Date of Report: 30 June 1999

Date of Next Status Report: Final
Date of Work Program Approval:
Project Complete Date: 30 June 1999

LCMR Work Program 1997

I. **Project Title:** Model Water Quality Cooperatives Pilot Project

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Total Biennial Project Budget:

$LCMR:	$300,000
– LCMR Amount Spent:	300,000
$LCMR Balance:	$ 0

A. Legal Citation: ML 1997, Chapt. 216, Sec. 2, Subdiv. 2.

Appropriation Language: $300,000 for the first year is for an appropriation to the pollution control agency for a grant to the University of Minnesota for the development of two pilot water quality cooperatives that own or control alternative discharging sewage systems, as defined in Minnesota Statutes, section 115.58, subdivision 1, paragraph (b). The grant may be used by the university for public education of the purposes and benefits of water quality treatment and management by water quality cooperatives and other purposes defined as eligible costs under Minnesota Statutes, section 116.16, subdivision 2, clause (6), and capital cost components under Minnesota Statutes, section 471A.02, subdivision 3. As a condition of this grant, the university must submit a work program and submit semiannual progress reports as provided in Minnesota Statutes, section 116P.05, subdivision 2, paragraph (c).

II. **PROJECT SUMMARY AND RESULTS:** This goal of this project is to pioneer two water quality cooperatives (WQCs) in Minnesota to begin the systematic remedy of rural and ex-urban waste-water treatment problems, and other water-related problems

In the 1997 Minnesota legislative session Minnesota Statutes section 115.58 was modified to enable the establishment WQCs and the issuance of permits (by the

Minnesota Pollution Control Agency – MPCA) to these cooperatives for the use of alternative discharging sewage systems to provide wastewater treatment services to their members. Prior to this there were fundamentally two categories of wastewater (sewage) treatment systems generally available to Minnesota residents. The first type was the standardized on-site, soil-based (septic) systems typically used by home and small business owners. The second type was sanitary sewer service with custom designed, centralized sewage treatment plants typically owned and operated by a local government entity.

Today, there exist many modern, proven, less costly alternative discharging wastewater equipment and systems technologies commonly used in other cold weather states. Many of these technologies have been tested and certified by the National Sanitation Foundation (NSF). (The NSF provides, for water treatment equipment and systems, a certification process similar to that provided by the Underwriters Laboratory for electrical equipment and systems.) In Minnesota, these alternatives fell into a regulatory 'gray area' making them generally unavailable to the rural and exurban homeowners and small businesses who need them most. The enabling of member-owned Water Quality Cooperatives (WQCs) opened a much needed third category of systems so rural and exurban Minnesotans working together may access the many benefits of alternative discharging wastewater systems. The method of access makes use of the existing regulatory process routinely used by cities for centralized sewage treatment systems.

This pilot project is necessary because, although a regulatory route exists, its use in this way has never been done before by a cooperative or by the Minnesota Pollution Control Agency. There are many problems that need to be solved and procedures that need to be established to make use of the route. The problems involved with WQCs are organizational and procedural in nature, not technological. This project is designed to pioneer new organizational and procedural solutions made possible by the WQC option. The technology used will be proven technology put in place with all the appropriate MPCA review and permitting, including monitoring provisions.

The WQC is a private entity organized under Minnesota Statutes chapter 308. Like all cooperatives, it is the owned and managed by its members. By voluntarily joining together in this utility cooperative organizational structure, individuals can achieve the economic critical mass necessary to bring alternative discharging wastewater systems on line in the cooperative's service area. As a group, the members could afford to buy management and engineering know-how needed The alternative systems would be designed and permitted through the existing part 7001 rules (point source), using many of the technologies now used in sewage treatment plants. However, the WQC would not use lots of pipes to bring sewage from where the wastewater is generated to large centralized plants for treatment. Instead the WQC would build and operate, within its permitted service area, many small-scale treatment systems right where the wastewater is generated. Each small-scale system could serve anywhere from one residence or business, to dozens at clustered locations. Using economies of scale and bulk purchasing, rural and exurban WQC members would also enjoy the considerable cost savings in operation and monitoring of these systems, similar to those now enjoyed by urban and suburban residents.

This project will perform the considerable public education and organization needed to start the first WQCs. This includes working with the MPCA to craft appropriate procedures, the identification of appropriate locations for these cooperatives, and the character and extent of their initial service areas. It also includes the legal establishment of the cooperatives, as well as working with them to help them get area-wide permits from the MPCA and the local government cooperation needed to make them successful over time.

III. PROGRESS SUMMARY: Work on all results is complete. Results 4, 5 and 6 encountered serious delays by forces outside the control of the project team (see detailed narratives for an explanation). Technical completion of results 4, 5 and 6 was accomplished, but the long term intended effect of these results has been greatly diminished because of the delays.

IV. OUTLINE OF PROJECT RESULTS:

Result 1: **Public Education Program.** A public education program developed and conducted to provide interested individuals, groups, and potential cooperative members with an understanding of the purpose, activities and benefits of forming and operating a Water Quality Cooperative (WQC). This program will be as substantial area of effort in this project and will continue and evolve throughout its duration. Public education efforts will be modified as needed using the experience, and knowledge developed from Results 3, 4, 5, 6 and 7.

Public education efforts will include identifying specific information needs and developing appropriate instruments for getting information out to those who seek it. It will include the organization and holding of general interest meetings as well as public meetings in targeted areas that make sense in terms of the results areas of this project. It will also include preparing and delivering presentations to public bodies related to achieving the results of the project. It will also include preparation and dissemination of written materials, including the revision and expansion of their content as the project progresses and more knowledge is developed about how to set up and run these cooperatives. In the formation of initial cooperatives, it is expected that direct mail marketing will be used to contact and develop prospects for cooperative membership.

BENEFITS: Increased awareness and understanding among the concerned public (1) of the technical and regulatory options available to help solve rural and ex-urban wastewater and other water-related problems; (2) of methods of accessing those technical and regulatory options through WQCs.

STATUS OF RESULT 1: Public education efforts focused on the dissemination of information about the project and the water quality cooperative approach to citizens and decision-makers in the target communities for initial cooperative activities.

Several avenues of public education were pursued. The project team made several public presentations to interested communities and in meetings with public officials and staff of those communities throughout the projected service areas of the two pilot cooperatives. These have been made primarily in Wright, Hennepin, Sherburne, Washington and Koochiching Counties. The project team has published several articles in various publications explaining the water quality cooperative approach.

Education efforts especially focused on the target communities for start-up activity for the cooperatives. The project team has worked closely with the City of Corcoran in Hennepin County, Rockford Township in Wright County, and Sherburne County on behalf of the Headwaters Co-op. The project team worked with Koochiching County on behalf of the Rainy River Co-op. The team made several presentations to citizens and public bodies in all of these communities.

The project has also worked with a graduate design studio in the Department of Landscape Architecture to develop an array of examples showing how water quality cooperatives and the technology they make available can help shape new development to insure the preservation of rural character and help maintain land in farming in the face of development pressures. This work will result in a publication documenting the student work for use in further public education efforts. This document is being prepared over the summer of 1999 with supplemental funding from the Minnesota Extension Service.

Education efforts were also focused on the board members of the pilot cooperatives. This work began with the basics of how cooperatives work and the scope of water quality cooperatives specifically. The project team has worked with the boards of directors to help prepare them to take on the direction of the cooperatives.

* Budget:.....$88,000
  Spent.....$88,000 Balance: $0
* Completion Date: 30 June 1999

Result 2 **Draft Model Business Plan For Water Quality Cooperatives.** A draft model business plan developed for Water Quality Cooperatives. The draft model business plan will be designed to serve as a guide for the formation and operation of pilot Water Quality Cooperatives. The term draft is used indicate the dynamic intent for the document. The result of this task will be subject to revision and improvement through the incorporation of experience acquired through the subsequent tasks of the project. Final business plans will be developed for each cooperative in

Result 4. Result 2 will be developed by working closely with the Minnesota Pollution Control Agency.

BENEFITS: A draft model business plan developed in a simple, photocopy reproducible format so that it can also serve as a resource for public education.

STATUS OF RESULT 2: This task is complete. Copies have been delivered to the LCMR offices. Work on preparing this document included a survey wastewater treatment laws and rules to map a path for water quality cooperatives to take through the regulatory process. It also identified mechanisms by which the cooperative could engage both public and private financing. The most interesting component of the financing plans suggests the use of a charitable non-profit, Minnesota Rural Utility Services Foundation engage federal assistance to new cooperative members using income tax deductions.

* Budget:.....$28,750
  Spent.....$28,750 Balance: $0
* Completion Date: January 1998

Result 3a **Service Area for First Pilot Water Quality Cooperative Selected.** From the experience gained during Result 1, a service area for the first pilot water quality cooperative will be selected. Factors included in the consideration of this decision will include: land character, nature and extent of waste water treatment problems and opportunities, likelihood of participation by local government, potential to recruit viable board members for the cooperative, potential to recruit a viable membership base for the cooperative, and potential for long-term success. The service area will be identified and selected by working closely with the Minnesota Pollution Control Agency (MPCA).

BENEFITS: (1) Documentation of the history of identifying the service area as a guide to future service area establishment. (2) Identification of a viable candidate service area for the first pilot water quality cooperative.

STATUS OF RESULT 3a: This result is complete. It has required the definition of how area-wide NPDES permits could be written by the Minnesota Pollution Control Agency. The project team and the MPCA have identified the need for these service areas to be defined on the basis of watersheds, rather than political boundaries. For economic and environmental reasons, the project team has proposed that each water quality cooperative should encompass one of the major watersheds in Minnesota as their ultimate service area. The project team has recommended to the MPCA that the first pilot cooperative focus on the Upper Mississippi Watershed basin as its service area.

The service area of the first water quality cooperative has been defined as the Upper Mississippi River Basin exclusive of those areas now serviced by centralized wastewater treatment and sanitary sewer. Maps have been prepared delimiting the service area boundaries based on United States Geological Survey maps of major watershed units and Minnesota Department of Natural Resources maps of Minnesota watersheds.

* Budget:.....$23,000
  Spent.....$23,000 Balance: $0
* Completion Date: February 1998

Result 3b **Service Area for Second Pilot Water Quality Cooperative Selected.** From the experience gained during Results 1, 2 and 3a, a service area for the service pilot water quality cooperative will be selected. Factors included in the consideration of this decision will include: land character, nature and extent of waste water treatment problems and opportunities, likelihood of participation by local government, ability to recruit viable board members for the cooperative, potential to recruit a viable membership base for the cooperative, and potential for long-term success. The service area will be identified and selected by working closely with the Minnesota Pollution Control Agency (MPCA).

BENEFITS: (1) Documentation of the history of identifying the service area as a guide to future service area establishment. (2) Identification of a viable candidate service area for the second pilot water quality cooperative.

STATUS OF RESULT 3b: This result is complete. The service area of the second water quality cooperative has been defined as the Rainy River Basin exclusive of those areas now serviced by centralized wastewater treatment and sanitary sewer. Maps have been prepared delimiting the service area boundaries based on United States Geological Survey maps of major watershed units and Minnesota Department of Natural Resources maps of Minnesota watersheds.

* Budget:.....$23,000
  Spent.....$23,000 Balance: $0
* Completion Date: July 1998

Result 4 **Water Quality Cooperatives Organized and Established.** A water quality cooperative organized and established for each service area identified in Results 3a and 3b. Includes (for each water quality cooperative) assembling the founding board members; providing assistance in drafting and filing the appropriate incorporation documents; providing assistance in drafting a business plan using the product of Result 2.

BENEFITS: For each Pilot Water Quality Cooperative: (1) Creation of the legal business entity needed to establish the membership base, and acquire and apply the expertise and funding needed to develop service systems. (2) Creation of the legal identity necessary to obtain and hold an area-wide NPDES/State Disposal System Permit.

STATUS OF RESULT 4: Work on this result is complete with the exception of the adoption of bylaws by the cooperatives. Work on the bylaws has been stalled by delays stemming from the extremely long NPDES/SDS permit review time taken by the Minnesota Pollution Control Agency (MPCA) in Result 5. This delay is unusual and was not anticipated in the original planning of this work. Bylaws cannot be properly drafted until the terms of the permits are fixed. These terms are not fixed until the permits are issued by the MPCA. See further discussion under Result 5.

All other work under this result is complete. Articles of incorporation have been filed with the Secretary of State for the two water quality cooperatives. The name of the first cooperative is the Headwaters Rural Utility Association (HRUA). The name of the second cooperative is the Rainy River Rural Utility Association (RRRUA). The names of both cooperatives have also been reserved with the Secretary of State. Staffing of the boards for these organizations is complete. Both boards have held meetings to direct the business of the cooperatives.

The project team will finish developing policies, bylaws and membership instruments for the cooperative when the terms of the NPDES/SDS permits are known. Completion of this work is contingent on action by the Pollution Control Agency, which is outside the control of this project's staff. These items will need to be officially adopted by the individual boards of the pilot cooperatives.

* Budget:.....$58,900
  Spent.....$58,900 Balance: $0
* Completion Date: June 1999

- **Result 5** **Assist Pilot Water Quality Cooperatives in Obtaining Area-Wide Waste-Water Permits.** Assist each of the pilot water quality cooperatives formed in Result 4 in obtaining area-wide NPDES and State Disposal System Permits needed to make progress on their business plans. The work for this task is planned based upon previous consultation with MPCA officials on the prerequisites upon which an area-wide permit could be issued. Specifically, these terms were identified as consisting of two main points: (1) Identification of the permittee, and (2) Delimitation of the

area of homes and businesses to be served under the area-wide permit.

The principal components of assistance provided in this result will consist of: (a) establishment of a water quality cooperative as the target permitee entity, (b) recommendation of a designated service area to be delimited in permit language, and (c) a proposed schedule for the planning, design, individual facility permitting and construction of facilities. It is not anticipated that engineering studies will be necessary for area-wide permit applications. However, it is expected that cooperation with local units of government will be necessary. Thus the work on this result will occur in concert with the work described in Result 6. The project team will work with the pilot cooperatives, local units of government and the MPCA to define the terms of such permits.

BENEFITS: Initial area-wide permits for each cooperative formed under Result 4 that: (1) provide the assurance needed for local government support for the WQC; (2) establishes a framework and schedule for systematically solving waste-water problems monitored by the MPCA; (3) provides assurances to third parties that waste-water treatment is the responsibility of a utility.

STATUS OF RESULT 5: The project team filed applications for areawide NPDES/SDS permits with the MPCA on 17 March 1998. Action on these permits was effectively stalled until late October 1998 due to the extremely slow processing of them and the adverse attitude expressed by the MPCA staff then assigned to them. Together with help of Representatives Dave Bishop and Tom Osthoff, the project team has been working with the MPCA to resolve the roadblocks in issuing these permits over the summer of 1998. In October of 1998, the MPCA assigned new personnel to work on the permits. The permit progress slowed again during the 1999 legislative session. The notices of intent to issue permits for the two cooperatives was published by the MPCA 24 May 1999, with the 30 day comment period ending on 23 June 1999. The project team filed extensive comments on behalf of both cooperatives on 23 June 1999. The team has received no response from the MPCA as of the end date of this project. We are hopeful that a permit will be issued sometime during the summer of 1999.

The following comments made in the last report (1/30/99) continue to apply: The delay in permit processing created a loss of opportunity for generating the magnitude of benefit in Result 6 originally planned for that task. Loss includes opportunity to enlist local governments in a timely way (see Result 6) and opportunity to enroll members because of a lack of ability to generate final bylaws for the cooperatives (see Result 4).

The pemits published by the MPCA contained an appendix "D" that included a vast array of restrictions and procedures that were not

discussed with the project team prior to publication. In the opinion of the project team, this change created a permit that, if issued, would be counterproductive to everything accomplished by the project over the last two years, and nullified the positive features set forth in the body of the permit. During the comment period, the project team worked very hard to craft a comment document to respond to the MPCA's call for comments. Formal comments, structured to the legal protocol established by the MPCA Board were submitted on behalf of both cooperatives on 23 June 1999. In accordance with the protocol, the comments pointed out the problems and possible illegalities contained in the permit, and also presented a solution to the problems presented by the addition of the unexpected appendix items.

At the conclusion of the funding period for this project it is unclear what the MPCA Board will do with respect to the content of the permits: Will they be issued as published or as per our recommended revision or some other revision? This state of affairs has completely eliminated the ability of the project team to create a meaningful revision to the draft bylaws for the cooperatives. It is impossible to recommend a final draft of bylaws to the cooperatives for adoption, completely frustrating the completion of Result 4. It has also consumed a large amount of staff resources beyond those budgeted for this result. This use of staff resources was necessary to develop and provide the comments to the MPCA that were necessary to preserve the value of the work completed on this project prior to the comment period and to protect the interests of the cooperatives it established.

* Budget:.....$45,900
  Spent.....$45,900 Balance: $0
* Completion Date: June 1999

Result 6 **Assist Water Quality Cooperatives in Obtaining Local Government Participation.** WQCs assisted in obtaining local government participation in developing funding to devise and phase a dispersed alternative-systems approach to a long-range treatment plan for the permit area.

BENEFIT: Local government participation provides access to low cost funding through the state.

STATUS OF RESULT 6: Much effort has been expended assisting cooperatives in enlisting local government participation. However, the ability of those efforts to yield practical results has been seriously threatened by the adverse activities by outside forces. Specifically, this problem arises from the reality that the governing boards of small population municipalities are serviced by small groups of consulting attorneys and engineers. Clearly, these professionals view the cooperatives as a competitive threat. We have observed repeated instances where such professionals have

gone out of their way to raise spurious doubts about the cooperative's technology and approach in an attempt to kill the whole idea. The project team has observed and documented several examples of these malicious (and in some cases possibly nefarious) attacks. These attacks prevent the cooperatives' clients, the citizen boards, from fairly and objectively weighing cost-effective alternatives presented by the project staff on behalf of the cooperatives.

Project staff is working to track down and document the sources and nature of these attacks. As this information is developed, it is being forwarded to Representative Bishop, who sponsored the Water Quality Enabling Act and the funding for this project for possible action. While this is going on, the project team has still been able to generate several successes under this result area.

This task has produced initial resolutions from boards of three local governments to work with a water quality cooperative to bring wastewater service to their communities. The City of Corcoran and Rockford Township, both of Hennepin County have passed official resolutions to work with the University and the Headwaters Rural Utility Association. The Koochiching County Board has passed a resolution to work with the University and the Rainy River Rural Utility Association.

The project staff has prepared and submitted draft 471A agreements to the City of Corcoran and to Rockford Township on behalf of the Headwaters Co-op to provide water quality services in those communities. The staff has also prepared and submitted a draft 471A agreement to the Koochiching County Board on behalf of the Rainy River Co-op to provide water quality services in Koochiching County. In addition, the project staff has had preliminary discussion with the Elk River School Board to provide that entity with service.

The project staff has developed opportunities for further local government partnering with Sherburne County and several townships in Sterns County Minnesota on behalf of the Headwaters cooperative.

* Budget:.....$21,550
  Spent.....$21,550 Balance: $0
* Completion Date: 30 June 1999

Result 7 **Final Project Report.** A final report will be assembled consisting of an introduction plus all of the essential reports and documents developed by this project.

BENEFIT: The results of this project is captured in a single document as a guide to future work in this area.

STATUS OF RESULT 6: This work is essentially complete. The principal investigator is completing the final editing of the document

in preparation for printing. Printing is scheduled for completion by July 20. Printed copies will be delivered to the LCMR office immediately after printing is complete.

It is important to note that a substantial portion of the staff funds budgeted for this result had to be used to address the problems with the permits published by the MPCA for public comment. These problems are discussed under Result 5. This last minute demand of effort was necessary to protect the value of the two years of work represented by this project, and the integrity of cooperatives.

* Budget:.....$10,900
  Spent.....$10,900 Balance: $0
* Completion Date: 30 June 1999

V.DISSEMINATION: The products developed under this project will be documented and distributed primarily in three ways:

A. Public Education Program: The activities associated with Result 1 will produce live and print encapsulations of the information developed in this project. Print dissemination will include fact sheets, meeting handouts, a newsletter, and direct mailing pieces designed for specific meetings held.

B. Draft Model Business Plan. This will be the product of Result 2. The development of the appropriate outline and content of this product is the work of Result 2. It is intended to provide a model for the written communication of the goals and objectives of a Water Quality Cooperative in its initial years of operation, and its plan and schedule for achieving them. The audience for this communication includes potential cooperative members, local government officials, and organizations approached for capital improvement and operational financing for the cooperatives.

C. Final Report: This includes all of the reports and documents developed in Results 1 through 7. It will be reproduced in the quantity permitted by the length of the document and budget available to reproduce it. It will be made available to a range of interested parties identified by the project.

D. The Two Pilot Water Quality Cooperatives: An essential part of the business plan of each of these cooperatives will require on-going education and dissemination of the ideas and methods developed in this project. This effort will be essential to the expansion of membership and education of new members.

VI. CONTEXT:

A. Significance: 3 million urban/suburban residents face $200/person waste-water upgrades under Minnesota Rules part 7001 ($0.6 billion cost to cure). 1.4 million rural/ex-urban residents face $1200/person waste-water upgrades under Minnesota Rules part 7080 ($1.7 billion cost to cure). Upgrades under part 7080 add little to the economic vitality of the communities served. Waste-water treated under part 7080 is not monitored and cannot be easily reused

for other purposes. Waste-water treated under part 7001 is monitored and can be used for other purposes. Most of the 480,000 systems permitted under part 7080 are managed and operated by homeowners, not professionals. Most of the 600 part 7001 systems have management organizations and are operated by trained professionals. Proven, modern alternative discharging sewage systems exist which can provide wastewater service in ex-urban/rural areas at lower costs, but require management organizations and professionals for operation. This project seeks to make the proven, lower cost alternative systems available to rural/ex-urban users through the use of utility cooperatives. Cooperative ownership of dispersed wastewater treatment systems transfers accountability to a group, enabling the use of professional design, management and monitoring under part 7001.

- Comparison With Recent Spending on Part 7080 Solutions. In 1995-97 the State spent $500,000 on research into part 7080 solutions, and in 1997-99 the State has committed $950,000 on part 7080 research (LCMR project). Funding for this project is less than one-fourth the level committed to 7080 for 1997-99.

- Performance Versus Prescriptive Approach. The part 7080 approach to Individual Sewage Treatment Systems relies on a prescriptive approach to the design and permitting of septic systems. This simplifies and localizes the permit process, enabling the efficient oversight of hundreds of thousands of systems. Worst case assumptions built into the prescriptive approach drives up owners' costs. The part 7001 approach is performance based and involves a more complex permit review by the MPCA, allowing the use of highly efficient and customized technologies. This process cannot accommodate thousands of individual applications. The cooperative approach combines the interests of many individuals to access the performance-based rules to produce significant initial cost savings to the individuals without overwhelming the MPCA permit review capacity.

  •Integration of Water Technologies More Economical. The opportunities to use wastewater treated by facilities permitted under pt. 7001 can produce additional cost savings. By integrating water quality systems water supply and wastewater discharge can be used with geothermal once-through discharge home heating to provide fire protection water in remote locations, and to augment storm water facilities. These services can be provided in combination at much lower costs than if provided separately.

B. Time: July 1, 1997 through June 30, 1999.

C. Budget Context: "Creating a Rural Technology Development Center" $90,000 funded by the Rural Business and Cooperative Development Service of the United States Department of Agriculture, Paul R. Jacobs, Principal Investigator, Rural Energy Producers Electric Power Cooperative (REPCO) in cooperation with the Center for Alternative Plant and Animal Products, University of Minnesota.

'Design for Dwelling: Forest Lake Township' Robert Sykes, Major Cooperator as part of "Initiating a Formal Discussion and Program Development on Land

Use Planning" $37,000 funded by the Minnesota Extension Service (MES), Univ. of Minn., Thomas Wegner, Principal Investigator (PI).

'Design for Dwelling: New Scandia Township' Robert Sykes, Major Cooperator as part of "Continuing a Formal Discussion and Program Development on Land Use Planning" $34,000 funded by the MES, University of Minnesota, Thomas Wegner, PI, MES.

'Alternatives for Sewage Treatment for Cluster Developments' Robert Sykes, Major Cooperator as part of "Design, Local Adoption, and Management of Communal Septic Systems, Open Space and Storm Water" $10,000 funded by the Metropolitan Council, Thomas Wegner, PI.

Prior expenditures do not include over $100,000 of in-kind services contributed by REPCO.

Future expenditures reflect unfunded portions of original proposal (LCMR) plus estimates for the extension of the project to other areas of the state using financial backing from the U.S.D.A. and interested electric power cooperatives (Non-State). The non-state sources have not yet been approached for this funding but have indicated an interest in providing support after the state has made a significant financial contribution to this effort (represented by this project).

	July 1995 - June 1997 Prior expenditures on this project	July 1997 - June 1999 Proposed expenditures on this project	July 1999 - June 2001 Anticipated future expenditures on this project
1. LCMR	$0	$0	$500,000
2. Other State	$51,000	$300,000	$0
3. Non-State Cash	$90,000	$0	$300,000
Total	$141,000	$300,000	$800,000

In addition to the funds indicated proposed under 1997-1999, the project team plans to pursue funding from the United States Department of Agriculture to help further the success of the cooperatives during this period and subsequent time. Also, in the process of developing participation on the part of local municipalities, the project team will seek to acquire real in-kind contributions from the municipalities that will be valuable to the cooperatives (such as Grants of easements along public rights-of-way). In addition, certain grant monies are available through the MPCA that may be accessed by participating municipalities to support the provision of services to residents with qualifying household income levels.

Funding indicated above for 1999 to 2001 reflects the receipt of U.S.D.A. funding for WQC purposes (such as capital improvements) and subsequent LCMR project funding to continue establishing more WQCs in other areas of the state.

BUDGET:

Personnel	
Project Manager Sykes (15% of full-time)	$24,700
Cooperator Fisher (4% of F.T.)	$6,000
Research Fellow - Business (50% F.T.)	$87,850
Research Fellow - Lawyer (50% F.T.)	$87,850
Clerical	$16,300
Total Personnel	$222,700
Equipment	$1,400
Acquisition	$0
Development	$0
Other Expenses	
Telephone	$3,000
Travel (in-state)	$14,900
Printing, Photo	$4,000
Materials	$8,000
Education Program Expenses	$28,000
Miscellaneous	$18,000
Total	$300,000

* Percent time is the *average* over two years, of a full-time 12 month per year base salary plus benefits. Actual effort will vary over project duration: at some times it will be above and and at other times below the average percent time. This variation will be due to the nature of the work required of each individual, which varies from task to task within each result area.

VII. COOPERATION:

A. Cooperators. The major cooperators are (for percent time and cost allocation information, see section VI above):

Department of Architecture, University of Minnesota – Thomas Fisher, Professor and Dean. Assistance with Results, 1, 3 and 6 plus assistance with general project oversight. ($6000 cost associated only with work on results areas, no costs are associated with general project oversight)

Minnesota Pollution Control Agency – Russell Felt, Supervisor, Point Source Compliance Section, Water Quality Division (percent time, no costs are associated).

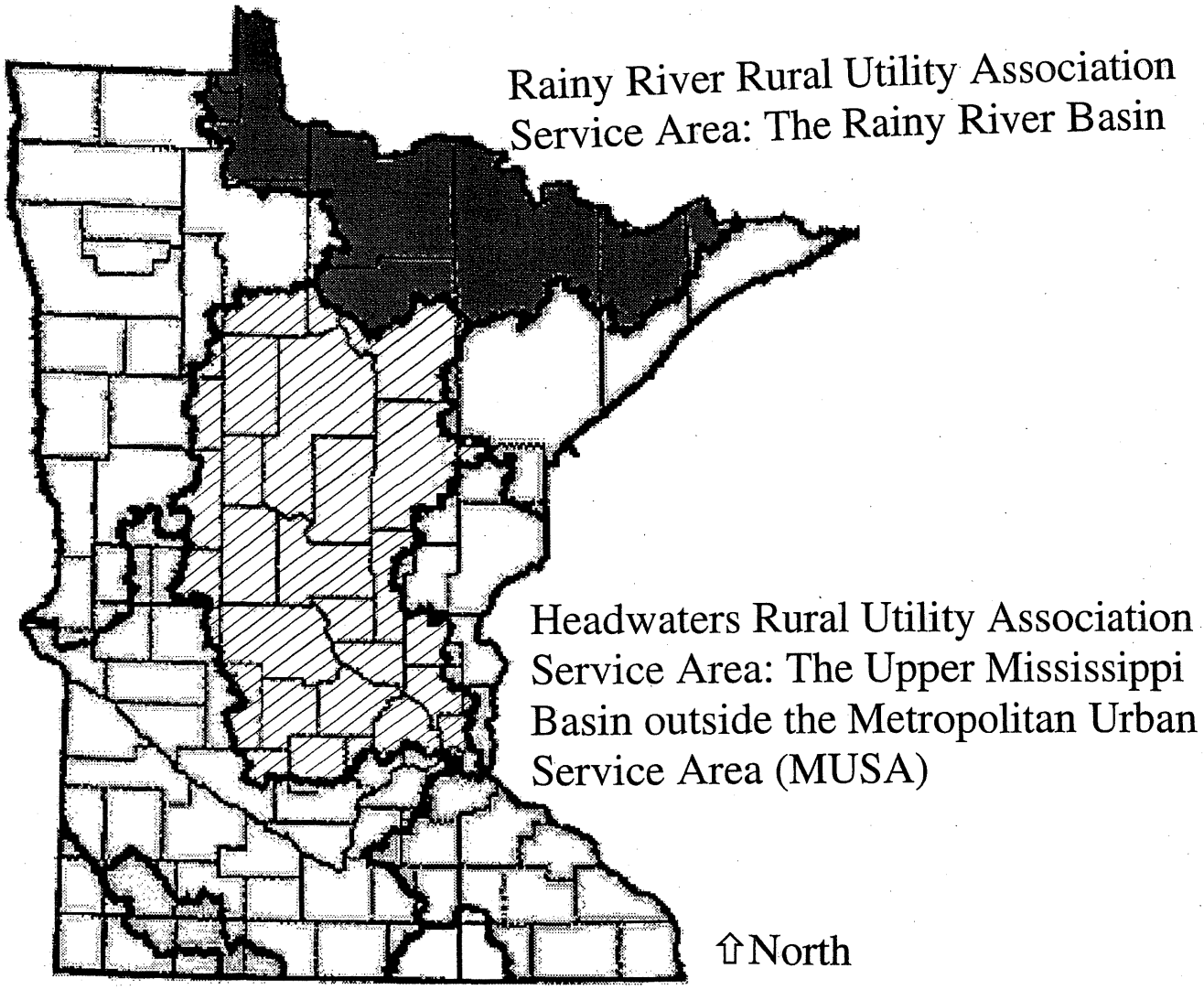
In addition to the above, the project team will seek cooperation from existing power cooperatives in the state which have expressed interest in helping to establish WQCs.

The project team also expects to work with other organizations such as the Metropolitan Council, the Minnesota Association of Townships and the Association of Minnesota Counties, and others.

VIII. LOCATION:

The Headwaters Rural Utility Association's service area is the Upper Mississippi River Basin. The Rainy River Rural Utility Association's service area is the Rainy

River Basin. The map of Minnesota shown below indicates the locations of these service areas.



IX. REPORTING REQUIREMENTS: Periodic work program progress reports will be submitted not later than January 1998, July 1998, and January 1999. A final work program report and associated products will be submitted by June 30, 1999, or by the completion date as set in the appropriation.

X. FOR RESEARCH PROJECTS: Not Applicable.