

A.1.a. Context within the project: Increased public awareness of water quality -- offers greater understanding of its importance, complexity and opportunity for involvement. Illustrate tie of water quality priority to TCLLWP Comprehensive Plan.

A.1.b. Methods: Utilize local committee members, Deep Portage Conservation Reserve and basin citizens to illustrate multi-agency rational of methods and activities of water quality monitoring. Develop plan for utilizing video, networking with radio and public TV. Show monitoring methods involving macroinvertebrates, hydrolab system, biological and chemical analysis. Show why sustaining water quality is priority for TCLLWP; per information sharing, cooperative sampling projects, economic values, Geographic Information Systems, Project Comprehensive Management Plan and private/public stakeholder involvement. Seek new committee members project support.

A.1.c. Materials: Upon completion, TCLLWP committees work with qualified consultant to develop video project. Supply video copies to stakeholders of basin.

A.1.d. Budget
Total Biennial LCMR Budget: \$19,500
LCMR Balance: \$0
Match: N/A

A.1.e. Timeline:

	7/95	1/96	6/96	1/97	6/97
1) TCLLWP W.Q. Video					
Video Committee	xxx				
Contract		xxxx			
Design			xxxxxx		
Complete			xxxxxxxxxxxxxxxxxxxxxx		

2) Release TCLLWP Video xxxxxxx

A.1.f. Workprogram Update: I & E Committee for the project is reorganized. Coordinating with MHB and local vendors to contract video development. Anticipate contract completion by August 1. Behind schedule but progress is being made. January 1, 1997. Contractor is in place (10/17/96). Aerial video taping conducted. Script “treatment” complete. Draft script due 1/14/97. On schedule. July 1, 1997 video completed. Copies to be released in late July to all lake management organizations for environmental outreach /awareness and collaboration.

A.2 Title of Objective/Outcome: Monthly Information and Education Articles and Newsletter

A.2.a. Context within the project: Provide regular project information updates, per various written materials, to the public and stakeholders. Illustrate tie of TCLLWP projects to TCLLWP Comprehensive Plan and public.

A.2.b. Methods: Develop and send project articles and annual newsletter to watershed residents. Contract with a writer, in conjunction with other entities, to develop a newsletter. Issue all articles and news releases to media covering the watershed.

A.2.c. Materials: Utilize stakeholders for in-kind assistance in production, i.e., counties, lake associations, etc. Printing and mailing materials will be required. About 4,000 mailing addresses of the watershed are targeted including seasonal and full time residents, commercial and governmental entities.

A.2.d. Budget
Total Biennial LCMR Budget: \$17,500.00
LCMR Balance: \$0
Match: N/A

A.2.e. Timeline:

	7/95	1/96	6/96	1/97	6/97
1.) TCLLWP Newsletter					
- Assemble Information and Education Committee	xxxxxxx				
- Develop Newsletter		xxxxxxx			
- Mail Issue 1			xx		
- Mail Issue 2					xx
2.) TCLLWP Articles and Promotion					
- Information and Education Committee	xxxxxxx				
- Contract		xx			
- Release Monthly Articles		xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx			
- Promotion			xxxxxxxxxxxxxxxxxxxxxx		

A.2.f. Workprogram Update: I & E Work Group reorganized. Information Coordinator hired and workplan complete. Annual report/newsletter is being published. Completed 5 newsletters. Completed two Public Environmental Awareness meetings scheduled for July 1996. On schedule. January 1, 1997 - Completed five newsletters “Basin News.” Amount of resources dedicated to this objective are increased. Participated in process establishing Blackwater Lake Association. Completed monthly committee reports for 1997. Developing new TCLLWP brochure. July 1, 1997 - Newsletters 6 - 9 completed. New brochure completed. Project news releases completed.

A.3 Title of Objective/Outcome: TCLLWP Public Service Announcements (PSA's)

A.3.a. Context within the project: To further inform and educate the general public in the Leech Lake watershed about the TCLLWP, it's goals, importance, and benefits for the future of the area's people, economy and environment.

A.3.b. Methods: Target 2 or 3 strategic radio stations that serve the watershed area. Negotiate with their advertising departments to get the best possible terms available. Most stations offer special rates or reduced-cost "package deals" to nonprofit, public service agencies.

A.3.c. Materials: Develop PSA information and scripts within the TCLLWP Information and Education subcommittee. Work with the creative personnel of the radio stations to produce and record the PSA's. Most rural stations provide this service to customers at no extra cost.

A.3.d. Budget
Total Biennial LCMR Budget: \$4,500
LCMR Balance: \$0
Match: N/A
Match Balance: N/A

A.3.e. Timelines:

	7/95	1/96	6/96	1/97	6/97
1) TCLLWP PSA's					
- Information and Education Committee	xxxx				
- Develop PSA products		xxxxx			
- Contract			xxxxx		
- Complete Phase 1			xx		
- Complete Phase 2			xxxxxxxxxxxxxxxxxx		

A.3.f. Workprogram Update: I & E Work Group is reorganized. Delayed. Information Coordinator hired. Work plan completed. PSA's expected to begin on radio in July. PSA's coordinated with MnDNR. January 1, 1997. Developed five radio PSA's. Developing TV PSA. Developed promotional/educational mugs/meetings, nine lake association memberships, and two public environmental awareness meetings. July 1, 1997 - completed two TV PSA's. Aired on four stations (100+) spots.

A.4. Activity: Deep Portage Conservation Reserve-Develop Watershed Management Curriculum and Educational Display

A.4.a. Context within the project: To identify conceptual and curriculum priorities relating to watershed management.

A.4.b. Methods: Conduct pre-development planning meetings with Department of Education (DOE), TCLLWP committees and resource managers. Assemble a teacher developer training team of 6 classroom teachers from the watershed. Conduct watershed and ecosystem teacher developer workshop. Use Department of Education curriculum experts as resource. Develop watershed ecosystem lessons in accordance with Department of Education and the Minnesota Graduation Rule. Conduct 2-day curriculum development team institute for 6 teacher developers. Pay teacher release, stipend, travel, and per diem.

A.4.c. Materials: Assorted classroom materials including paper, printing, brochures, learning box and computer discs. Upon completion, lesson materials copied on disks for dissemination to Cass, Hubbard and Beltrami County and Reservation elementary schools; county Environmental Services Unit, Upper Mississippi Headwaters Board; DNR Information and Education Officers, and the Chippewa Forest Headquarters.

A.4.d. Budget
Total Biennial LCMR: \$8,500.00
LCMR Balance: \$0
Match: N/A
LCMR Balance: N/A

A.4.e. Timeline:

7/95 1/96 6/96 1/97 6/97

1) Local Curriculum Delivery xxxxxxxxxxxxxxxx

A.4.f. Workprogram Update: Held organizational meetings with Deep Portage Conservation Reserve, Mississippi Headwaters Board and Bemidji Science Center. Coop teacher workshop held in January, 1996. Available curriculums are being evaluated and found adequate. No need to develop new curriculum. Committees approve proposed shift in funds to capitalize on other opportunities.- Propose A.4 funds (new balance) be utilized for curriculum delivery locally per TCLLWP Committees action 7/2/96. January 1, 1997. Completed five workshops: Beef producers, Project WET, Water Festival, MLA, and Lake May Creek/WHA schools. Supported Deep Portage Conservation Reserve and Hubbard County Environmental Education Center. Negotiating coop project for Walker-Hackensack-Akeley schools in Akeley for coop outdoor environmental learning classroom project. Project to be designed by the students. July 1, 1997 - Completed: walkway improvements to Akeley outdoor classroom, co-sponsored Longville Area School Forest (100 acres) completed parking and walkways, supported Hubbard County Water Fest 2, began Northern Watershed Foundation, completed project signs and projects display including expos, shows, county and state fairs. Executing affiliations with schools, lake associations, business, MN Land Trust and MN Foundation. Exploring interest in an ongoing central lake management "roundtable" relationship with watershed projects of Bemidji, Big Sandy, Pine River, Mille Lacs, LARA, MLA, MHB and Leech Lakes.

B. Title of Objective/Outcome: Build Baseline Management Tools for Sustainability

B.1 Activity: Baseline Water Quality Monitoring Stations for Watershed

B.1.a. Context within the project: Develop baseline biological and toxicity information of tributaries and Leech Lake.

B.1.b. Methods: Eight tributaries to Leech Lake will be monitored for biological parameters, flow and phosphorous levels. Two Lake stations will be sampled once for a total of fifty fish from 5 species to assess possible bioaccumulation. Analysis will be for mercury. Data collected will be entered into "Waterbody

Systems” a National Database of assessment information. January 1, 1997. Pursuing joint-governmental erosion control projects for spring completions (Shingobee River Co. Rd 83). Secondly Garfield Lake erosion control joint project (bio-engineering) in negotiation for spring construction. Shift \$10,000 from objective C.1 to B.1 per agreement. Cost share projects between County, State and Federal Government per road crossing and shoreline erosion.

B.1.c. Materials: Handheld Digital Flowmeter (\$700.00). RFP’s will be used to contract with a qualified laboratory. TCLLWP Committees will review and evaluate work proposals. Selection will be based on merit and cost. Flowmeter equipment purchased with this appropriation will continue to be used for the same program through its useful life and if use changes we will pay back to the appropriate fund or account an amount equal to either the cash sale price we receive from sale at that time or a residual value to be negotiated with the Director if we choose not to sell it. This will belong to the Cass County Environmental Services Department. January 1, 1997 - H.D. Flowmeter (\$700) not needed. Request HP4P scanner (\$512) to be purchased for document development and be housed at Hubbard County SWCD.

B.1.d. Budget
Total Biennial LCMR Budget: \$76,000 (Added \$10K from C.1)
LCMR Balance: \$5,000
Match: N/A
Match Balance: N/A

B.1.e. Timeline:

1) Complete W.Q. Monitoring on 8 Tributaries

- Select Sites	xxxx				
- Purchase and Install Equipment	xxx				
- Monitor	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx				

B.1.f. Workprogram Update: Workplan completed and approved by Executive Committee. Contracts have been completed with the Leech Lake Indian Reservation Division of Resource Management (DRM) and the Minnesota Chippewa Tribe Water Lab to accomplish tasks. \$5,000 have been matched with Forest Stewardship Program (FSP). A contractor has been hired to do up to 15 completed 6 FSP plans along private riparian lands on the Necktie River and tributaries. \$3,000 is planned for implementation of BMP measures. On schedule. Supported successful Hubbard County SWCD Challenge Grant applications: 1) Necktie River FSP’s for BMP’s work (\$20,000), and 2) inventory and BMP work) on Steamboat Bay/River Watershed. \$7,000 match is planned for water quality monitoring for baseline data. January 1, 1997 - Monitoring data presentation by LLIR due 3/97. On schedule. Western Leech Lake Watershed joint project awarded (BWSR \$34K). 1/97 organizational meeting set. Eight F.S. plans complete. July 1, 1997 - Completed: water testing of nine tributaries to Leech Lake, mercury testing of fish tissue, 1,400+ acres of Forest Stewardship Plans/Necktie River, one mile fencing/forest BMP, County Road #83 erosion control project, and provided white pine report. Garfield Lake co-op erosion project not completed. Return \$5,000.

B.2. Activity: Develop Inter-Agency Water Quality Monitoring GIS Data Layer Coverage for Watershed.

B.2.a. Context within the project: Develop well head protection methodology and program as required by State and Federal agencies. Provide automated information to agencies in watershed. Develop a second urban runoff Phase I report. Develop inventory of boat harbors and breakwaters for Leech Lake. Compile alternatives for harboring watercraft as part of Local County Water Plan implementation.

B.2.b. Methods: In Conjunction with UMD to develop data layer compatible with well head protection. Coordinate activity with TCLLWP committees and GIS Work Committees for compatibility and quality control.

B.2.c. Materials: Dissemination of final product to all agencies of the watershed and or interested parties.

B.2.d. Budget
Total Biennial LCMR Budget: \$46,000
LCMR Balance: \$0
Match: N/A

B.2.e. Timeline:

	7/95	1/96	6/96	1/97	6/97
1) GIS W.Q. Data Layer					
- Technical Committee Develops Work Plan	xxxxx				
- Contract		x			
- System Development		xxxxxxxxxxxxx			
- dissemination of Data				xxxxxxxxxxxxxxxxx	

B.2.f. Workprogram Update: Workplan for objective has been drafted and approved and coop project with University of MN Duluth established. GIS project for well head protection has begun and will include four towns; Cass Lake, Walker, Longville and Pine River. Project on hold to assess extent of TCLLWP involvement in this cooperative project. Phase 1 urban runoff report coordinated by TCLLWP and USDA-NRSC completed in May for Walker. Committees action supports proposed boat harbor inventory/GIS. January 1, 1997. TCLLWP contractor working on basic wellhead protection plans for villages of: 1) Walker/Ah-Gwah-Ching, 2) Akeley, Hackensack, Cass Lake, Nevis, Longville per MDH priority. Water recreation inventory/GIS ready to start. B.2 behind schedule but gaining. Completed strategic plan for TCLLWP. Building local GIS capability for intergovernmental cooperation. Contracts with SCSU and SWCD in process. Projects to be completed by June 30, 1997. July 1, 1997 - Completed: preliminary wellhead protection plans for Walker and Hackensack, GIS/inventory of boats on Leech Lake, urban water runoff plans for the towns of Federal Dam, Longville, Akeley, Laporte, Hackensack and Walker and beginning a comprehensive recreation plan for the watershed/MN DNR. A TCLLWP lake is selected as one of only five pilot lake projects statewide for the LCMR funded comprehensive lake planning project per MLA and the Interagency Lake Coordinating Committee.

C. Title of Objective/Outcome: Pilot Projects with Local Stakeholders

C.1. Activity: Coordinate and Design Subordinate Service Districts (SSD) for Cooperative Sewage Treatment Systems.

C.1.a. Context within the project: In cooperation with volunteer local townships, increase use of joint collection systems for lakeshore generally unincorporated lots/plat unable to meet codes through traditional septic systems. Establish design and cost estimate projects in cooperation with all stakeholders to develop a plan for installing sewage treatment system/s.

C.1.b. Methods: Develop preliminary engineering plans and provide legal assistance for up to 6 subordinate service districts, community drain fields. The effort will be coordinated with other programs.

C.1.c. Materials: No special materials requested -- general materials for this process provided in kind by stakeholders.

C.1.d. Budget
Total Biennial LCMR Budget: \$57,200 (Shifted \$10K to B.1)
LCMR Balance: \$0
Match: N/A

C.1.e. Timeline:

	7/95	1/96	6/96	1/97	6/97
1) SSD's					
- Select Committee	xxx				
- Solicit Applications		xxx			
- Select Projects		x			
- Implement Projects		xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx			

C.1.f. Workprogram Update: Committee has been appointed, thirteen applications received and selection criteria has been developed. Lower cost alternative (non-traditional) designs are emphasized. Feasibility reports completed on: Walker Hwy 371/Corridor and North Ten Mile Lake SSD. Additional projects in review. Top priority cluster project is Onigum/Pine Point of Leech lake. Public Meeting on June 27. Jurisdictional questions in review. Anticipate letting RFP in July/per public meeting. Large system. Two SSD projects in review for funding. Behind schedule but pace expected to increase in July/August. January 1, 1997- Evaluating project for spring septic system inspections. Information sharing is key. This objective behind schedule but expect project partner to commit in time to complete projects. Evaluating purchase of TCLLWP Hydro Lab for project review (January). Conducted organizational meetings (two) with Ten Mile Lake SSD project. July 1, 1997 - Completed request for qualified engineer. Completed organizational and design on cluster projects on Wabedo and Little Boy Lakes for spring '97 construction, completed design and facilities plan for N. Ten Mile Lake cluster project (spring '97 construction). Completed septic system inventory on Garfield, Oak and Horseshoe Lakes.

C.2. Activity: Coordinate Design, Development and Monitoring of One Commercial/Resort State of the Art Sewage System

C.2.a. Context within the project: Establish and provide design and cost estimates for up to three to pilot modern sewage systems at volunteer resort campground or restaurant businesses in the watershed.

C.2.b. Methods: In cooperation with the University of MN, TCLLWP Selection Committee and all stakeholders, investigate alternative small sewage treatment design alternatives. Develop up to three model projects to pilot new technology. Monitor system closely per U of MN and MN PCA. Coordinate with DTED 1993 LCMR Project results on septic system replacement for water related tourism businesses.

C.2.c. Materials: Project entails providing expert site evaluation, design and construction administration for development of alternative sewage/septic system/s for up to three commercial establishments.

C.2.d. Budget:
Total Biennial LCMR Budget: \$40,105
LCMR Balance: \$0
Match: N/A

C.2.e. Timeline:

	7/95	1/96	6/96	1/97	6/97
1) Commercial Pilot Project					
- Select Committee	x				
- Set Project Criteria	xxx				
- Contract		xxx			
- Select Project		xx			
- Complete Design		xxxxxxxxxxxx			
- Construction			xxxxxxxxxxxxxxx	xxx	
- Monitor				xxxxxxxxxxxxxx	

C.2.f. Workprogram Update: Sanitary Work Group interviewed commercial establishments owners. Top two priorities selected; one restaurant (Ten Mile Lake) Engineering RFQ posted and closed 6/26 contractor in place and contract signed. Expected to be under contract by mid-July. Slightly behind schedule. Lower cost non-traditional designs are needed statewide. Work group ties to DTED and IRRRB are in place. January 1, 1997 - A third project is being pursued. Negotiating. - DNR topographical survey assistance. Design complete, construction started - complete in spring. On schedule) and one resort (Leech Lake - Field work collected. Winter design with spring construction. On schedule). Build local GIS capability; purchase ArcView Spatial Analyst software \$1,000 for Cass County SWCD. July 1, 1997 - Completed design plans for Arthur's Ten Mile Lake Supper Club and Northland Lodge of Leech Lake - both now in construction. Completed design for Laporte School. Three designs done. Set up monitoring for Arthur's project. Developing information sharing.

C.3. Activity: Initiate Cooperative Projects for Development of Small Municipal Sewage Systems

C.3.a. Context within the project: Initiate and coordinate assessments of known sewage problems with all stakeholders in small incorporated towns of watershed including Federal Dam, Laporte, Bena, Walker, and Hackensack. Establish design and cost estimates in cooperation with all stakeholders for developing a plan for solving existing sewage problems. Enable development of new sewage system. The TCLLWP Sanitary Work Group Technical Committee will assess and recommend needs and prioritize projects.

C.3.b. Methods: Develop design and development plans and cost estimates for town sewage systems. Explore alternative designs consistent with area. Provide key advice on system design alternatives and maintenance. Explore shared maintenance options. Federal Dam Village Council approves coop deal for completing a “Facilities Plan” per TCLLWP, MHB, village and county contributions. January 1, 1997 - Facilities plan completed for Federal Dam, accepted by MPCA. Second application to DTED for \$1,080,550 submitted - sand filter wastewater system/housing rehabilitation proposed. In spring, DTED responds to proposal.

C.3.c. Materials: No materials requested for his action -- general materials for this process provided in kind by stakeholders.

C.3.d. Budget
Total Biennial LCMR Budget: \$30,695
LCMR Balance: \$0
Match: N/A
Match Balance: N/A

C.3.e. Timeline:

	7/95	1/96	6/96	1/97	6/97
- Select Committee	xxx				
- Conduct Needs Assessment	xxxx				
- Prioritize Projects	xxx				
- Public Meeting		xxx			
- Contract		xx			
- Engineering Needs Assessment		xxxxxxxx			
- Local Unit of Government (Alternatives)			xxx		
- Design and Implementation				xxxxxxxx	

C.3.f. Workprogram Update: Preliminary Engineering feasibility reports are complete for Federal Dam and Laporte. Cost share with USCE for town of Bena is being pursued. Develop volunteers. Develop “Facilities Plans” per DTED and MPCA requirements. January 1, 1997 - Water conservation for municipal wastewater management proposed to towns 1/97, and per OEA grant application. Conducted one joint agency wastewater issues tour. July 1, 1997 - No OEA Grant received. Organized and secured joint funds including Cass County Board and MHB (\$5000.00) for facilities plan. \$1,017,240 DTED small cities grant received for Federal Dam wastewater project. Proceeding with a three year wastewater project to sewer the town. Completed water conservation projects in Laporte and Federal Dam (80+ water saving devices) as an interim measure. State regulations for unsewered incorporated villages were seen as unreasonably complicated and costly for small towns to afford and accomplish without collaborative help from organizations like TCLLWP, MHB, etc. Therefore, it is difficult for the town to complete the first step in completing a “Facilities Plan,” the same requirement a large city project proposal. Unsewered small towns number in the hundreds statewide.

VI. Evaluation: TCLLWP committees will assess work activities at each quarterly meeting. News releases to the community and organizations will encourage comment and involvement. Overall pace in developing and completing objectives is improving each month. TCLLWP anticipates committee approval to request redirecting A.4 funds to other objectives per new information and opportunity. Strategic Planning session scheduled for August 8. Facilitation expected to be neutral perhaps via Blandin Foundation. January 1, 1997 - Completed strategic plan for TCLLWP as scheduled. Considering request to purchase Hydro Lab unit for TCLLWP to monitor and evaluate projects for January meetings. Considering joint erosion control projects.

VII. Context within field: Nationally, watershed and ecosystem management is being explored. No known watershed management projects are exploring a locally developed management plan on a "comprehensive basis." Coordination and the testing of implementation measures is perhaps the cornerstone of this project. Also, investigations of cumulative impacts coupled with sustainable development is ongoing. TCLLWP Strategic Plan completed 10/96. It is designed per an umbrella formate -- tying TCLLWP recommendations for practical long-term land use practices -- to existing plans such as: the 3 Local County Water Plans, MN DNR Plans, Lake Association Lake Management Plans, Indian Reservation Plans, municipal, MN PCA Plans," Chippewa Forest Plan, etc. Research efforts may be cited as well. Working to develop a practical local mechanism to conduct watershed management. Per TCLLWP strategic plan. Supported and influenced land use plan and county-wide zoning in Cass County passed by County Board July 1, 1997. Participated and commented on important conservation issues including: boat harbor permit applications, tax-forfeit land trade/waterfront - Woman Lake, vacation of public R.O.W. Ten Mile Lake, etc.

VIII. Budget context: MN DNR is funding the TCLLWP Coordinator position. All project partners are contributing in kind resources at various rates. TCLLWP has secured grant resources and expects to continue to seek such funding. Cass County is the fiscal agent for this project.

(a) 1993 - 1995 \$162,000 (b) 1995 - 1997 \$110,000

IX. Dissemination: All experience, information, designs or data developed will be shared with all agencies and interested parties of the watershed. Specific methods of dissemination are cited per description of "objectives/outcome" herein.

X. Time: Completion of project shall not exceed 2 years. It is important that spending approval be secured for 7/95 start up.

XI. Cooperation: Project cooperator numbers are significant and are as follows:

Private Citizen	Project Co-Chairman
Mayor of Longville	Project Co-Chairman
	Chair public and TCLLWP Meetings
Association of Cass County Lakes/ SC	
Ten Mile Lake Association	Draft Management Plan, Incorporation
	Investigations/Tech/Committee
Minnesota Lakes Association	Executive Committee
	Friends of the TCLLWP Committee
	Governmental Rep

Business Agriculture, Cass Forest Products (past SC),Landecker & Assoc., Leech Lake Realty, Leech Lake Chamber of Commerce, Agency Bay Lodge & Trailer Park

Kabekona Lake Association Executive Committee/SC, By-laws, LCMR Presentation, Chair Meetings, County Board presentations, etc.

Cass County Environmental Services, 1995 J 22 LCMR Contract Admin/GIS Grant Project - Contract Administration/SSD/SC, LCMR Presentation, facilitation of plan.
Leech Lake Indian Reservation - DRM, Tech/Executive Committee W.Q. Monitoring, Urban Runoff Project, EPA Grant, watershed wetland mapping, etc.
Mississippi Headwaters Board, I & E Committee/SC, Facilitation of Plan

A Steering Committee of 30 individuals direct the project's efforts. The committee includes representatives from business, local units of government, state and federal agencies, Indian reservations and special interests.

XIII. Required Attachment

1. Qualifications:

- 1) Program manager: Wally Christensen
- 2) DNR Fiscal Agent: Paul Swenson
- 3) Project Coordinator: John Steward

2. Project Staffing Summary:

State Agency Positions Sheet

