Subd. 8

Date of Report: December 31, 1997
LCMR Final Work Program Update Report

Date of Workprogram Approval: April 30, 1996
Project Completion Date: December 31, 1997

LCMR Work Program 1996-97

I. PROJECT TITLE: Greenway Corridors and Natural Areas Project

Project Manager: Sharon Pfeifer, DNR Metro Region
Affiliation: Department of Natural Resources
Mailing Address: 1200 Warner Road, St. Paul, MN 55106
Telephone: (612) 772-7982 **Fax:** (612) 772-7977

Total Biennial Project Budget: **$LCMR:** $50,000
$Balance: $0

A. Legal Citation: ML 1996, Chap. 407, Sec. 8, Subd. 4

Appropriation Language: "This appropriation is to the commissioner of natural resources from the future resources fund, to be administered through region six, for the greenway corridors and natural areas project. The appropriation must be used to develop a strategy to protect and manage greenway corridors and significant natural areas in the seven-county metropolitan area."

B. Status of Match Requirement: Not applicable.

II. PROJECT SUMMARY AND RESULTS:
This project will investigate and suggest an approach with strategies for developing a connected network of natural lands for the metropolitan region under the direction of a broad coalition of interests and technical experts.

A distinguishing characteristic of North American cities is the relatively low density of residential development. In the Twin Cities metropolitan area this pattern is especially pronounced. Of the 25 largest metropolitan areas in the country, the Twin Cities and expanding suburbs have the 23rd lowest density of development. Between 1970 and 1990, the urbanized portion of the Twin Cities metropolitan area more than doubled in size from 350 to 740 square miles. This rapid outward growth has increased the demand for roads, water, and sewage lines and space for buildings resulting in the rapid loss, degradation and fragmentation of the region's natural lands and water courses.

Over the past year, staff at the Metro Region of the Department of Natural Resources in conjunction with representatives from other resource agencies, environmental groups, the University of Minnesota and private partners, have met and developed a series of draft geographic information system maps with several data layers intended to illustrate remaining large blocks of natural land and the existing or possible connections between them. In large part, this preliminary work was undertaken to assess the status of remaining natural areas and to paint a picture or provide a visual way of discussing the problems of loss and fragmentation of natural lands and communities.

The next steps of this effort need to focus on forming a broader coalition of interests to understand the issue, gauge public and private interest, develop an approach and strategies to address the problem, and mobilize support for a system of natural areas connected by a network of natural and recreational corridors for the use of wildlife and people. In addition the existing draft map products need to be further refined by comparing them to recent aerial photography and by ground-truthing.

III. FINAL WORK PROGRAM UPDATE SUMMARY:

Successful completion of The Greenway Corridors and Natural Areas Project, which was funded in 1996, was marked by the issuance of a final report entitled "Metro Greenprint: Planning for Nature in the Face of Urban Growth." Asked to investigate the value of a Metro-wide network of greenways and natural areas, the citizen-based Greenways and Natural Areas Collaborative developed six goals to guide future program development and will request funding from the 1998 MN Legislature to move the initiative forward. In addition to the final report, project efforts during 1997 also produced a) natural resource inventory maps for the 7 Metro counties, and 2) a GIS map, which depicts more specifically than the original concept greenways map, the locations of areas of high ecological value and high endangerment in Metro which require protection, restoration, and connection as natural areas.

Result 1

1a. Forming and Convening the Collaborative Group

Thirty-two individuals were invited to participate in the Greenways and Natural Areas Collaborative group in December 1996. Of these 32, roughly 60-70% of the original members participated in the half-day sessions which met monthly from January through October 1997, for a rough total of 750 hours of citizen input by the Collaborative. Of the larger Collaborative, five volunteered additional time to act as members of a Steering Committee to guide the project's direction and products. The steering committee members contributed, minimally, an additional 100 hours of effort, for an estimated 850 hours of citizen participation on this project (excluding time contributed to the project by DNR staff).

A variety of formats were employed in the monthly meetings to inform the group about greenways and natural areas and to generate dialogue among the members. Outside speakers presented on regional scale efforts (Dr. Phillip Lewis, Wisconsin, and Nancy Chase, Oregon) and were very well received based on followup information. The project coordinator facilitated large group discussions to share information and concerns as well as to reach consensus at critical points such as on the group's vision statement, goals and recommendations. Steering committee members facilitated smaller, work group sessions to generate more specific sets of information needed by the group.

The Collaborative Group developed and adopted a vision statement which foresees a regional network of greenways and natural areas that contributes to more sustainable development in the Metro region (see page 7, Collaborative's final Greenprint report).

Subsequent to agreeing on a vision for Metro, the Collaborative developed six goals which needed to be achieved if their vision were to be realized (pages 19-21, final report). Work was begun on detailing specific strategies in order to attain each goal. Strategies are included in the final report, but work was not fully completed on defining specific strategies for each goal.

By the project's conclusion, the Collaborative decided on four recommendations to make to the MN Legislature to further their year-long efforts (p. 25, final report): briefly, to establish a DNR appointed advisory committee to establish a greenways and natural areas Metro program and to provide resources to substantially increase the level-of-effort, including grant money for local units of government and nongovernmental organizations and an appropriation to begin to protect natural areas of regional and local significance in Metro.

1b. Group Information Sharing and Decision-making

Factual information was shared both indirectly, through regular monthly mailings, as well as during monthly meeting discussions. For example, technical articles such as "How Greenways Work" and two DNR handbooks on protecting natural areas (one for private landowners and one for local units of government) were distributed to the Collaborative at the monthly meetings.

Active discussions among Collaborative members were useful for sharing opinions and personal and professional perspectives about the project, although large groups discussions were less focused and less efficient in terms of addressing action items . The most efficient method of group decision-making and information-sharing was facilitated small group work, with the smaller groups reporting back to the larger group.

The year-long process involved healthy, respectful discussions. Most members openly engaged in meeting discussions, and there were incidences of spirited debate. The group even exerted peer pressure to get meaningful presence by the Metropolitan Council at its final monthly meetings. The Collaborative had a persistent concern from early on in the process regarding the Council's stance on this project, and they were able to get some clarification as to the formal position of the Council's

Parks and Open Space division on regional greenways and natural areas by the project's conclusion.

There were key decisions which had to be made and approved by the Collaborative, including final wording of the group's vision statement, proposed goals and strategies needed to move ahead, and final recommendations to fund what the group saw as next steps to their efforts. There were many other decision points during the process, when decisions were made by the steering committee in conjunction with the DNR project coordinator. This smaller group assumed the majority of "day-to-day" decision-making responsibility on behalf of the larger group for one primary reason: it was more expedient to convene 4 to 5 people for half day meetings to shape upcoming agendas given the limited project timeframe.

Two-way information-sharing between the Collaborative's county planners and DNR technical staff enabled improved GIS production of the county natural resource inventory maps and other mapping efforts. Future collaboration between county staff and the DNR is anticipated to further refine county maps as more data and information become available.

Noteworthy, is that the natural resource inventory maps developed jointly by the Collaborative and Metro DNR were shared with the Met Council's sector representatives involved with comprehensive plan updates throughout the Metro. These maps begin to fill a glaring gap for many Metro planners: some knowledge and baseline information on natural resources there are "to work with" and "to plan around" in local areas.

The most important decision made by the Collaborative was that the concept they set out to explore had merit and could benefit the region as a whole if implemented. Some Collaborative members had reservations about the project, too, but these were not enough to deter Collaborative members as a whole from supporting in their final report a regionwide network of greenways and natural areas that augmented Metro's existing parks and open spaces and, thereby, served to retain Metro's quality-fo-life into the future.

1c. Mustering Technical Support and Assistance

The Technical Advisory Group (TAG) to the Collaborative provided much assistance throughout the project, especially in the forms of GIS mapping and knowledge of natural community locations and qualities. The TAG, comprised of six DNR staff, met at least monthly and a few TAG members provided input on a much more regular basis. Because some of the TAG members provided technical expertise to nongovernmental organizations or counties engaged in natural resource inventories, information about the greenways effort was shared at other opportunities besides the monthly meetings. Minimally, the TAG expended about 400 person-hours on the project, with many more hours contributed by 3 key TAG members. At the project's beginning, Collaborative members were invited to join the TAG, but only on two occasions did a Collaborative member participate in TAG meetings.

GIS work was very important in moving this project forward and several generations of maps were produced. One working subgroup of the Collaborative worked with the GIS Metro DNR staff to help revise county maps showing natural resource inventories. A part time GIS intern position was created early on in the project and was filled throughout the life of the project to assist the DNR GIS staff person in the mapping for the Collaborative.

Collaborative members also contributed valuable professional expertise in terms of some of the realities of what could better advance the idea of a regional greenways network. Some of these ideas included: working with the Met Council, rather than dismissing the Council as ineffective; getting city and county representation on a more formal committee so that work time could be designated to the effort; engaging in public outreach and education about the project; providing technical and grant support to greenway projects in the developed urban area that focus more on restoration than protection of natural areas, which are mainly in the urban reserve and rural areas of Metro.

In addition to tapping local expertise, a fair amount of useful information was gathered from other greenway project leaders in Illinois and Portland, Oregon. With several years of experience behind them, these outside contacts provided useful documents and project insights, which were passed along to the Collaborative in the form of reading materials or discussion information.

Opportune timing enabled Metro DNR to distribute a useful document entitled "Natural Areas: Protecting a Vital Community Asset", which complemented the efforts of the Collaborative. This document focused on tools to protect natural areas, and provided a more in-depth discussion of land protection tools also contained in the Collaborative's final report (Appendix D, Toolbox for land protection).

The Attorney General's office played a role in identifying and reviewing useful conservation ordinances which are applicable to the goals of this project and may be used as models in the future.

To ensure that the project met its expected deadline, the DNR's I&E Bureau did a commendable job at report layout and production in a very short timeframe and ensured that the Collaborative's initiative concluded in timely fashion with time to prepare for the 1998 Legislative session.

Metro DNR's public affairs coordinator also provided journalistic expertise to write two articles about the greenways and natural areas project during the last year for the DNR's Volunteer and the DNR Review and an oped piece in the Minneapolis Star and Tribune. The Metro daily newspapers have been contacted to cover the release of the Collaborative's final report in January 1998.

1d. Preparing a Final Report

Consultant Mary Kroll played an important role in working with the steering committee for 6 months and completing a draft report by the end of September 1997. This draft enabled the Collaborative to critique a written document and to clarify any remaining issues or concerns for the final report.

Based on feedback generated by the draft report, the final report was written by two DNR staff following the Collaborative's final, mid-October meeting. The final report incorporated the feedback expressed by Collaborative members to the greatest extent possible and went to production in early November. The final, four-color report was delivered 17 December 1997 and becomes a public document on 7 January 1998, when Collaborative members receive their copies.

1e. Collaborative Group Responsibilities

By working respectfully together, the Collaborative fulfilled its project responsibilities to the best of its abilities, which included a) developing an understanding of the functions and values of a greenways and natural areas network in Metro, b) recommending a set of strategies to protect, maintain, and restore natural areas via land protection tools including acquisition, c) developing recommendations to create a program to promote a regional network of natural areas and greenways, and d) developing support for the initiative. Dissenting opinions were heard and commented on, and while not everyone "bought on" to this project idea in the 40 hours of meeting time, it did seem as though members began to hear others' perspectives and to think more broadly about what this concept might do for the region and for individual interests.

Many Collaborative members have discussed this project and its final recommendations with their organizations and agencies. At the request of individual Collaborative members, presentations about this project have been given to Commissioners of the LCMR and members of the Citizens Advisory Council (June 1997), Dakota County commissioners and MNRRA city representatives (July 1997), to the MN Parks and Trails Council (August 1997), to the Metropolitan Parks and Open Space Commission (November 1997), to the Met Council's Environmental Review and Local Assistance sections (October 1997), and to the River Leaders group (November 1997). MNRRA's Metro Trails and Open Space Partnership is supportive of the Collaborative's efforts and has incorporated the some of the Collaborative's goals into its planning efforts. The Nature Conservancy, which held ex officio status on the project, recently gave strong indications of supporting the project's recommendations.

There are several indications that the Collaborative's work and recommendations have merit. The Collaborative will put forth its own recommendations to the 1998 MN Legislature and request funds to carry its efforts into a second phase. However, members of the River Leaders group support the Collaborative's recommendations and chose to develop a more ambitious legislative request which included the Collaborative's funding request in toto. The Nature Conservancy also decided to support the Collaborative's request in addition to its request for outstate funding. Finally, the MN DNR's capital budget request contains a placeholder for the Greenways and Natural Areas project in the Governor's budget.

In the interim period following completion of this project, several Collaborative members continue to work to generate more interest in the greenways and natural areas concept. Some members are working on their own legislative agendas, which include the Collaborative's recommendations as part of their efforts. A couple of Collaborative members have contacted Metro DNR to see how the DNR

can assist local communities in developing greenways and natural areas plans and projects. Certainly, Metro DNR staff continue to work on technical aspects of the project which anticipate future information needs.

Result 2: Refinement of GIS map

When the project began in January 1997, the Collaborative had one map - the "concept" map, which visually depicted hypothetical greenways interconnecting potential natural areas, or areas which had not been surveyed on the ground for their ecological quality or actual existence. During the course of this project other maps were needed and developed. One of the most important mapping needs of the Collaborative members was the generation of natural resource inventory maps for each Metro county. DNR Technical Advisory staff worked with Collaborative members to refine county maps. The final county maps showed the locations of different natural resources, parks (county and state), and other natural resource areas (wildlife management areas, aquatic management areas, scientific and natural areas). These maps were ultimately provided to county planners on the Collaborative and to the Met Council's Office of Local Assistance for use by their sector representatives in comprehensive planning discussions. These maps constitute an important, useful final product of this project and are being used by local units of government, nongovernmental organizations, and, hopefully, the Metropolitan Council.

In addition to the inventory maps, the original concept map was refined. Using MN County Biological Survey information, the known, highest quality remaining natural areas were mapped in relation to existing parks and natural resource management areas and potential connections were made between these regional network "building blocks." As shown in the Opportunities for Protection and Restoration map (p. 22, final report), the Collaborative decided on a narrower scope of Metro locations to focus initial greenways and natural areas efforts. Focal areas in Metro include, not surprisingly, the natural greenway corridors of the Mississippi, Minnesota, and St. Croix rivers, in addition to a substantial wetland/stream corridor in northeast Metro and small, remnant populations of Metro's nearly extinct prairie and mixed hardwoods plant communities.

To help advance the Collaborative's efforts, Metro DNR has continued GIS applications to analyze Metro opportunities for greenways and natural areas planning and implementation. The "Opportunities" map contains over 50 known high quality natural areas in Metro deserving of good planning and protection. With the application of ecological criteria developed by one of the Collaborative's working groups, 19 high quality areas have emerged as most in need of protection, and these areas are shown in relation to the existing parks system and 18 known greenways projects in Metro.

IV. OUTLINE OF PROJECT RESULTS:

Result 1: Formation of a collaborative group to investigate the value of developing a system of natural lands, parks, lakes, woodlands, stream corridors, wetland complexes and wildlife and recreational corridors that together make up a series of ecologically significant natural areas and corridors for the use of people and wildlife, within the seven-county metropolitan area.

This would be accomplished by a project coordinator whose major responsibilities would include:

- Forming and convening the collaborative group.
- Carrying out a process whereby pertinent information is delivered; issues and options are discussed; approaches and strategies are researched, developed and agreed to; and support and interest is generated.
- Mustering technical support and assistance as needed.
- Preparing a final report detailing findings, strategies and future direction.

The responsibilities of the collaborative group and those providing technical assistance will include:

- Developing an understanding of the functions, requirements and value of connected networks of natural land in urbanizing areas through a series of presentations and discussion.
- Recommending a set of strategies for protecting, maintaining and restoring networks of natural land by knitting together a variety of tools such as easements, zoning, cooperative agreements, tax incentives, acquisition, land trusts, technical assistance, grants and public/private partnerships.
- Developing recommendations aimed at coordinated delivery of these strategies to land and water resource agencies, local units of government, the Legislature, environmental organizations, and landowners and other interests across the seven-county metropolitan area.
- Developing support and interest for this initiative.

Budget: $40,000
Balance: $0
Completion Date: December 31, 1997

Result 2: Refine existing geographic information system maps by comparing them to aerial photography and ground truthing and by adding additional data layers.

Budget: $10,000
Balance: $0
Completion Date: December 31, 1997

Dissemination: The Greenways and Natural Areas Collaborative issued a final report entitled Metro Greenprint: Planning for Nature in the Face of Urban Growth, which becomes a public document on 7 January 1998. This report will be mailed to all cities, townships, and counties. The Board of Water and Soil Resources offered to mail copies to all watershed districts and watershed management organizations. Several members of the MN Environmental Partnership will receive copies as will other key organizations and consulting firms in Metro. Copies will be distributed to all divisions within the MN DNR. The two Twin Cities papers have been informed of the final report and media releases on the Collaborative are anticipated. Presentations have been made by Collaborative members and DNR staff to a variety of groups, including the MN Parks and Trails Council, the Metropolitan Parks and Open Space Commission, Metropolitan Council Office of Local Assistance staff, the MN Shade Tree Advisory Council, the Fish and Wildlife Legislative Committee, the River Leaders group, MN DNR division staff and directors, and the DNR Commissioners Management Team.

V. CONTEXT:

A. Significance: In urbanizing areas, connected networks of natural land, open space and water resources can help to maintain ecological integrity in human-dominated landscapes especially with regard to preserving biological diversity and high quality water resources. Such networks provide habitat for and increase the long term health of plant and animal populations. They help to maintain water quality by buffering and filtering excessive nutrients and contaminants and they provide opportunities for an array of recreational pursuits.

Blocks and networks of natural land exist in the metropolitan region, however, the future existence of many of them may be threatened by rapid, sprawling development. Areas across the country in Maryland, Florida, California, New England, Boulder, Colorado and Portland Oregon, noting a loss of natural areas and facing development pressures, have begun or are in the process of developing connected networks of natural land in order to conserve and restore their region's natural heritage and provide recreational opportunities.

B. Time: The proposed project has been completed on time.

C. Budget Context: For the past two years, items in the annual work plans of DNR Metro Region have identified the need for inventorying remaining natural areas and developing an approach to address the problem of the continued loss and fragmentation of natural lands within the metropolitan region. A process to identify natural lands and develop a GIS mapping system of the findings has been pursued and products include: 1) a regional map covering eighteen counties in the urbanizing Rochester to St. Cloud corridor identifying existing and potential corridor connections; and 2) a more detailed map of the seven county metropolitan area depicting natural areas and existing or potential corridor connection.

These maps were developed using the knowledge of an expert panel versed in land and water resources in the eighteen county target area and by adding information from existing natural resource data layers into a GIS system. They should be viewed as opportunity maps, rather than maps that identify natural lands and corridors with strict scientific accuracy. These maps are in draft form and need further refinement as detailed in Result #2, page 3.

It is anticipated that additional funding will be needed for this project July 1997 - June1999 in the approximate amount of $200,000, for refinement and implementation of strategies. In addition, it is likely that future substantial funds will be needed for a variety of protection techniques including acquisition. The source of that funding is unknown at this time.

	July 1995-June 1996 Prior expenditures on this project.	**July 1996-June 1997**	**July 1997-June 1999 Future expenditures On this project.**
1. LCMR		**$50,000**	**$0**
2. Other			
State	**$13,500 (in-kind)**	**$14,000 (in-kind)**	**$ 20,000 (in-kind) $105,000 in FY98-99**
Total	**$13,500**	**$64,000**	**$125,000**

BUDGET:

Personnel	$45,000
Equipment	
Acquisition	
Development	
Other	$5,000 (space rental, communication)
Total	$50,000

VI. COOPERATION: Continued cooperation is anticipated from a broad spectrum of local governmental units, watershed organizations, environmental and community-based organizations, natural resource agencies, the Attorney General's office, the University of Minnesota, and possibly major foundations.

VII. LOCATION: Ecological classification location: Oak Savannah, Big Woods, St. Croix Moraine and Outwash Plain, and Anoka Sand Plain.

VIII. Reporting Requirements: The following language must appear in the work program. Semiannual six-month work program update reports will be submitted not later than January 1, 1997, and a final six-month work program update and final report by June 30, 1997 or according to the completion date in the appropriation.