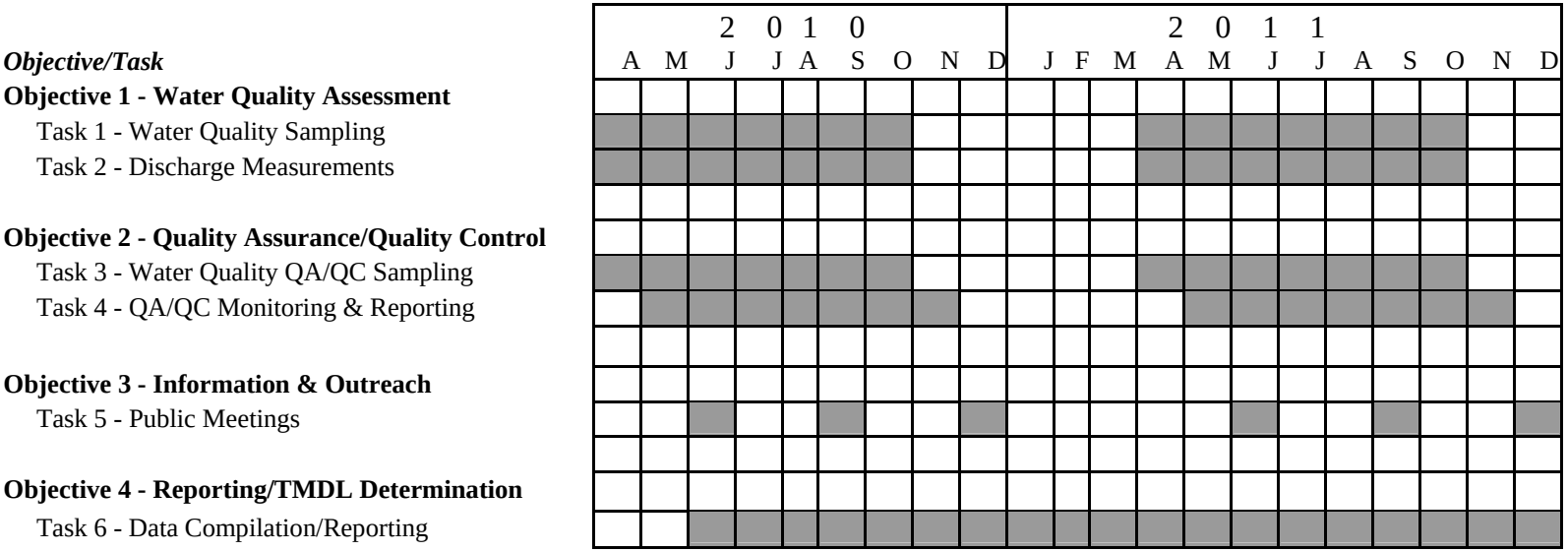
Water Quality Sampling/Stream Gaging Sites
for the
Upper Minnesota River Watershed Water Quality Assessment

Location Number	Site Description	Latitude/ Longitude	Stage*/ Discharge
	Whetstone River (WR)		
UMR 01	N Fork WR near Corona	45 22 11/096 45 37	**N**
UMR 02	N Fork WR at SD Hwy 15	45 18 19/096 38 14	**N**
UMR 03	S Fork WR at Twin Brooks	45 13 21/096 46 56	**N**
UMR 04	S Fork WR at SD Hwy 15 (WQM 90)*	45 13 43/096 38 27	**E**
UMR 05	S Fork WR at 479th Avenue (WQM 91)*	45 13 58/096 37 09	**E**
UMR 06	WR near Big Stone City (WQM 28)*	45 17 30/096 29 16	**E**
	Yellow Bank River (YBR)		
UMR 07	N Fork YBR at 482nd Avenue	45 10 07/096 33 31	**N**
UMR 08	N Fork YBR at 486th Avenue (WQM 88)*	45 12 28/096 28 36	**E**
UMR 09	LaBolt Creek near Nassau	45 04 48/096 28 37	**N**
UMR 10	S Fork YBR at 164th Street	45 00 13/096 39 23	**N**
UMR 11	Mud Creek at 162nd Street	45 02 08/096 29 10	**N**
UMR 12	S Fork YBR near Nassau, MN (WQM 87)*	45 03 00/096 28 04	**E**
UMR 13	S Fork YBR near Bellingham, MN*	45 10 31/096 21 14	**N**
UMR 14	YBR near Odessa, MN*	45 13 36/096 21 15	**E**

* - **N** indicates a location where a temporary stage recorder will be installed. **E** indicates existing SD DENR or United States Geological Survey stage recorders.

** - Nutrients (total phosphorus and nitrate + nitrite) and total suspended volatile solids will be measured at these sites only.

3.3 Milestone Schedule for the Upper Minnesota River Watershed Assessment



Responsible Agency

East Dakota Water Development District

6.0 Budget - UMR Watershed WQ Assessment

Objective/Task/Item	*2010*	*2011*	*Total Costs*	**Funding Sources** *EDWDD Cash/In-Kind*	*Local Cash/In-Kind*	*SD DENR Fee Funds*	*604(b) Funds*
Objective 1 - Water Quality Assessment							
Task 1 - Water Quality Sampling							
Water Quality Analyzes	$20,020	$20,020	$40,040		$5,720	$14,260	$20,060
Travel	$4,355	$4,355	$8,710	$4,355	$4,355		
Supplies & Materials	$1,030	$1,030	$2,060				$2,060
Task Subtotal	$25,405	$25,405	$50,810	$4,355	$10,075	$14,260	$22,120
Task 2 - Discharge Measurements							
Supplies & Materials	$375	$125	$500				$500
Travel	$400	$210	$610	$305	$305		
Task Subtotal	$775	$335	$1,110	$305	$305		$500
Objective 1 Subtotal	**$26,180**	**$25,740**	**$51,920**	**$4,660**	**$10,380**	**$14,260**	**$22,620**
Objective 2 - WQ Sampling QA/QC							
Task 3 - Water Quality QA/QC Sampling							
Water Quality Analyzes	$2,025	$2,025	$4,050		$580		$3,470
Supplies & Materials	$175	$175	$350				$350
Objective 2 Subtotal	**$2,200**	**$2,200**	**$4,400**		**$580**		**$3,820**
Objective 3 - Information & Outreach							
Task 5 -Public Meetings							
Travel	$75	$75	$150	$75	$75		
Supplies & Materials	$250	$250	$500				$500
Objective 3 Subtotal	**$325**	**$325**	**$650**	**$75**	**$75**		**$500**
Objective 4 - Data Compilation & Reporting							
Task 6 -Data Compilation & Reporting							
Personnel	$3,000	$7,500	$10,500	$10,500			
Supplies & Materials	$100	$200	$300				$300
Objective 4 Subtotal	**$3,100**	**$7,700**	**$10,800**	**$10,500**			**$300**

6.0 Budget - UMR Watershed WQ Assessment

Objective/Task/Item	*2010*	*2011*	*Total Costs*	Funding Sources: *EDWDD Cash/In-Kind*	*Local Cash/In-Kind*	*SD DENR Fee Funds*	*604(b) Funds*
Project Staff, Support & Administration							
UMRWD Project Staff	$14,700	$14,700	$29,400	$17,640			$11,760
EDWDD Project Staff	$6,300	$6,300	$12,600	$12,600			
UMRWD Office Space	$1,800	$2,400	$4,200		$4,200		
UMRWD Support Staff	$1,620	$2,160	$3,780		$3,780		
Administration Subtotal	**$24,420**	**$25,560**	**$49,980**	**$30,240**	**$7,980**		**$11,760**
Total Project Costs	**$56,225**	**$61,525**	**$117,750**	**$45,475**	**$19,015**	**$14,260**	**$39,000**

Financial Support	
EPA Section 604(b) Program	$39,000
SD DENR Environmental Fee Funds	$14,260
East Dakota Water Development District	$45,475
Local Funding (UMR & LQP/YB WDs)	$19,015
TOTAL	$117,750

OBJECTIVE 1, TASK 1 WATER QUALITY ANALYZES

(April 15, 2010- October 15, 2011)

Bi-Weekly Samples 14 sites * 104 samples/site = 1,456 samples

Cost per sample: *E. coli* bacteria @ RMB Environmental Laboratories = $ 13/sample

$ 13/sample * 1,456 samples..... $ 18,928

Weekly Samples 14 sites * 52 samples/site = 728 samples

Cost per sample: Ammonia and Total Suspended Solids @ RMB Environmental Laboratories = $ 19/sample

$ 19/sample * 728 samples..... $ 13,832

Bi-Monthly Samples 7 sites * 26 samples/site = 182 samples

Cost per sample: Nitrate + Nitrite, Total Phosphorus and Total Suspended Volatile Solids @ RMB Environmental Laboratories = $ 40/sample

$ 40/sample * 182 samples..... $ 7,280

Task 1 WQ Sample Analyses = $ 40,040

Weekly collection runs Whetstone route (65 miles)
+ Yellow Bank route (90 miles)
+ Combined route (150 miles) = 305 miles/week

52 sampling weeks * 305 miles/week = 15,860
Mileage - (15,860 * $0.50/mile)..... $ 7,930
52 weeks * 3 lunches/week * $5/lunch ..... $ 780

Task 1 Travel = $ 8,710

1 shipping cooler/day * 3 days/week * 52 weeks * $10/cooler..... $ 1,560
Supplies & Materials..... $ 500

Task 1 Supplies/Materials/Shipping = $ 2,060

OBJECTIVE 1, TASK 2 TRIBUTARY & RIVER DISCHARGE

(April 15, 2010- October 15, 2011)

River/Tributary sites 8 Total to be gaged using existing DENR, EDWDD and/or MPCA stage recorders

Task 2 Supplies & Materials = $ 500

2 installation trips * 150 miles/trip = 300 miles
Mileage - (300 miles * $0.50/mile) ..... $ 150
10 data collection trips * 80 miles/trip = 750 miles
Mileage - (800 miles * $0.50/mile) ..... $ 400
12 trips * 1 lunch/week * $5/lunch ..... $ 60

Task 2 Travel = $ 610

OBJECTIVE 1 TOTALS

TASK 1 $ 50,810
TASK 2 $ 1,110

TOTAL $ 51,920

OBJECTIVE 2, TASK 3 WQ QA/QC SAMPLING

(April 15, 2010- October 15, 2011)

1,456 bi-weekly samples * 0.10 (10%) = 146 samples
146 samples * $ 13/sample..... $ 1,898

728 weekly samples * 0.10 (10%) = 73 samples
73 samples * $ 19/sample..... $ 1,387

182 bi-monthly samples * 0.10 (10%) = 19 samples
19 samples * $ 40/sample..... $ 760

Task 3 WQ QA/QC samples = $ 4,050 (rounded up by $5)

Task 3 Supplies/Materials/Shipping = $ 350

OBJECTIVE 2 TOTALS

TASK 3 $ 4,395
TASK 4 $ 0

TOTAL $ 4,395

OBJECTIVE 3, TASK 5 INFORMATIONAL MEETINGS

(June 1, 2010 - December 31, 2011)

6 semi-annual meetings

50 miles/meeting * 6 meetings = 300 miles
300 miles * $0.50/mile ..... $ 150

Task 5 Travel = $ 150
Task 5 Supplies/Materials/Advertising = $ 500

OBJECTIVE 3 TOTALS

TASK 5 $ 650
TOTAL $ 650

OBJECTIVE 4, TASK 6 DATA COMPILATION, EVALUATION AND REPORTING

(June 1, 2010 - December 31, 2011)

Task 6 Personnel (EDWDD) 350 hours * $30/hour (s&b) = $ 10,500

Task 6 Supplies/Materials = $ 300

OBJECTIVE 4 TOTALS

TASK 6 $ 10,800

TOTAL $ 10,800

Project Staff

Project Staff $33,600/year * 1.75 years * 0.5 FTE = **$29,400**

EDWDD Staff $36,000/year * 1.75 years * 0.2 FTE = **$12,600**

WD Office Space 21 months * $200/month = **$ 4,200**

WD Support Staff 21 months * 10 hrs/month = 210 hours
210 hours * $18/hour (s&b) = **$ 3,780**