

# FINAL REPORT

AUG 13 2001

## 1999 Project Abstract

For the Period Ending June 30, 2001

**TITLE:** Landscaping for Wildlife and Nonpoint Source Pollution Prevention

**PROJECT MANAGER:** Shelley Shreffler

**ORGANIZATION:** Saint Paul Neighborhood Energy Consortium

**ADDRESS:** 624 Selby Avenue, Saint Paul, MN 55104

**FUND:** Minnesota Environment and Natural Resources Trust Fund

**LEGAL CITATION:** ML 1999, Ch. 231, Sec. 16, Subd. 14(b)

**APPROPRIATION AMOUNT:** \$150,000

### Overall Project Outcome and Results

This project expanded native habitats in the east metro area to invite wildlife and reduce nonpoint source pollution through residential landscaping using workshops and public education that promoted action. Native habitats provide food, shelter and diversity for wildlife; and reduce nonpoint source pollution in area lakes, streams and rivers. This project provided 18 introductory workshops, 12 follow-up landscaping workshops, low-cost planting material to 216 households and broad public education to over 130,000 individuals.

Four hundred eight introductory workshop participants learned the value of landscaping with native species to attract wildlife to a metropolitan environment, positive impacts on water quality because of reduced need for chemicals and decreased runoff, and benefits of reestablishing ecosystem functions in a built environment. Two hundred sixteen of the participant households used the professionally designed landscape plans to incorporate native plants into their landscapes and obtained plant material on a cost-share basis. One hundred seventy-two participants in the follow-up workshops gained knowledge about the care, maintenance and propagation of prairie and woodland landscapes.

Broad public education activities taught residents that what they do in their own yards directly impacts wildlife and the water quality of area lakes, streams and rivers. Approximately 130,000 households were reached through community newspapers, city newsletters and organizational newsletters.

### Project Results Use and Dissemination

The landscape plans and/or workshop materials have been used by other organizations, such as Ramsey Washington Metro Watershed District, Washington County Soil and Water Conservation District, Carpenter Nature Center, Maplewood Nature Center and Friends of the Mississippi River, in their education programs. The Department of Natural Resources may put the landscape plans on their website (plans from a previous LCMR project are on the website).

The workshop was taped and has been broadcast on east metro cable access stations.

**Date of Report:** July 1, 2001  
**LCMR Final Work Program Report**

**LCMR Work Program 1999**

**I. PROJECT TITLE:** Landscaping for Wildlife and Nonpoint Source Pollution Prevention

**Project Manager:** Shelley Shreffler  
**Affiliation:** Saint Paul Neighborhood Energy Consortium  
**Mailing Address:** 624 Selby Avenue  
Saint Paul, MN 55104  
**Telephone Number:** 651-221-4462 **E-mail:** shelley@spnec.org **Fax:** 651-221-9831

**Total Biennial Project Budget:**

<b>\$ LCMR:</b>	\$150,000	<b>\$ Match:</b>	\$24,000
<b>- \$ LCMR Amount</b>		<b>- \$ Match Amount</b>	
<b>Spent:</b>	\$138,714	<b>Spent:</b>	\$24,000
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<b>= LCMR Balance:</b>	\$11,286	<b>= \$ Match Balance:</b>	\$0

**A. Legal Citation:** ML 1999 Chap. 231, Sec. 16, Subd. 14(b)

**Appropriation Language:** Landscaping for Wildlife and Nonpoint Source Pollution Prevention \$75,000 the first year and \$75,000 the second year are from the trust fund to the commissioner of natural resources for an agreement with St. Paul Neighborhood Energy Consortium to work with urban and suburban communities to expand native species planting through residential landscaping and cooperative neighborhood projects. The activities must include participant cost sharing. This appropriation must be matched by at least \$24,000 of nonstate money.

**B. Status of Match Requirement:** City of Saint Paul, Public Works Department letter of commitment, February 6, 1998, for \$4,000 for Result 6, Broad Public Education; Ramsey Washington Metro Watershed District Board of Managers approval, June 3, 1998, for \$20,000 for overall project cost share. Participant cost sharing will average 50% of plant material costs and of Result 3 landscape design costs. A nominal fee will be charged for workshops under Result 2.

**II and III. FINAL PROJECT SUMMARY:**

Overall Project Outcome and Results

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#### **IV. OUTLINE OF PROJECT RESULTS:**

##### **Result 1: Design, promote and deliver introductory landscape workshops to east metro urban and suburban residents**

Project staff will work with DNR and Ramsey Washington Metro Watershed District (RWMWD) staff and other community resources to modify our existing landscaping workshop to make it suitable for suburban residents. Project manager will contract with a professional landscape designer or architect to create landscape designs suitable for suburban yards.

Project staff will research workshop locations throughout Saint Paul and the RWMWD. Project staff will contract with a graphic artist to design promotional material and will mail out informational material and press releases.

Project staff will conduct 3-4 workshops in the late summer or fall of 1999, 4-6 workshops in the spring of 2000, 4-5 workshops in the late summer or fall of 2000 and 4-5 workshops in the spring of 2001. Each workshop will reach 20-30 people (approximately 400 people).

Result 1:	LCMR Budget: \$35,440	Match: \$3,500
	LCMR Balance: \$10	Match Balance: \$0

Completion Date:

Workshop redesign for suburban residents: March 2000

Workshop promotion and workshop delivery: October 1999; June 2000; October 2000; May 2001

July 1, 2001: Eleven urban-focused and seven suburban-focused workshops were held in various locations in Saint Paul and the east metro region. All locations were handicap accessible and on or near at least one bus line. Douglas Owens Pike created landscape designs suitable for suburban yards. Workshops were promoted through organizational newsletters, city newsletters, and community newspapers and to people who had expressed an interest in the workshop.

At the beginning of this project, project staff assumed that modifying the existing workshop would take very little time and effort. This proved not to be the case. Modifying the workshop for a suburban audience and creating new landscape designs took about as much time as if they were newly created.

There continues to be great interest in learning how to landscape with native Minnesota plants. These workshops continue to be popular and participants rate them very effective and interesting.

**Result 2: Develop, promote and deliver follow-up landscape workshops**

Project staff will work with DNR and Ramsey Washington Metro Watershed District (RWMWD) staff and other community resources to develop two new workshops. One workshop will provide detailed, in-depth information on the care, maintenance of native landscapes. A second workshop will provide detailed, in-depth information on the propagation of prairie and woodland plants.

Project staff will research workshop locations throughout Saint Paul and the RWMWD. Project staff will contract with a graphic artist to design promotional material and will mail out informational material and press releases.

Project staff will conduct 2 workshops in the spring 2000 and 4 workshops in the fall of 2000 and 5-6 workshops in the spring of 2001. Each workshop will reach 20-30 people (approximately 400 people). A nominal fee will be charged for workshops.

Result 2: LCMR Budget: \$27,680

Match: \$5,000

LCMR Balance: \$8

Match Balance: \$0

Completion Date:

Workshop development: March 2000

Workshop promotion and workshop delivery: April 2000; April 2001

July 1, 2001: Project staff contracted with Char Bezanson to develop and present a workshop on native plant propagation. It was designed as a hands-on, half-day workshop. A \$10 donation was requested. 94 individuals attended eight workshops. Workshops were held in Saint Paul and suburban locations. Workshop participants rated the workshop as very good to excellent and felt the \$10 fee was appropriate. A lower number of people attended the workshops than

originally thought. Project staff feel this is due in part to the longer format. It is also a specialized topic that may appeal to fewer people than expected.

When this project was proposed in 1998, the demand for native plants greatly exceeded the supply. We felt one way to increase supply was to teach people how to propagate their own plants. We discovered that only a small number of people are interested in investing the time and effort needed to grow their own plants. There probably will always be people wanting to know more about native plant propagation. However, teaching people how to propagate plants will not be an effective tool to reduce short supplies of plants. Also, native plants are now more available commercially. Supply and demand seems to be closer together.

Project staff contracted with Roy Robison to develop and deliver a workshop on care and maintenance of native gardens and landscapes. A \$5 donation was requested. 78 individuals attended 4 workshops held in Saint Paul and suburban locations. Fewer workshops were held than originally proposed. This was due to lower interest in the topic than anticipated. Project staff had surveyed participants in the previous residential landscaping project (LCMR 1995-97). Participants said they wanted follow-up workshops and the topic most frequently mentioned was maintenance of landscapes. We are not sure why actual workshop registration did not match the reported interest.

### **Result 3: Facilitate expanded native habitats through cooperative neighborhood projects**

Project staff will identify and recruit property owners to participate in 5-7 cooperative neighborhood projects. Contiguous neighbors or other property owners will pledge a portion of their property to a common area for the development of a native habitat. Project staff will contract with a graphic artist to design promotional material and will mail out informational material.

Project staff will contract with professional landscape designers and architects, to create designs for the cooperative neighborhood projects. Residents will be required to contribute to the cost of the designs based on their ability to pay. Participant cost share will average 50%.

Project staff will coordinate a registry program for the cooperative neighborhood projects.

Result 3:	LCMR Budget: \$21,125	Match: \$1,000
	LCMR Balance: \$11,226	Match Balance: \$0

#### **Completion Date:**

Identification and recruitment of property owners: March 2001

Cooperative neighborhood projects designed: May 2001

Registry program established: June 2001

July 1, 2001: Project staff developed a description of this element of the project and solicited proposals from landscape designers. Eight neighbor groups expressed an interest in participating in cooperative neighborhood projects based on the description. Six landscape designers were selected to work with neighborhood groups.



Project staff wanted to provide the greatest flexibility and range of choices possible so that anyone committed to expanding the amount of their yard devoted to native plants would have an opportunity to do so. We wanted to offer a choice of designers, levels of design detail and price/hour. These three items determine the total cost. Our goal was to provide a range of price options for residents while controlling overall costs. This commitment to accessibility presented barriers. Project staff were unable to reach an agreement with any designers on specific deliverables. No designer was willing to predict the number of hours needed on a specific design project in advance of meeting with the landowners. Also, most were not comfortable working with more than one client on a cooperative project.

Due to these challenges, project staff shifted their approach and opted to work with one designer and complete a smaller number of projects. Douglas Owens Pike with EnergyScapes was selected based on his availability and willingness to work within the project structure. Interested residents were contacted with project information. Each group of residents withdrew their participation after they found out the area requirements (25-30% of either the front or back yard for each resident) and their portion of the cost share (50% of design costs or approximately \$400-\$800). As a result, no cooperative neighborhood plantings were completed. We also learned that in most cases only one of the residents was strongly interested in the project and there was not equal commitment from all parties.

Project staff felt it was critical to the success of the project that each member of a group of residents be strongly committed to the effort. While setting up this project in 1999, staff spoke with Bonnie Harper-Lore and Fred Rozumalski about their experiences working with groups on landscape designs and installations. Both have experience working with residents on neighborhood-scale projects. Their experiences demonstrated the importance of all people being involved and supportive of the project. Where only one or two people were committed, the projects were not sustained and native plantings were frequently removed within two years. Because of their experiences, we felt it was better to do no installations rather than move ahead with any when only one person was strongly interested in the project.

We learned some important things while working on this project element. Money is the largest barrier for most people. There was interest in receiving professional design assistance, but few people were interested in paying for it, even with a 50% cost share. The other project hindrance was expecting contiguous neighbors to work together. In only one instance did we have three neighbors with similar levels of commitment.

The goal of this project task was to increase the size of native habitat patches within urban and suburban areas. In hindsight, project staff feel this could more effectively be done by targeting key neighborhoods (such as Mississippi River bluff area, Ames Lake/Phalen wetland area, areas adjacent to open space) with the residential landscaping workshop. The workshop is a proven, effective tool to educate people about the importance of using native plants. Over half of the workshop participants plant native species within six months of being in the workshop. By targeting areas, it may be possible to achieve a critical mass of individuals incorporating native plants in their yards such that native landscapes become the neighborhood norm. As it becomes more acceptable to have a native garden, more people will adopt them. The desired goal of larger habitat patches could be achieved.

**Result 4: Plant urban wildlife habitat**

One hundred seventy-five to two hundred residential sites and 15-20 cooperative neighborhood projects will be planted using a variety of native species. NEC will work to secure a discount on the cost of the planting materials. Participants will be required to contribute to the cost based on their ability to pay. Participant cost share will average 50%.

Result 4:	LCMR Budget: \$40,700	Match: \$6,000
	LCMR Balance: \$7	Match Balance: \$0

Completion Date: June 2001

July 1, 2001: Two hundred sixteen households obtained planting materials (flowering plants, grasses, shrubs and trees) during this project. People ordered an average of 10-13 species of plants.

Project staff contracted with Sean Uslabar, manager of the Ramsey County Corrections Facility greenhouse, to grow prairie forbs and grasses. Woodland plants, shrubs and trees were purchased from licensed nurseries in the Twin Cities metro area.

Project participants contributed on average 50% of the cost of the plant material. No one was denied plants due to an inability to pay; however, each participant was required to make a financial contribution. Some participants contributed more than the suggested amount.

**Result 5: Evaluate the impact of landscaping with native plants**

Project staff will contract with a professional researcher to conduct a survey of project participants to determine the success of those who have incorporated native plants into their landscapes. Parameters of success will include plant establishment and wildlife use. The NEC will also survey participants on the social acceptance of using native plants.

Project staff will distribute survey results to interested organizations, agencies and individuals.

Result 5:	LCMR Budget: \$12,275	Match: \$2,500
	LCMR Balance: \$8	Match Balance: \$0

Completion Date: June 2001

July 1, 2001: Project staff contracted with Will Pipkin of Future Now to conduct the evaluation of impacts of landscaping with native plants. The study examined the experiences of gardeners who participated in NEC workshops from 1996 to 2000 and purchased plants through the NEC. Participants were asked to describe their experiences using native plants in their gardens including the extent to which they use natives (number of species and area planted), number of hours devoted to gardening with native plants, species changes over time and wildlife use. The study also sought to gauge their relative success and satisfaction with the endeavor.



The results of the study indicate the project achieved a strong set of outcomes. The vast majority of participants (97%) succeeded in their attempts to incorporate native plants into their gardens and landscapes and most (92%) plan to continue using native plants. The results also indicated a strong commitment by these gardeners. Over half (52%) expanded the area devoted to native plants and 36% doubled the area in native plants. A significant number of participants (11%) have at least half of their yard in native plants.

From an ecological perspective, another important finding is that 57% of participants increased the number of species they planted, 38% reported doubling the number of species in their gardens. Unfortunately we do not have information about the relationship between area planted and number of species planted. It is likely there is a direct, positive relationship (as area increase, number of species increases).

The information related to number of hours gardening is less clear. Project staff assumed people would spend less time gardening once the native plants were established after two or three growing seasons. With hindsight, project staff can see the questions asked did not obtain enough detailed information to make definitive conclusions about trends in hours spent gardening with native plants. While some people reported spending less time gardening (20%), about half (47%) said the time spent remained the same and 16% said they spent more time gardening. We don't know why more people didn't report a decrease but speculate that it is related to age of garden, expansion of landscaped areas and/or inclusion of all gardening.

Participants reported seeing more wildlife, especially butterflies and birds; however, a substantial number of those surveyed did not feel comfortable expressing an opinion. There is a positive relationship between people's interest in viewing wildlife and reporting more sightings. It is reasonable to assume that increased native habitat will support more wildlife. Unfortunately, the study could not address this.

An overwhelming 89% of the respondents said they were satisfied with their efforts at using native plants (34% were extremely satisfied). Only 4% were dissatisfied.

#### **Result 6: Broad public education**

Approximately 130,000 east metro and Saint Paul residents will learn actions they can take that will directly impact wildlife and water quality in area lakes, streams and rivers through community newspapers, city newsletters and organizational newsletters.

Project staff will contract with a graphic artist to provide artwork and design for a series of public education pieces. These messages will be published in the *Curbsider* (the NEC recycling newsletter). Project staff will provide articles to community newspapers and neighborhood newsletters. Project staff will work with RWMWD staff to provide articles to community newspapers and city newsletters in communities in the watershed district.

Result 6:	LCMR Budget: \$12,780	Match: \$6,500
	LCMR Balance: \$27	Match Balance: \$0

Completion Date: May 2001



July 1, 2001: An article on landscaping with native plants was published in the spring 2000 and spring 2001 issues of the *Curbsider*. They focused on landscaping for wildlife and water quality improvement. Each issue was distributed to over 110,000 households in Saint Paul.

Project staff worked with RWMWD and Maplewood Nature Center staff to publish articles in community newspapers in the watershed district. An article was published in the *East Side Review* and the Maplewood city newsletter.

Project staff had informational displays at community events such as Midway Home Show and Capitol City Earth Day event. Fact sheets were distributed to interested individuals.

**V. DISSEMINATION:** The landscape plans and/or workshop materials have been used by other organizations, such as Ramsey Washington Metro Watershed District, Washington County Soil and Water Conservation District, Carpenter Nature Center, Maplewood Nature Center and Friends of the Mississippi River, in their education programs. The Department of Natural Resources may put the landscape plans on their website (plans from a previous LCMR project are on the website).

The workshop was taped and has been broadcast on east metro cable access stations.

## **VI. CONTEXT:**

**A. Significance:** Many current native habitat restoration programs are done in rural or outlying areas. This project uniquely matched that work by promoting the development of native habitats in urban and suburban settings. Because most of the land in metropolitan areas is developed, it is significant to encourage residential homeowners to incorporate patches of native habitat into their urban and suburban yards. These patches enhance the environment by helping to restore ecosystem function. By doing this, the project strongly complemented other work being done on greenway corridors. The NEC offered introductory landscaping workshops in 1995-97. This project enhanced that work by expanding the workshops to suburban communities and offering follow-up workshops to further understanding of native habitats.

**B. Time:** This project did not exceed two years.

**C. Budget Context:** The NEC has coordinated the development of native habitats with activities providing education on and promotion of water quality protection since 1995. Work in the two areas promotes an overall message of native habitat development and environmental protection. This project built upon the foundations created during the Urban Wildlife Habitat Program funding by the State of Minnesota as recommended by the LCMR, July 1995-June 1998. It also complemented the Neighborhood Nonpoint Source Education program funded by the Metropolitan Council to teach residents how their actions impact local water quality.

LCMR Budget History:

\$150,000, July 1995-June 1998, "Urban Wildlife Habitat Program"

Non-LCMR Budget History:

Metropolitan Council Water Quality Initiative Grant, "Neighborhood Nonpoint Source Education Grant, August 1995-July 1996, \$62,975

Metropolitan Council Water Quality Initiative Grant, "Neighborhood Nonpoint Source Education Grant, August 1996-August 1997, \$83,799

Ramsey Washington Metro Watershed District, \$4,000, 1996, to develop two native plant demonstration sites.

## **1. BUDGET:**

### **Personnel**

\$101,630

NEC staff (1.25 FTE x 2 years)

\$12,195

Contract with one or more landscape professionals to develop suburban landscape designs, modify introductory landscape workshop, develop advanced landscape workshops and design 15-20 cooperative neighborhood projects.

\$4,875

Contract with research firm to evaluate landscaping with native plants.

\$1,800

Contract with graphic artist to design promotional material and broad public education material.

**Equipment** \$0

**Acquisition** \$0

**Development** \$16,375

LCMR cost share portion of plant material

### **Other**

Space rental, \$4,200

maintenance & utilities

Printing & advertising \$3,930

Communications, \$2,565

telephone, mail, etc.

Mileage \$410

Supplies \$2,020

**Total** \$150,000

## **VII. COOPERATION:**

Cliff Aichinger, William Bartodziej, Louise Watson: Ramsey Washington Metro Watershed District

Average 20% of time at no cost to project

Anne Weber, Saint Paul Department of Public Works

Assistance with broad public education at no cost to project

Carrol Henderson and Joan Galli, Minnesota Department of Natural Resources

Assistance with workshop development at no cost to project

David Schuller, Minnesota Department of Natural Resources

Assistance with information dissemination at no cost to project

## **VIII. LOCATION:** City of Saint Paul and the Ramsey Washington Metro Watershed District