FINAL REPORT

AUG 2 9 2002

Title: Dakota County Wetland Health Monitoring Program, Subd. 12 (d), Benchmarks and Indicators

Project Manager: Daniel A. Huff
Organization: Dakota County Environmental Education Program

Website address:
http://www.extension.umn.edu/county/dakota/Environment/wetlands/wetld.html

Fund: Minnesota Environment and Natural Resources Trust Fund
Legal Citation: ML 99, [Chap. 231], Sec. [16], Subd. 12 (d)
Appropriation Amount: $160,000

The Dakota County Wetland Health Evaluation Project (WHEP) is a joint research and educational project sponsored by the Dakota County Environmental Education Program (DCEEP) the Minnesota Pollution Control Agency (MPCA) and the Cities of Dakota County. The goals of the project are to:

- Develop and refine biological monitoring methodologies to access the biological health of wetlands
- Provide meaningful data on wetland health to local governments
- Foster public awareness of wetland value and health within Dakota County communities
- Create positive partnerships between citizens and their local government in addressing natural resource issues

Annually, volunteer monitoring teams sampled up to four wetlands between June and August for plant and macroinvertebrate communities within their city and performed a cross check of a wetland monitored by another city's team. Using sampling techniques and monitoring protocols developed by the MPCA and approved by the US Environmental Protection Agency (EPA), volunteers analyzed collected samples and completed data field sheets. Prior to sampling, volunteers attended two and a half days of training given by MPCA staff. The time commitment for volunteers was approximately 30-50 hours per year. City staff worked with each team to select monitored wetlands. Volunteers reported the annual results back to their city, either to the city council or parks commission. URS/BRW, professional consultants provided quality control, statistical analysis and reporting.

From 1999-2001, over 200 volunteers have contributed approximately 10,000 hours performing 228 wetland surveys. Each of these surveys were tallied, met quality control and quality assurance guidelines and were reported to city and county staff and scientists at the MPCA. MPCA scientists combined this citizen data with their own research to refine the Indexes of Biological Integrity for depressional wetlands in Minnesota. This research has contributed to the methods for wetland bioassessment methods published by the US EPA.

Date of Report: July 1, 2002
LCMR Final Work Program Report

Project Completion Date: June 30, 2002

LCMR Work Program 1999:

I. **PROJECT TITLE:** Dakota County Wetland Health Monitoring Program, Subd. 12 (d), Benchmarks and Indicators

Project Manager: Daniel A. Huff
Affiliation: Dakota County Environmental Education Program
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Web Page address:
http://www.extension.umn.edu/county/dakota/Environment/eeprog.html

Total Biennial Project Budget: $160,000

$ LCMR:	$160,000	**$ Match:**	not applicable volunteer time
-$ LCMR Amount Spent:		**-$ Match Amount**	
7/1/99-9/10/99	$ 13,057.55	**Spent:**	$0
9/10/99-6/30/00	$ 23,568.26		
7/1/00-9/30/00	$ 10,278.18		
10/1/00-2/28/01	$ 24,905.61		
3/1/01-8/24/01	$32,680.28		
8/25/01-8/31/01	$13,736.47		
9/01/01-2/28/02	$22,593.64		
2/28/02-6/30/02	$19,180.01		
= $ LCMR Balance:	0.00	**= $ Match Balance:**	$0

A. Legal Citation: ML 99, [Chap. 231], Sec. [16], Subd. 12 (d)

Dakota County Wetland Health Monitoring Program, B05.
$80,000 the first year and $80,000 the second year are from the trust fund to the Commissioner of the Pollution Control Agency for an agreement with Dakota County to evaluate wetland health through citizen volunteers, develop wetland biodiversity projects in urban areas, and conduct public education.

Carryforward Language: ML 2001, 1st Special Session, Ch. 2, Sec. 14, subdivision 18, paragraph (a): The availability of the appropriation for the following project is extended to June 30, 2002: ML 1999, Chp 231, Sec. 16, Subd. Dakota County Wetland Health Monitoring Program B05.

B. Status of Match Requirement: Not applicable.

II. And III. FINAL PROJECT SUMMARY:

The Dakota County Wetland Health Evaluation Project (WHEP) is a joint research and educational project sponsored by the Dakota County Environmental Education Program (DCEEP), the Minnesota Pollution Control Agency (MPCA), and the cities of Dakota County. The goals of the project are to:

- Develop and refine biological monitoring methodologies to access the biological health of wetlands
- Provide meaningful data on wetland health to local governments
- Foster public awareness of wetland value and health within Dakota County communities
- Create positive partnerships between citizens and their local government in addressing natural resource issues

Annually, volunteer monitoring teams sampled up to four wetlands between June and August for plant and macroinvertebrate communities within their city and performed a cross check of a wetland monitored by another city's team. Using sampling techniques and monitoring protocols developed by the MPCA and approved by the U.S. Environmental Protection Agency (EPA), volunteers analyzed collected samples and completed data field sheets. Prior to sampling, volunteers attended two and a half days of training given by MPCA staff. The time commitment for volunteers was approximately 30-50 hours per year. City staff worked with each team to select monitored wetlands. Volunteers reported the annual results back to their city, either to the city council or parks commission. URS/BRW, professional consultants, provided quality control, statistical analysis and reporting.

From 1999-2001, over 200 volunteers have contributed approximately 10,000 hours performing 228 wetland surveys. Each of these surveys were tallied, met quality control and quality assurance guidelines, and were reported to city and county staff and scientists at the MPCA. MPCA scientists combined this citizen data with their own research to refine the Indexes of Biological Integrity for depressional wetlands in Minnesota. This research has contributed to the methods for wetland bioassessment methods published by the U.S. EPA.

IV. OUTLINE OF PROJECT RESULTS:

Result 1: Citizen monitoring:
The program developed a refined protocol where citizen volunteers gather biological data on invertebrates and vegetation to monitor wetland health. Scientists at the MPCA worked closely with WHEP volunteers, team leaders and coordinators over the past four years to develop this protocol. A final version will be published by MPCA by October of 2002. WHEP added to the research performed by MPCA and as a result contributed to articles on biological wetland monitoring published by the United States Environmental Protection Agency. These articles can be found at: http://www.epa.gov/owow/wetlands/bawwg/ . The finalization of WHEP protocols represents a significant achievement. Before WHEP started there was no volunteer biological wetland monitoring programs within the country. WHEP serves as a model citizen monitoring program.

Volunteers participated in common training experiences provided by MPCA staff. The challenge of training volunteers in a technical scientific protocol has grown as the numbers of volunteers has grown. In the future using a combination of common centralized training as currently practiced in addition to local team trainings may be effective. Currently plans on creating a training video for volunteers to view before the common trainings is being planned. Ten cities established citizen teams and selected an educator to serve as the team leader. In 2001 this number grew to 11 cities in Dakota County and three cities in Hennepin County. In 2002 three additional teams were added in Hennepin County bringing the total number of teams to 15.

Following an adopted Quality Assurance Project Plan, each citizen team monitored up to four wetlands within their city each year and an additional wetland monitored by another city team as a cross-check for quality control purposes. Frog call monitoring was originally part of the project. While some cities have continued their own frog call monitoring program, it was dropped as part of WHEP. The demands of the program from the monitoring of invertebrates and vegetation was more than enough to use all available resources and to provide a good picture of wetland health. While the program has shown longevity and continues to grow, the expansion of outreach efforts while maintaining the comprehensive monitoring program is a challenge. The rigor and time commitment of the program creates an increasing need to recruit and nurture volunteers. Meanwhile volunteers involved in the project want to see greater impact of their efforts than just the reporting of monitoring results. This requires the need for more outreach opportunities and remediation projects such as at Cedar Pond.

Result 1:	LCMR Budget:	$47,281.04	Match: $0
	Expenditures to 9/10/99	$ 3,409.81	
	Balance carried forward:	$59,590.19	

Expenditures 9/11/99-6/30/00 $ 4,930.43
Expenditures 7/1/00-9/30/00 $ 7,527.19
Expenditures 10-/01/00-2/28/01 $9,002.78
Balance carried forward: $38,129.79
Transfer funds to Result 3: $14,047.92
Transfer funds to Result 2: $7,473.35
Expenditures 3/1/01 – 8/24/01 $1,898.15
Balance carried forward: 14,710.37
Expenditures 8/25/01 – 8/31/01 $803.68
Balance carried forward: $13,906.69
Expenditures 9/01/01 – 2/28/02 $12,789.37
Balance carried forward: $1,117.32
Expenditures 3/01/02 – 6/30/02 $6,919.63
Balance carried forward: $0.0

Result 2: Technical assessment: Technical wetland experts provided quality assurance and quality control (QA/QC) for the citizen teams, analyzed data collected from 1997 through 2001, analyzed the effectiveness of BMPs in place on wetlands in the project, and made recommendations for installing new BMPs and bioengineering practices on Cedar Pond. URS served as the technical experts and designed the improvements at Cedar Pond. The QA/QC provided by URS showed that the citizen monitoring teams were providing reproducible monitoring results. URS/BRW provided checked the work of WHEP teams and in some cases performed replicate samples to gauge the validity of the volunteer data. This validation of the volunteers' data has given credence to the results of the project and has increased its value to participating cities.

Result 2: LCMR Budget: $72,235.00 Match: $0
Expenditures to 9/10/99 $ 9,308.65
Balance carried forward: $52,691.35
Expenditures 9/11/99-6/30/00 $12,903.31
Expenditures 7/1/00-9/30/00 $ 2,644.21
Expenditures 10/1/00-2/28/01 $15,843.87
Balance carried forward: $21,299.96
Transfer funds from Result 1: $7,473.35
Transfer funds from Result 4: $2,760.65
Expenditures 3/1/01-8/25/01 $6,509.00
Balance carried forward: $25,024.96
Expenditures 8/25/01-8/31/01 $12,932.79
Balance carried forward: $12,092.17
Expenditures 9/01/01 – 2/28/02 $8,490.53
Balance carried forward: $3,601.64
Expenditures 3/01/02 – 6/30/02 $3,602.64
Balance carried forward: $ 0.0

Result 3: Best Management Practices: City, county, state staff and WHEP volunteers have implemented the design of BMPs at Cedar Pond. It is too early to determine the impact of these BMPs on the quality of the wetland. However, BMP installation was successful. Educational outreach of this project included tours of the site, storm drain marking in the neighborhood, articles in the local papers and will include an educational Kiosk at the entrance to the park.

Result 3:	LCMR Budget:	$24,125.01	Match: $0
	Expenditures to 9/10/99	$ 0	
	Balance carried forward:	$20,000.00	
	Expenditures 9/11/99-6/15/00	$ 0	
	Expenditures 7/1/00-9/30/00	$ 0	
	Expenditures 10/1/00-2/28/01	$ 0	
	Balance carried forward:	**$20,000.00**	
	Transfer funds from Result 1:	$14,047.92	
	Expenditures 3/1/01-8/24/01	$24,273.13	
	Balance carried forward:	**$9774.79**	
	Expenditures 8/25/01-8/31/01	$0.0	
	Balance carried forward:	**$9774.79**	
	Expenditures 9/01/01 – 2/28/02	$0	
	Balance carried forward:	**$9,774.79**	
	Expenditures 3/01/02 – 6/30/02	$4,851.88	
	Balance carried forward:	**$0.0**	

Result 4: Education and Information: The public education effort has taken and continues to take many different tracks. Teacher workshops were held in the first two years of the project using *WOW! The Wonders of Wetlands* and Project WET (Water Education for Teachers) curricula. An environmental field day for fifth grade students offered by the local soil and water conservation district has received financial and staff support from WHEP. One WHEP team has done their macroinvertebrate lab work in the Mississippi River Gallery at the Minnesota Science Museum. While looking at their samples these volunteers are a living exhibit, showing children wetland critters and discussing the project with visitors. Other WHEP volunteers have presented to neighborhood groups, lake associations and city festivals. In 2002 each team was given multiple copies of brochures about wetlands and water quality to distribute while monitoring in neighborhoods. Instead of an insert in local community newspapers of cooperating cities, numerous articles on wetland health and WHEP have appeared in local newspapers throughout the County. An educational kiosk at Cedar Pond was professionally developed to provide not only educational information on the BMPs at the pond but also on wetlands in general. As WHEP has grown so has

our need to provide resources on the program to volunteers. Currently plans are being developed to create WHEP displays that may be checked out by volunteers while performing public outreach.

Result 4:	LCMR Budget:	$11,358.95	Match: $0
	Expenditures to 9/10/99	$ 339.09	
	Balance carried forward:	$14,660.91	
	Expenditures 9/11/99-6/30/00	$5,734.52	
	Expenditures 7/1/00-9/23/00	$ 106.78	
	Expenditures 10/1/00-2/28/01	$ 58.96	
	Balance carried forward:	**$ 8760.65**	
	Transfer funds to Result 2:	$2,760.65	
	Expenditures 3/1/01-8/24/01	$0.00	
	Balance carried forward:	**$6,000.00**	
	Expenditures 8/25/01-8/31/01	$0.0	
	Balance carried forward:	**$6000.00**	
	Expenditures 9/01/01 – 2/28/02	$1,313.74	
	Balance carried forward:	**$4,686.26**	
	Expenditures 3/1/02 – 6/30/02	$3,805.40	
	Balance carried forward:	**$ 0.0**	

V. DISSEMINATION

- Each year a summary report including the data results and analysis, analysis of the effectiveness of the BMPs and recommendations for new BMPs, and recommendations on the citizen monitoring process has been provided to the Minnesota Legislature, Dakota County, participating cities, team leaders, the Minnesota Zoo, the Minnesota Pollution Control Agency, and the Minnesota Department of Natural Resources. The summary is also posted at http://www.extension.umn.edu/county/dakota/Environment/wetlands/wetld.html .
- BRW/URS has prepared a reference collection for invertebrates from the project.
- A slide program that describes the results of the project has been prepared each year and presented to volunteers, city and county staff and MPCA scientists (examples are included in attached CD).
- The project has been described in numerous newspaper articles, city newsletters and conferences.
- Citizen teams have presented annual results to their city council, parks commission or other such city body.
- The project and resulting research is described on the US EPA website at http://www.epa.gov/owow/wetlands/bawwg/

V. CONTEXT

A. **Significance:** This grant request is for Phase II of a three-phased plan to increase knowledge of wetlands, to pilot a citizen volunteer monitoring protocol, to gather baseline and trend information on local wetland health, and to increase the biodiversity and installation of BMPs in wetlands in Dakota County.

During the first phase in 1996 and 1997, the Minnesota Pollution Control Agency and the Minnesota Audubon Council piloted a citizen-based biological monitoring protocol for evaluating wetland health using federal grant funding from United States Environmental Protection Agency (U.S. EPA). The goal of that project was to develop a cost-effective, scientifically accurate method that citizens can use to monitor the health of wetlands and provide information for local decision making about wetland management. In 1996, an initial testing of the protocol was conducted in Scott County. In 1997, the "beta testing" was done in Dakota County by five volunteer teams from the communities of Lakeville, Burnsville, Eagan, the Minnesota Zoo, and the Dakota County Soil and Water Conservation District. The project was coordinated locally by the Dakota County Environmental Education Program.

In 1997, Dakota County was awarded a grant from the US EPA Region 5 for continued monitoring and educational activities in 1998. The project was coordinated again by the Dakota County Environmental Education Program. The Minnesota Zoo was under contract to provide technical support the citizen monitoring teams. Wetland technical experts from the consulting firm of BRW, Inc. (now URS) also collected data using the citizen protocol and a more technical protocol developed by the Minnesota Pollution Control Agency. They analyzed the data for the project. The overall goal of the project was to see if data gathered by citizens and technical experts, using the same protocol, would result in similar scores for wetland health. By having consultants do a more technical protocol, the data could be used to see if the citizen protocol scored the same as a more technical protocol. The Minnesota Zoo and the cities of Apple Valley, Burnsville, Eagan, Farmington, Inver Grove Heights, Mendota Heights, and Rosemount had volunteer monitoring teams in 1998. The Zoo and the cities plan to continue monitoring under this LCMR project.

The grant project will provide an opportunity for the Minnesota Pollution Control Agency to finalize the protocol and metrics to guide citizen monitoring efforts in the central hardwood forest region of Minnesota. The summary report and recommendations will set the stage for Phase III when the citizen monitoring process can be firmly established to monitor wetland health and the effectiveness of BMPs and bioengineering practices over time.

B. **Time:** Since the metrics are designed for monitoring in June and July, extending the completion date to the requested June 30, 2002, will allow for monitoring for invertebrates (June monitoring) and vegetation (July-August

monitoring) to occur in the summers of 2000 and 2001. In 1999, the grant will support training and monitoring for vegetation only (July-August). The June 30, 2002 requested completion date will allow for analysis of the data and a summary report that covers 1999-2000 monitoring. The June 30, 2002 requested completion data also allows for installation of BMPs on selected wetlands to take place through the fall of 2001.

C. Budget Context:

History:

1996-1997	US EPA Grant to MPCA/MN Audubon Council	$276.659
	State match	$92,220
	Total	**$368,879**
1997-1998	US EPA Grant to Dakota County	$81,000
	Local match	$27,000
	Total	**$108,00**

1999 LCMR Project:

1. Budget: $160,000

Personnel: $113,683.79

$37,909.79	Team Leaders and Monitoring Coordinators, mileage and educational presentations.
$ 3,540	Clerical, project coordination
$70,234.00	Technical assessments (including technical evaluation and plans for BMPs)
$ 2,000	Reference collection (invertebrates)

Equipment: $17,191.20

$12,707.98	collection supplies, photography, educational materials, brochures, etc.
$3,483.22	reference/resource materials
$ 1,000	office supplies

Acquisition: $0

Development: $29,125.01

$29,125.01	Installation of BMPs on Cedar Pond

Other: Incorporated into Personnel and Equipment Budgets

Wetland field day
WET/WOW teacher workshop
summary report/slide program

2. Submit a budget detail with all the specifics as attached as Attachment A.

VII. COOPERATION:

- Team Leaders, ten team leaders to be selected by cooperating cities. Each team leader will be entitled to a stipend of $1,000 each for five monitoring events, @ $100 per event and related training.
  A monitoring event includes collecting and recording data for one metric at each of four wetland sites, visiting the reference site twice.
  Number of wetlands monitored may vary per city depending upon resources of team leader, volunteers and city commitment.
  Cooperating cities include Apple Valley, Burnsville, Eagan, Farmington, Hastings, Inver Grove Heights, Lakeville, Mendota Heights, Rosemount, South St. Paul, and West St. Paul.
  The Minnesota Zoo may have a monitoring team for the first year only, but the team leader will not be supported with grant funds.
  % of time to be spent on the project: 35%

- Citizen monitoring coordinator, $6,000
  Chris Kline, Minnesota Zoo
  Percent of time to be spent on the project: 1%
  Mary Kay Lynch, Retired: 10%

- Clerical, project coordination, $ 3,000
  Daniel Huff, Dakota County Environmental Education Coordinator, project coordination. % of time to be spent on the project: 40%
  Support staff, University of Minnesota Extension Service, Dakota County
  Percent of time to be spent on the project: 15%

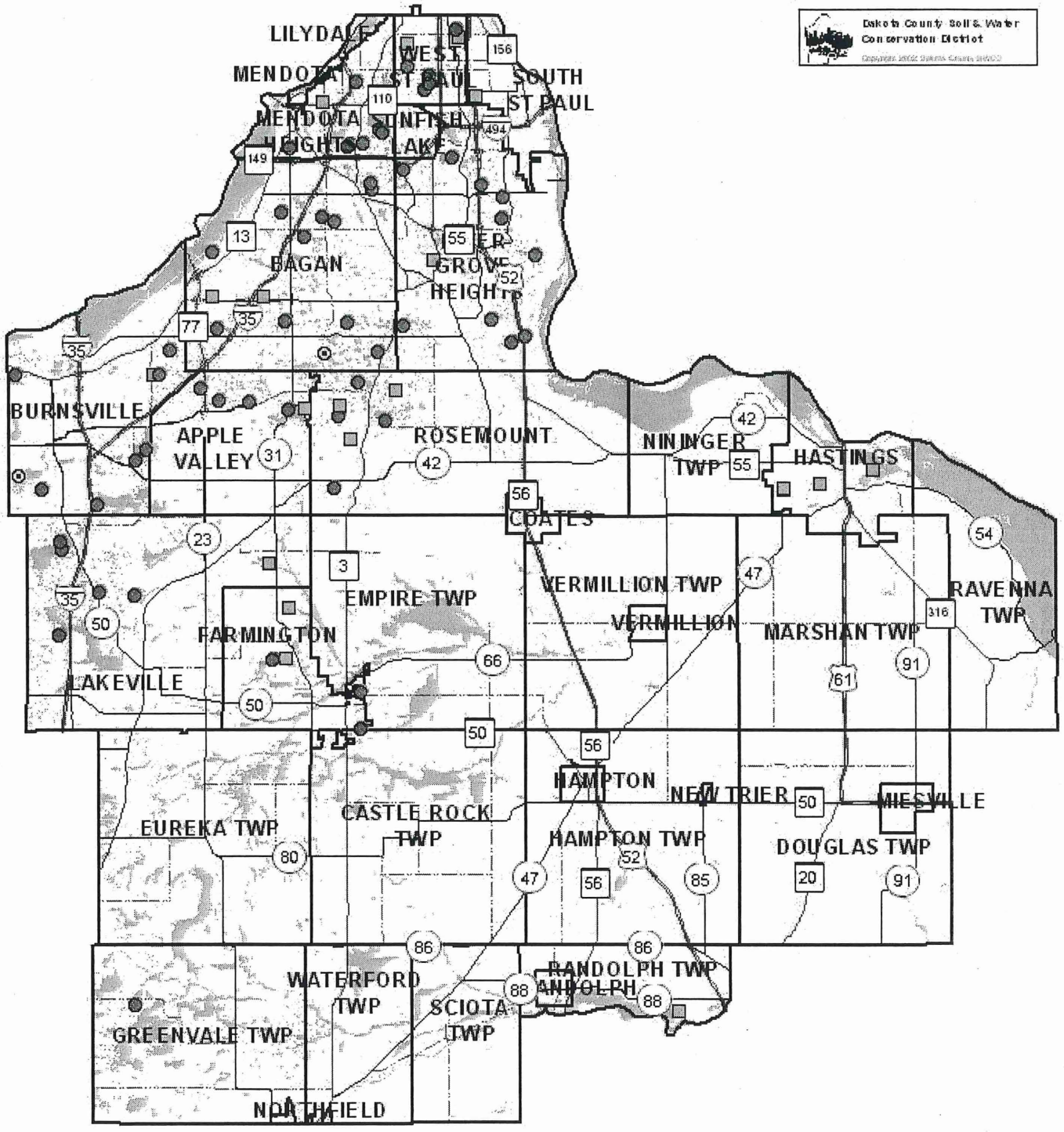
- Technical assessments, reference collection, $72,234
  URS is the wetland consultant for all BMPs on Cedar Pond
  Percent of time to be spent on the project: 35%

VIII. LOCATION

Dakota County
Cities of Apple Valley, Burnsville, Eagan, Farmington, Hastings, Inver Grove Heights, Lakeville, Mendota Heights, Rosemount, South St. Paul, West, St. Paul
Map attached of 1997-2001 monitoring sites. A black and white map is not available.

IX. REPORTING REQUIREMENTS:

Periodic workprogram progress reports will be submitted not later than September 1999, September 2000, and September 2001. A final workprogram and associated products will be submitted by the requested completion date of June 30, 2002.



N

0 1 2 3 4 Miles

LEGEND

Wetland Health Evaluation Sites
- Excellent
- Moderate
- Poor

Municipal Boundaries

National Wetland Inventory

SOURCE INFORMATION

U.S. Fish and Wildlife Service, 1981.
MnDot Base Map '97, 1997.
Dakota County Survey and Land Information Department, 1996.
Dakota County Soil & Water Conservation District, 2002.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data located in various city, county, state and federal offices and other sources, affecting the area shown, and is to be used for reference purposes only. Dakota County SWCD is not responsible for any inaccuracies herein contained. If discrepancies are found, please contact this office at 651-480-7777

1998 - 2001 Dakota County Wetland Health Evaluation Sites

Dakot ounty Wetland Health Evaluation Poject Attac ent A Total get

6/30/02

	Entire Project	Citizen Monitoring	Technical Assessment	BMPs	Education and Information
Cost to Date	$ 160,000.00	$ 47,281.04	$ 72,235.00	$ 29,125.01	$ 11,358.95
Reimbursement to date	$ 140,819.99	$ 40,361.41	$ 68,632.36	$ 24,273.13	$ 7,553.09
To be reimbursed	$ 19,180.01	$ 6,919.63	$ 3,602.64	$ 4,851.88	$ 3,805.86
Projected Expenses	$ 0.00	$ (5,802.31)	$ (1.00)	$ 4,922.91	$ 880.40
Estimated Total Costs	$ 160,000.00	$ 41,478.73	$ 72,234.00	$ 34,047.92	$ 12,239.35

	Entire Project	Personnel	Equipment	Acquisition	Development
Cost to Date	$ 160,000.00	$ 113,683.79	$ 17,191.20	0	$ 29,125.01
Reimbursement to date	$ 140,819.99	$ 105,233.06	$ 11,313.80	0	$ 24,273.13
To be reimbursed	$ 19,180.01	$ 8,450.73	$ 5,877.40	$ -	$ 4,851.88
Projected Expenses	$ -	$ (3,374.96)	$ (1,547.95)	0	$ 4,922.91
Estimated Total Costs	$ 160,000.00	$ 110,308.83	$ 15,643.25	0	$ 34,047.92

Dakot. ounty Wetland Health Evaluation Project Attac nt A Edcuation and Info ion

6/30/02

	Education & Information							
		Personnel					Equipment	
			1999 Expenditures	2000 Expenditures	2001 Expenditures	2002 Expenditures		1999 Expenditures
					$ 40.00	Jan. 1 - Feb. 28		$ 339.09
					Sept. 1 - Dec. 31	$ -		
					$ 500.00	March 1 - June 30		
						2652.35		
cost to date	$ 11,358.95	$ 3,192.35	$ -	$ -	$ 540.00	$ 2,652.35	$ 8,166.60	$ 339.09
reimbursement to date	$ 7,553.09	$ 540.00	$ -	$ -	$ 540.00	$ -	$ 7,013.09	$ 339.09
to be reimbursed	$ 3,805.86	$ 2,652.35	$ -	$ -	$ -	$ 2,652.35	$ 1,153.51	$ -
projected expenses	$ 880.40	$ (1,652.35)	0	0	$ -	$ (1,652.35)	$ 2,532.75	$ -
Estimated total cost	$ 12,239.35	$ 1,540.00	$ -	$ -	$ 540.00	$ 1,000.00	$ 10,699.35	$ 339.09

Dakot ounty Wetland Health Evaluation Project

Attac ent A
6/30/02

Edcuation and Infc tion

2000 Expenditures	2001 Expenditures	2002 Expenditures
$ 106.78	$ 18.96	Jan. 1 - Feb. 28
$ 5,734.52	Sept. 1 - Dec. 31	48.75
	15	March 1 - June 30
	$ 749.99	543.11
		610.4
$ 5,841.30	$ 783.95	$ 1,202.26
$ 5,841.30	$ 783.95	48.75
$ -	$ -	$ 1,153.51
$ -	$ -	$ 2,532.75
$ 5,841.30	$ 783.95	3735.01

Dakota County Wetland Health Evaluation Project

Attachment A
6/30/02

BMPs

	BMPs	Personnel	Equipment	Development	1999 Expenditures	2000 Expenditures	2001 Expenditures	2002 Expenditures
				$ -	0	0	$ 6,531.65	Jan. 1 - Feb. 28
							$ 1,573.61	March 1- June 30
							$ 3,237.60	4851.88
							$ 2,726.00	
							$ 3,800.00	
							$ 5,925.00	
							$ 100.00	
							$ 379.27	
							Sept. 1 - Dec. 31	
							$ -	
cost to date	$ 29,125.01	$ -	$ -	$ 29,125.01	0	0	$ 24,273.13	$ 4,851.88
reimbursement to date	$ 24,273.13	$ -	$ -	$ 24,273.13	0	0	$ 24,273.13	0
to be reimbursed	$ 4,851.88	$ -	$ -	$ 4,851.88	$ -	$ -	$ -	$ 4,851.88
projected expenses	$ 4,922.91	$ -	$ -	$ 4,922.91			$ -	$ 4,922.91
Estimated total cost	$ 34,047.92	$ -	$ -	$ 34,047.92	$ -	$ -	$ 24,273.13	$ 9,774.79

Dakot ounty Wetland Health Evaluation Project Attac ent A Technical A tance

6/30/02

	Technical Assistance						
		Personnel					Equipment
			1999 Expenditures	2000 Expenditures	2001 Expenditures	2002 Expenditures	
			$ 16,331.75	$ 20,905.79	$ 9,971.50	Jan 1. - Feb. 28	
			$ -	$ -	Aug. 26- Aug. 31	$ -	
			$ -	$ -	$ 4,368.57	March 1- June 30	
			$ -	$ -	$ 8,564.22	$ 3,602.64	
					Sept. 1 - Dec. 31		
					8490.53		
cost to date	$ 72,235.00	$ 72,235.00	$ 16,331.75	$ 20,905.79	$ 31,394.82	$ 3,602.64	$ -
reimbursement to date	$ 68,632.36	$ 68,632.36	$ 16,331.75	$ 20,905.79	$ 31,394.82		$ -
to be reimbursed	$ 3,602.64	$ 3,602.64	$ -	$ -	$ -	$ 3,602.64	$ -
projected expenses	$ (1.00)	$ (1.00)	0	0	$ -	$ (1.00)	$ -
Estimated total cost	$ 72,234.00	$ 72,234.00	$ 16,331.75	$ 20,905.79	$ 31,394.82	$ 3,601.64	$ -