

M.L. 2009 Projects Completed 2011-2012

MN Laws 2009, Chapter 143, Section 2

M.L. 2009 Projects Completed 2011-2012

M.L. 2009 Projects

MN Laws 2009, Chapter 143, Section 2 (beginning July 1, 2009)

NOTE: Below are short abstracts for projects funded during the 2009 Legislative Session and ending during 2011-2012. The final date of completion for these projects is listed at the end of the abstract. Final Reports for all completed projects are available at <http://www.lccmr.leg.mn/projects/2009-index.html> or by contacting the LCCMR office.

Subd. 03 Natural Resource Data and Information

- 03a Minnesota County Biological Survey
- 03b County Geologic Atlas and South-Central Minnesota Groundwater
- 03c Soil Survey
- 03d Springshed Mapping for Trout Stream Management
- 03e Restorable Wetlands Inventory

Subd. 04 Land, Habitat, and Recreation

- 04a State Parks Acquisition
- 04b State Trail Acquisition
- 04d Statewide Scientific and Natural Area Acquisition and Restoration
- 04e Minnesota's Habitat Conservation Partnership (HCP) - Phase VI
- 04f Metro Conservation Corridors (MeCC) - Phase V
- 04g Statewide Ecological Ranking of Conservation Reserve Program (CRP) and Other Critical Lands
- 04h Protection of Granite Rock Outcrop Ecosystem
- 04i MN Farm Bill Assistance Project

Subd. 05 Water Resources

- 05d Intensified Tile Drainage Evaluation - RESEARCH
- 05e Citizen-Based Stormwater Management
- 05f Minnesota Drainage Law Analysis and Evaluation

Subd. 06 Aquatic and Terrestrial Invasive Species

- 06a Ballast Water Sampling Method Development and Treatment Technology - RESEARCH
- 06b Emergency Delivery System Development for Disinfecting Ballast Water - RESEARCH
- 06c Improving Emerging Fish Disease Surveillance in Minnesota - RESEARCH

Subd. 07 Energy

- 07b Projecting Environmental Trajectories for Energy-Water-Habitat Planning
- 07c Energy Efficient Cities

Subd. 08 Administration and Other

- 08a Contract Management
- 08b Legislative-Citizen Commission on Minnesota Resources (LCCMR)

SUBD. 03 NATURAL RESOURCE DATA AND INFORMATION

M.L. 2009 Projects Completed 2011-2012

Minnesota County Biological Survey

Subd. 03a \$2,100,000

Carmen Converse

DNR

500 Lafayette Rd

St. Paul, MN 55155

Phone: (651) 259-5083

Email: carmen.converse@dnr.state.mn.us

Fax: (651) 296-1811

Web: <http://www.dnr.state.mn.us/eco/mcbs/index.html>

Appropriation Language

\$2,100,000 is from the trust fund to the commissioner of natural resources for continuation of the Minnesota county biological survey to provide a foundation for conserving biological diversity by systematically collecting, interpreting, and delivering data on plant and animal distribution and ecology, native plant communities, and functional landscapes.

Overall Project Outcome and Results

Since 1987 the Minnesota County Biological Survey (MCBS) has systematically collected, interpreted and delivered baseline data on the distribution and ecology of plants, animals, native plant communities, and functional landscapes in 81 of 87 counties. MCBS has added 19,089 new records to the Rare Features Database and contributed 4,544 of the 9,634 total database records to the Releve (vegetation sampling) Database. Rare aquatic plant and vegetation surveys were completed for 1,764 lakes. Statewide 9,713 MCBS Sites of Biodiversity Significance and 58,957 polygons of native plant communities are now publically available on DNR's Data Deli.

During this project period, northeastern surveys documented features within large functional landscapes of fire-dependent forests, cliff and talus complexes, and undeveloped lakes. Surveys began in a portion of the northern patterned peatlands, one of the state's largest (about 2.5 million acres) and most inaccessible ecological systems. Surveys included successful collaboration with Red Lake Reservation DNR managers and University of Minnesota researchers.

New range distributional data were recorded for Braun's holly fern (*Polystichum braunii*), Laurentian tiger beetle (*Cicindela denikei*), Black-throated Blue Warblers (*Setophaga caerulescens*) and three species of mosses.

MCBS data on the locations of native prairie were a centerpiece of a plan: Minnesota prairie conservation plan 2010: a habitat plan for native prairie, grassland, and wetlands in the Prairie Region of western Minnesota. See also: [Minnesota's Remaining Native Prairie 100 Years After the Public Land Survey](#).

MCBS provided data and interpretation to inform management and monitoring activities in the Manitou and Sand Lake Seven Beavers Collaboratives- two large multi-jurisdictional landscapes.

DNR's Forest Certification implementation used a MCBS data access tool to assist in evaluation of data related to High Conservation Value Forests.

M.L. 2009 Projects Completed 2011-2012

Maps of the Minnesota locations of 242 breeding birds based on observations by MCBS are on the web: [Bird Distribution Maps](#).

Project Results Use and Dissemination

Data delivery includes delivery of information to local units of government, presentations and field trips, publications and web products. Several examples of recipients of data during this period include: St Louis County, Becker County, State Parks, northeast Landscape Collaboratives, Potlatch, Hamden Slough National Wildlife Refuge, Voyageurs National Park, Heron Lake Watershed District, and private landowners near the Chandler, MN Chanarambie Creek Prairies. See Final Report for additional information.

Project completed: 06/30/2011

County Geologic Atlas and South-Central Minnesota Groundwater

Subd. 03b \$2,695,000

Part 1: County Geologic Atlas and South-Central Minnesota Groundwater (\$820,000)

Dale Setterholm

Minnesota Geological Survey
2642 University Ave. W.
St. Paul, MN 55114-1057

Phone: (612) 627-4780 x223

Email: sette001@umn.edu

Fax: (612) 627-4778

Web: http://www.mngs.umn.edu/county_atlas/countyatlas.htm

Part 2: County Geologic Atlas and South-Central Minnesota Groundwater (\$1,875,000)

Jim Berg

DNR
500 Lafayette Road
Saint Paul, MN 55155

Phone: (651) 259-5680

Email: jim.berg@dnr.state.mn.us

Fax: (651) 296-0445

Web: http://www.dnr.state.mn.us/waters/groundwater_section/mapping/index.html

Appropriation Language

\$2,695,000 is from the trust fund for collection and interpretation of subsurface geological information and acceleration of the county geologic atlas program. \$820,000 of this appropriation is to the Board of Regents of the University of Minnesota for the geological survey to continue and to initiate the production of county geologic atlases. \$1,875,000 of this appropriation is to the commissioner of natural resources to investigate the physical and recharge characteristics of the Mt. Simon aquifer.

This appropriation represents a continuing effort to complete the county geologic atlases throughout

M.L. 2009 Projects Completed 2011-2012

the state. This appropriation is available until June 30, 2012, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

PART 1: Minnesota Geological Survey

Overall Project Outcome and Results

County geologic atlases support water and mineral resource management and education. An atlas provides maps and databases at scales appropriate for land use planning and water management decisions. An atlas greatly improves our ability to monitor the resource, to predict the effects of pumping, and to respond effectively to contamination. This project created atlases for Anoka and Wright counties in paper, digital, and web-accessible formats. Copies will be provided to LCCMR and the counties, and workshops will be held to train users.

Geologic maps describe the distribution of earth materials that determine where water can enter the ground (become ground water), where it can be taken from the ground (aquifers), and how aquifers connect to rivers, lakes, and wetlands. Each geologic atlas contains these parts:

1. Database map: shows the location of all well records, borings, scientific drilling, natural exposures, and geophysical measurements used to support the atlas. The databases are also provided.
2. Surficial Geology map: shows the earth materials immediately beneath the soil zone, and describes their composition and ability to convey water. The surface described by this map is the interface between human activities and ground water. Its character determines to a great degree the sensitivity of ground water to contamination.
3. Glacial Stratigraphy and Sand Distribution Model: A series of maps show the location, depth, and thickness of sand or gravel bodies (aquifers) in glacial materials. This map is useful in finding a water source, determining pumping effects, and in understanding the results of water monitoring.
4. Bedrock Geology map, bedrock topography map: These maps describe the location and type of bedrock present, and its ability to host and transmit groundwater. The contacts between layers of sedimentary rock are mapped as digital surfaces and this enables numerical simulations of the ground water system that can predict the effects of pumping before wells are drilled.

Project Results Use and Dissemination

Geologic atlases support informed decision-making. They are applied to wellhead protection, water appropriation decisions, well field design, onsite water treatment design, facility siting, monitoring, and remediation of contamination. The atlases are printed, and also provided in several digital formats for electronic use including geographic information systems. When the atlases are complete we hold workshops in the county to explain the products and their uses.

Project completed: 06/30/2012

PART 2: MN Department of Natural Resources

Overall Project Outcome and Results

Most data collected for the Mt. Simon - Hinckley aquifer Phase 2 study were derived from 16 wells installed at 10 locations to depths of 100 to 695 feet in McLeod, Wright, Hennepin, Sherburne, Anoka, and Isanti counties. In the Phase 2 area chemical residence time indicators from the Mt. Simon aquifer indicate groundwater ages less than approximately 1,000 years in eastern Wright and Sherburne

M.L. 2009 Projects Completed 2011-2012

counties and northern Isanti County. These relatively young groundwater ages are consistent with water level and stratigraphic information that indicate both direct and indirect connection of surface water to the Mt. Simon- Hinckley aquifer through localized focused recharge.

This project has shown that the most critical recharge area for the Mt. Simon-Hinckley aquifer and Minneapolis-St. Paul metropolitan area water supply includes portions of Wright, Sherburne, and Isanti counties. Protection of this region from water pollution should be a high priority for all levels of government. Continued monitoring of wells installed for this investigation will create a long term record that can be used to interpret changes in local and regional water supply due to water use or climate changes.

The County Geologic Atlas, Part B, portion of this project supported the completion of three and the initiation of six Part B atlases in the County Geologic Atlas series that the DNR prepares in collaboration with the Minnesota Geological Survey. Each Part B atlas provides groundwater maps, data describing aquifer properties and use, analytical results of groundwater chemistry sampling including age-dating samples, and interpretation of pollution sensitivity. All of these maps and data are used to meet many environmental information and protection needs, including resource protection planning, water resource management, water appropriation permitting, contamination mitigation, education, among others. The Todd, Carlton, and Benton Part B atlases were completed and the Carver, McLeod, Chisago, Blue Earth, Nicollet, and Sibley Part B atlases were initiated.

Project Results Use and Dissemination

The reports from this project have been available on the DNR website since the summer of 2012. The Mt. Simon project was presented as a poster at the Midwest Groundwater Association meeting in Minneapolis in October 2012. We are currently producing a short (15 minute) video highlighting some of the results of the project for presentation at future meetings and for general viewing on the internet. In addition, a summary of the project will be submitted to the Minnesota Groundwater Association for inclusion in the quarterly newsletter.

The well log and well construction information is currently available in the project report and the Minnesota Department of Health County Well Index (<http://mdh-agua.health.state.mn.us/cwi/cwiViewer.htm>). The wells have become part of the DNR observation well network. Water level data is currently available at: http://climate.umn.edu/ground_water_level/.

Publication of Part B atlas reports include preparation and printing of the County Geologic Atlases, Part B, and delivery of printed reports to the county; preparation and delivery of Part B materials to MGS for inclusion in a DVD version of each completed project that incorporates geographic information system (GIS) files, database files, pdfs, and additional digital products. When each atlas Part B is completed a training workshop for the county and local users is held to explain the results and how the maps, data, and other information can be used to assist local water resource programs. To reach other users and audiences program staff contributed newsletter articles and presented talks and posters at conferences. Completed digital products are posted on DNR webspace at http://www.dnr.state.mn.us/waters/groundwater_section/mapping/status.html. Printed reports are available for sale through MGS Map Sales at <http://www.mngs.umn.edu/mapsales.html>.

Project Publication:

South-Central Minnesota Groundwater Monitoring of the Mt. Simon Aquifer - Phase 2

M.L. 2009 Projects Completed 2011-2012

Project completed: 06/30/2012

Soil Survey

Subd. 03c \$400,000

Megan Lennon

BWSR

520 Lafayette Road N

Saint Paul, MN 55155

Phone: (651) 296-1285

Email: megan.lennon@state.mn.us

Fax: (651) 297-5615

Web: <http://www.bwsr.state.mn.us> and http://soils.usda.gov/survey/online_surveys/minnesota/

Appropriation Language

\$400,000 is from the trust fund to the Board of Water and Soil Resources to accelerate the county soil survey mapping and Web-based data delivery. This appropriation represents a continuing effort to complete the mapping. The soil surveys must be done on a cost-share basis with local and federal funds.

Overall Project Outcome and Results

Accurate soils information is essential for evaluating the potential for land to support development, crop and forest production, and for identifying the most suitable locations for conservation practices and other land uses. Readily accessible local soil information is critical to informing conservation decisions and provides a foundation for sustainable land use planning. The soil survey is the mechanism for how this basic natural resource information is made available to land use authorities and landowners to make the best land use decisions.

In the ongoing, multi-year project to map, classify, interpret, and Web-publish an inventory of the soils of Minnesota, this two-year phase of the project focused on accelerating the completion of a Statewide soil survey, increase soil mapping in targeted areas, and enhancing soils data through increased sample collection, availability and interpretation. Specifically:

- 330,000 acres mapped in Crow Wing County;
- 32,000 acres mapped in Pine County;
- 85,000 acres mapped in Koochiching County;
- 80,000 acres mapped in the Crane Lake subset of St. Louis County;
- 219,000 acres mapped in Lake County;
- 114,000 acres mapped in Cook County;
- Data from 1,000 soil samples (some dating back to the 1970's) were interpreted for the first time and incorporated into Soil Surveys for many Minnesota counties;
- Land use effects on soil carbon were determined on 122 sites in 14 counties throughout the State; this data can be used to develop soil carbon management guidance.

The soil survey project was extremely successful and many of the mapping goals were exceeded. Mapping surpassed initial acreage goals in both Crow Wing, Lake, Cook and Pine Counties, and the soil surveys for Koochiching and St. Louis Counties were completed 1 year ahead of schedule. A report

M.L. 2009 Projects Completed 2011-2012

detailing the results of re-analysis of lab samples from the 1970's highlighting land use impacts on soil carbon is available below and on BWSR's State Soil Office [website](#).

Project Results Use and Dissemination

The Soil Survey project funded by the Minnesota Environment and Natural Resources Trust Fund is highlighted as a BWSR feature project on the Agency's home page. All the data, mapping information, and interpretations are available on the Web Soil Survey as a user-friendly, GIS-based application. Web Soil Survey provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world.

Project Publication:

Historical C Project Report on land use impacts on soil carbon

Project completed: 06/30/2011

Springshed Mapping for Trout Stream Management

Subd. 03d \$500,000

Part 1: Springshed Mapping for Trout Stream Management (\$250,000)

E. Calvin Alexander, Jr.

U of M
310 Pillsbury Dr. Se
Minneapolis, MN 55455

Phone: (612) 624-3517

Email: alexa001@umn.edu

Fax: (612) 625-3819

Part 2: Springshed Mapping for Trout Stream Management (\$250,000)

Jeff Green

DNR
2300 Silver Creek Rd NE
Rochester, MN 55906

Phone: (507) 206-2853

Email: jeff.green@dnr.state.mn.us

Fax: (507) 285-7144

Appropriation Language

\$500,000 is from the trust fund to continue to identify and delineate supply areas and springsheds for springs serving as coldwater sources for trout streams and to assess the impacts from development and water appropriations. Of this appropriation, \$250,000 is to the Board of Regents of the University of Minnesota and \$250,000 is to the commissioner of natural resources.

PART 1: University of Minnesota

M.L. 2009 Projects Completed 2011-2012

Overall Project Outcome and Results

Native trout require clean, cold water that usually originates from springs, but the springs feeding the 173 designated trout streams in southeastern Minnesota are under increasing pressure from current and expected changes in land use. This joint effort by the University of Minnesota and the Minnesota Department of Natural Resources continued an ongoing effort begun in 2007 that is working to identify and map the springs and the areas that feed water to these springs and to learn how these waters might be affected by development and water use.

Springshed delineation provides critical information for the protection and management of the springs that form the coldwater streams of southeast Minnesota. Our primary tool is fluorescent dye tracing. During the two-year period of Phase II, the U of M in collaboration with the DNR conducted 26 traces in Fillmore, Houston, Winona and Wabasha counties that mapped over 12,000 acres. Each individual trace typically has involved two or more different tracers with up to five different tracers employed in one trace. These traces are expanding the tools available for the springshed mapping, while defining new springsheds and refining the boundaries of known springsheds. These traces have been conducted in the Galena, Prairie du Chien and St. Lawrence springshed areas. Additionally, data monitoring equipment was also added as an additional component in this phase. The availability of new, high resolution LiDAR data also provided an important new tool that is being utilized to locate sinkholes, sinking streams, and spring as part of the springshed mapping effort.

We coordinated our efforts with other LCCMR funded programs in SE Minnesota and with ongoing resource management efforts by the DNR, MPCA and Agriculture Department State agencies. Six of the dye traces were done in coordination with local governmental staff in order to support the Root River pilot project of the Mississippi River Basin Initiative (MRBI) in Minnesota. We are working with the MPCA's TMDL efforts in SE Minnesota.

Project Results Use and Dissemination

The dissemination of the results of this project proceeded at several levels. We provided interim results to local landowners and to local, county, regional, and state agency staff and resource managers. MPCA staff, for example, routinely contact us with questions about karst features in SE Minn. We worked synergistically with other LCCMR funded research projects and with a range of resource management efforts. The generation and dissemination of the maps and written reports was part student educational projects - including local high school students, university students, interns, graduate student theses, post Doctoral researchers, and various colleagues. We lead and participated in fieldtrips sponsored by LCCMR, the MGWA, and other groups focused on protecting SE MN trout streams and water resources. We worked collaboratively with MPCA, DNR, Department of Agriculture and other agencies to expand and complement the LCCMR funded work. A dozen reports on the interim results of this project were presented at state and national scientific meetings.

Project completed: 06/30/2011

PART 2: MN Department of Natural Resources

Overall Project Outcome and Results

Springshed delineation provides critical information for the protection and management of the springs that form the coldwater streams of southeast Minnesota. Our primary tool is fluorescent dye tracing. During the two-year period of Phase II, DNR (in cooperation with the U of M) conducted 26 traces in Fillmore, Houston, Winona and Wabasha counties that mapped over 12,000 acres.

M.L. 2009 Projects Completed 2011-2012

The Fillmore County traces were in the Galena Formation. We discovered three previously unmapped springsheds and expanded the boundaries of five known springsheds. The expanded boundary springsheds were in the Watson Creek and South Fork Root watersheds, target areas for the local, state and federal Root River Initiative. The new springsheds are in the Crystal Creek watershed. These traces enhanced MDA watershed research and education efforts.

The traces in Houston, Winona and Wabasha were in the St. Lawrence Formation. This work expanded the geographic range of St. Lawrence traces and demonstrated that conduit flow in the St. Lawrence (a confining unit in the state well code) is a regional phenomenon. Four new springsheds were located in the St. Lawrence. Two of the traces in Houston County were run from streams that do not disappear into the St. Lawrence but flow continually across it. Both of those traces were detected at springs and one was detected in a private well. This indicates that St. Lawrence groundwater across southeast Minnesota could be impacted by the surface water quality of streams crossing the formation in shallow conditions.

Solinst level-temperature-conductivity loggers were purchased in the second year of the project. The data from them has shown that Prairie du Chien formation springs can be monitored for minor temperature fluctuations. Detecting these fluctuations has allowed us to conclude that the monitored springs are affected by snowmelt runoff. This information will be used for spring assessment protocol development.

Project Results Use and Dissemination

The project manager has spoken about the project and its results to local, state and federal officials, citizen groups, anglers, local, state and federal agency staff, and met one-on-one with numerous landowners. Project results are part of the base data for Root River Initiative watershed management efforts in the Watson Creek and Rush Pine watersheds. MPCA staff are using the maps as part of their nitrate-TMDL development. MDA staff are using the springshed maps to modify their watershed research in the Crystal Creek watershed. The project was featured on MPR when a reporter accompanied the project manager on a spring snowmelt runoff dye trace near Canton, MN. Two traces were conducted in cooperation with the earth science class at Fillmore Central High School in Harmony. The students assisted with dye input and sampling.

Project completed: 06/30/2011

Restorable Wetlands Inventory

Subd. 03e \$300,000

Darin Blunck

Ducks Unlimited, Inc.
2525 River Road
Bismarck, ND 58503

Phone: (701) 355-3500

Email: dblunck@ducks.org

Web: <http://prairie.ducks.org/index.cfm?&page=minnesota/restorablewetlands/home.htm>

M.L. 2009 Projects Completed 2011-2012

Appropriation Language

\$300,000 is from the trust fund to the commissioner of natural resources for an agreement with Ducks Unlimited, Inc., to complete the inventory, mapping, and digitizing of drained restorable wetlands in Minnesota. This appropriation is available until June 30, 2012, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

Overall Project Outcome and Results

The Restorable Wetlands Inventory (RWI) is a complement to the National Wetlands Inventory (NWI) completed in late-1980s by the U.S. Fish & Wildlife Service. An administrative decision was made developing the original NWI not to map wetland basins in Minnesota identified as completely drained. The number and acreage of completely drained wetlands that were not mapped by the NWI process is significant. In Pope County alone, 25,000 acres of completely drained wetland acres were missed in the NWI mapping process - nearly 19% of the total wetland resources in that county. The RWI project identifies and digitizes the completely-drained depressional wetlands that were not mapped by the NWI process. Restorable wetlands mapping is based upon protocols established for NWI allowing seamless integration of the two datasets.

The 2009 Environment and Natural Resources Trust Fund appropriation provided the last project funding needed to complete, remaining RWI mapping for the glaciated, tallgrass prairie region of Minnesota - an additional 6,120 square miles. The mapping occurred in approximately 178 townships in Clay, Mahnomen, McLeod, Meeker, Nicollet, Norman, Renville, Sibley, Wilkin, and Wright Counties.

In the Red River Valley Complex, over 132,000 individual restorable wetland basins were identified and mapped. In the Prairie-Hardwood Complex, almost 131,000 individual restorable wetland basins were identified and mapped.

As in previous phase of the mapping project, partners included the LCCMR, Ducks Unlimited, Inc., and the U.S. Fish and Wildlife Service. The photo-interpretation and digitization work was contracted to the GIS Lab at South Dakota State University.

The attached "Restorable Wetlands Inventory: Final Status Map" displays the counties and townships that were completed under the M.L. 2008, M.L. 2009, and prior appropriations.

Data will be distributed on the web via the Minnesota GIS Data Deli (<http://deli.dnr.state.mn.us>) and the Ducks Unlimited, Inc. (<http://www.ducks.org>) websites.

Project completed: 06/30/2012

SUBD. 04 LAND, HABITAT, AND RECREATION

State Parks Acquisition

Subd. 04a \$590,000

Jennifer Christie

DNR

500 Lafayette Rd

M.L. 2009 Projects Completed 2011-2012

St. Paul, MN 55155

Phone: (651) 259-5633

Email: jennifer.christie@state.mn.us

Web: http://www.dnr.state.mn.us/state_parks/index.html

Appropriation Language

\$590,000 is from the trust fund to the commissioner of natural resources to acquire in-holdings for state parks. Land acquired with this appropriation must be sufficiently improved to meet at least minimum management standards as determined by the commissioner of natural resources. A list of proposed acquisitions must be provided as part of the required work program.

Overall Project Outcome and Results

The Environment and Natural Resources Trust Fund funding allowed for the following:

- Ownership of approximately 87 acres in the Cuyuna Country State Recreation Area. Acquisition of this parcel provides for unified ownership of park-managed land and includes a key access point into the recreation area. This parcel also has over one mile of water frontage on three lakes within the recreation area.
- Ownership of a 17-acre parcel in Whitewater State Park. Acquisition of this parcel provides protection on the Whitewater River and adjacent to the park visitor center. The current trail system lies close to the boundary and could now be extended for additional river resource interpretation. The parcel also provides a natural buffer between the visitor center and private development.
- Ownership of approximately 20 acres of land in Nerstrand Big Woods State Park due to partially funding from the Trust Fund. This property is identified by Minnesota County Biological Survey as having outstanding biodiversity significance and has not been logged in over 100 years. The spring ephemerals prevalent in this area of the park are now protected. The site is also key to maintaining the closed canopy and diverse understory characteristic of 'big woods' in Nerstrand Big Woods State Park.

All acquisitions were from willing sellers, and located within the statutory boundary of state parks.

Project completed: 06/30/2012

State Trail Acquisition

Subd. 04b \$1,000,000

Jennifer Christie

DNR

500 Lafayette Rd

St. Paul, MN 55155

Phone: (651) 259-5633

Email: jennifer.christie@state.mn.us

Web: http://www.dnr.state.mn.us/state_trails/index.html

Appropriation Language

\$1,000,000 is from the trust fund to the commissioner of natural resources to assist in the acquisition of

M.L. 2009 Projects Completed 2011-2012

the Brown's Creek Segment of the Willard Munger Trail in Washington County and Paul Bunyan State Trail in the city of Bemidji.

Overall Project Outcome and Results

The Environment and Natural Resources Trust Fund funding allowed for the following:

- Ownership of approximately 1.25 miles of the Paul Bunyan State Trail. Acquisition of this property provided for the necessary connection to the Paul Bunyan State Trailhead on the southeastern corner of Lake Bemidji. The property is comprised entirely of former industrial property, located adjacent to the shoreline of Lake Bemidji. The 2009 Trust Fund appropriation amount partially funded this acquisition.
- Ownership of approximately 6 miles of the Browns Creek Segment of Munger State Trail. The property is comprised entirely of the right-of-way of the former Minnesota Zephyr Dinner Trail and traverses the margins of the St. Croix River floodplain adjacent to T.H. 95, the gently to steeply sloping bluffs of the river valley and gently rolling uplands that are interspersed with residential and commercial development. The 2009 Trust Fund appropriation amount partially funded this acquisition.

Project completed: 06/30/2012

Statewide Scientific and Natural Area Acquisition and Restoration

Subd. 04d \$590,000

Peggy Booth

DNR

500 Lafayette Rd, Box 25

St Paul, MN 55155

Phone: (651) 259-5088

Email: peggy.booth@dnr.state.mn.us

Fax: (651) 296-1811

Web: <http://www.dnr.state.mn.us/eco/sna/index.html>

Appropriation Language

\$590,000 is from the trust fund to the commissioner of natural resources to acquire high quality native plant communities and rare features and restore parts of scientific and natural areas as provided in Minnesota Statutes, section 86A.05, subdivision 5. A list of proposed acquisitions must be provided as part of the required work program.

Overall Project Outcome and Results

Acquisition and SNA designation of five properties at three SNAs was completed permanently protecting and providing for public use of 207.32 acres (pro-rated as 106.4 acres with this appropriation).

Acquisitions include the following:

- A new SNA was established with acquisition of the 14.72-acre Morton Outcrops SNA - the heart of a 65-acre exceptional and geologically significant Minnesota River valley rock outcrop site with seven rare species - located in Redwood County.
- Two additions totaling 105.7 acres (pro-rated as 50.3 acres for this appropriation) to the Hastings Sand Coulee SNA were acquired; along with a 78-acre adjoining tract transferred from

M.L. 2009 Projects Completed 2011-2012

DNR Wildlife, these acquisitions mean that 267 acres is now protected as SNA out of the ~500-acre sand coulee area which is the largest remaining sand prairie complex in Dakota County and is home to 14 rare species including three snakes and two butterflies.

- Two native prairie sites were added to Blanket Flower Prairie SNA in Clay County which now protects about 430 acres of habitat for 106 bird species including the greater prairie chicken: a 14-acre addition was acquired with this appropriation; and the 135.9-acre Ole Huseby Homestead addition to Blanket Flower Prairie SNA was acquired in part with this funding (prorated as 27.4 acres for this appropriation).

A total of 563 acres at 27 SNAs across the state received restoration and enhancement work, plus development projects were completed at 17 SNAs, thus increasing the native habitat quality and public use of these SNAs. In summary:

- One 11-acre prairie reconstruction project was completed.
- Woody invasive/non-native species were removed on 202 acres at 11 SNAs and herbaceous or seedling invasive species were removed at another 44 acres at four SNAs.
- Prescribed burning was completed on 317 acres at nine SNAs.
- New Adaptive Management Plans were completed for two sites.

Conservation Corps Minnesota (CCM) was involved in these projects at ten SNAs.

Project Results Use and Dissemination

Information about Scientific and Natural Area (SNA) sites, including those SNAs with new acquisition, restoration, enhancement and development activities through this appropriation, is available on the DNR website (www.mndnr.gov/snas). DNR-sponsored volunteer events are regularly posted at: www.dnr.state.mn.us/volunteering/sna/index. The Hastings Sand Coulee SNA acquisition was referenced in articles in the Hastings Gazette and the Friends of the Mississippi River website.

Project completed: 06/30/2012

Minnesota's Habitat Conservation Partnership (HCP) - Phase VI

Subd. 04e \$3,375,000

Joe Pavelko

Pheasants Forever, Inc.
7975 Acorn Circle
Victoria, MN 55386

Phone: (612) 532-3800

Email: jpavelko@pheasantsforever.org

Web: <http://www.mnhabitatcorridors.org>

Appropriation Language

\$3,375,000 is from the trust fund to the commissioner of natural resources for the sixth appropriation for acceleration of agency programs and cooperative agreements. Of this appropriation, \$770,000 is for the Department of Natural Resources agency programs and \$2,605,000 is for agreements as follows: \$450,000 with Pheasants Forever; \$50,000 with Minnesota Deer Hunters Association; \$895,000 with Ducks Unlimited, Inc.; \$85,000 with National Wild Turkey Federation; \$365,000 with the Nature Conservancy; \$210,000 with Minnesota Land Trust; \$350,000 with the Trust for Public Land; \$100,000 with Minnesota Valley National Wildlife Refuge Trust, Inc.; \$50,000 with the United States Fish and

M.L. 2009 Projects Completed 2011-2012

Wildlife Service; and \$50,000 with Friends of Detroit Lakes Watershed Management District to plan, restore, and acquire fragmented landscape corridors that connect areas of quality habitat to sustain fish, wildlife, and plants. The United States Department of Agriculture-Natural Resources Conservation Service is a cooperating partner in the appropriation. Expenditures are limited to the project corridor areas as defined in the work program. Land acquired with this appropriation must be sufficiently improved to meet at least minimum habitat and facility management standards as determined by the commissioner of natural resources. This appropriation may not be used for the purchase of residential structures, unless expressly approved in the work program. All conservation easements must be perpetual and have a natural resource management plan. Any land acquired in fee title by the commissioner of natural resources with money from this appropriation must be designated as an outdoor recreation unit under Minnesota Statutes, section 86A.07. The commissioner may similarly designate any lands acquired in less than fee title. A list of proposed restorations and fee title and easement acquisitions must be provided as part of the required work program. All funding for conservation easements must include a long-term stewardship plan and funding for monitoring and enforcing the agreement. To the maximum extent practical, consistent with contractual easement or fee acquisition obligations, the recipients shall utilize staff resources to identify future projects and shall maximize the implementation of biodiverse, quality restoration projects in the project proposal into the first half of the 2010 fiscal year.

OVERALL PROJECT OUTCOMES AND RESULTS

During the period between July 1st, 2009 and June 30th, 2011, Minnesota's Habitat Conservation Partnership (HCP) collectively expended \$10,849,598 of funds to restore, enhance or protect a total of 10,350 acres of habitat and 32,957 feet of shoreline and riparian areas within the defined HCP project areas. More specifically, 5,732 acres of habitat and 16,461 feet of shoreline and riparian areas were restored, enhanced or protected with \$2,973,871 of Environment and Natural Resources Trust Funds (ENRTF) that leveraged an additional \$5,217,069 of other non-state funds to restore, enhance, or protect 3,896 acres of habitat and 1,415 feet of shoreline and riparian areas.

In total, partners expended \$1,913,371 (\$1,158,226 ENRTF) to restore/enhance a total 6,100 acres (4,874 acres ENRTF). Work included 4,805 acres of grassland restoration/enhancement, 578 acres of wetland restoration/enhancement, 125 acres of woodland restoration, and 4,740 feet of shoreline restoration. Other accomplishments included 71 shallow lake surveys and designs, dam modifications, and site access/development.

Partners acquired a total of 3,463 acres (649 acres ENRTF) of perpetual conservation easements. Grassland/wetlands continued to be a priority for HCP partners working on easements, with 3,071.7 acres protected. Shoreline/riparian areas were also a priority with 13,216 feet protected. In addition, 335.6 acres of woodland was also permanently protected.

Partners permanently protected 787.6 acres in fee-title acquisition with total funding of \$2,499,610 (\$897,368 ENRTF and \$568,517 of other non-state funds). In total, HCP partners permanently protected 600.5 acres of new WMAs, 56.3 acres of AMAs, 52.3 acres of TNC preserve, and 78.5 acres of WPAs.

For complete information, go to <http://www.mnhabitatcorridors.org>.

HCP Partners include: Ducks Unlimited, Friends of the Detroit Lakes Wetland Management District, MN Deer Hunters Association, MN Department of Natural Resources, MN Land Trust, MN Valley National Wildlife Refuge Trust, Inc, National Wild Turkey Federation, Pheasants Forever, The Nature Conservancy,

M.L. 2009 Projects Completed 2011-2012

Trust for Public Land, U.S. Fish and Wildlife Service, U.S. Natural Resources Conservation Service.

OVERALL PROJECT RESULTS USE AND DISSEMINATION

The partnership acknowledges funding from the Minnesota Environment and Natural Resources Trust Fund. Accomplishment report information, mapping products, and project information can be found at www.mnhabitatcorridors.org.

Project completed: 6/30/2011

ABSTRACTS AND FINAL REPORTS OF INDIVIDUAL PARTNER PROJECTS (Click project # to go to listing for that project)

- 1a - HCP VI - Project Coordination and Mapping - Pheasants Forever (\$100,000)
- 2a - HCP VI - Hides for Habitat Restoration - Minnesota Deer Hunters Association (\$50,000)
- 2b - HCP VI - Partners for Wildlife U.S. Fish and Wildlife Service (\$50,000)
- 2c - HCP VI - Shallow Lake Enhancement - Ducks Unlimited, Inc. (\$225,000)
- 2d - HCP VI - Shallow Lake Assessment - MN DNR (\$145,000)
- 2g - HCP VI - Wildlife Areas Management - MN DNR (\$50,000)
- 2h - HCP VI - Fisheries Habitat Restoration - MN DNR (\$100,000)
- 2i - HCP VI - Set Out Seedlings/Bluffland Restoration - National Wild Turkey Federation (\$85,000)
- 2j - HCP VI - Lakescaping for Wildlife and Water Quality - MN DNR (\$75,000)
- 2k - HCP VI - Prairie Management - MN DNR (\$75,000)
- 2n - HCP VI - Campaign for Conservation - Restoration - The Nature Conservancy (\$315,000)
- 2o - HCP VI - Prairie Landscape Restoration: Oak, Savanna, Grasslands, and Wetlands - Friends of the Detroit Lakes Wetland Management District (\$50,000)
- 3a - HCP VI - Shoreland Protection Program - Minnesota Land Trust (\$210,000)
- 3c - HCP VI - Shallow Lake Easements - Ducks Unlimited, Inc. (\$250,000)
- 3d - HCP VI - Wetland Reserve Program - Ducks Unlimited, Inc. and USDA Natural Resource Conservation Services (\$420,000)
- 4a - HCP VI - Critical Lands Conservation Initiative - Pheasants Forever (\$350,000)
- 4b - HCP VI - Fisheries Land Acquisition - MN DNR (\$300,000)
- 4c - HCP VI - Critical Lands Protection Program - Trust for Public Land (\$350,000)
- 4f - HCP VI - Campaign for Conservation - Acquisition - The Nature Conservancy (\$50,000)
- 4h - HCP VI - Habitat Acquisition for Minnesota Valley Wetland Management - Minnesota Land Trust (\$100,000)
- 4i - HCP VI - Professional Services - MN DNR (\$25,000)

1a FINAL REPORT - HCP VI - Project Coordination and Mapping - Pheasants Forever (\$100,000)

Overall Project Outcome and Results

Duties assigned to the project coordinator under this work program and as outlined and approved by the Habitat Conservation Partnership were to:

1. Coordinate partners, projects and cultivate partnerships,
2. Manage project data and contract/coordinate mapping service,
3. Solicit & compile partner information & provide reports to LCCMR and partners,
4. Schedule, coordinate, and chair meetings & provide meeting minutes,
5. Coordinate public relations outreach to media,
6. Serve as primary contact for LCCMR,
7. Facilitate executive & full committee meetings & coordinate subcommittee meetings, and
8. Manage contract for administration and mapping components of the Partnership.

M.L. 2009 Projects Completed 2011-2012

We expended a total of \$38,267 of Environment and Natural Resources Trust Fund (ENRTF) funds. Pheasants Forever, Inc. completed the above-referenced tasks successfully so that the outstanding habitat work detailed in this report could be completed, reported, and promoted. Work included full partnership meetings, executive committee meetings, and the required full partnership update reports which included coordination between all funded partners, LCCMR, and Community GIS Services. Promotion of individual partnership accomplishments and overall accomplishments was encouraged and several positive articles and events occurred and were shared as a result. ENRTF expenditures for personnel (Project Coordinator and accounting staff) and project coordinator travel totaled \$2,242. A total of \$25,758 within the personnel budget item was not needed to achieve our results and remains unspent. In addition, \$36,025 of ENRTF funds were expended to manage data, operate the online reporting system from which all partner reports are generated, and map all partner projects. Pheasants Forever, Inc. contracted the mapping and data management services for the Phase VI Habitat Conservation Partnership with Community GIS Services of Duluth, Minnesota.

Community GIS has made several improvements to the operability of the reporting and mapping system. These updates include identifying free-text fields from the reporting website, and creating pre-populated drop down lists for them. As part of this exercise, all mapping fields were inspected to ensure minimal data duplication within the geodatabase. Metadata was created for the geodatabase at this time as well, which helps to define the fields being used. All HCP project accomplishments and expenditures are accounted for and fully described within the online reporting system and report generation. Anyone can access the Phase VI data electronically from the HCP website.

Project Results Use and Dissemination

The partnership acknowledges funding from the Minnesota Environment and Natural Resources Trust Fund. Accomplishment report information, mapping products, and project information can be found at www.mnhabitatcorridors.org. Other forms of information can be obtained by contacting Joe Pavelko, the HCP Coordinator, at (612) 532-3800.

Project completed: 6/30/2011

2a FINAL REPORT - HCP VI - Hides for Habitat Restoration - Minnesota Deer Hunters Association (\$50,000)

Overall Project Outcome and Results

MDHA funding restored a total of two oak savannahs (grassland enhancement) consisting of 35 acres on the Winger Waterfowl Production Area (WPA). Federal WPA's are managed for waterfowl production and are open to public hunting and other recreation consistent with the National Wildlife Refuge System. This restoration to the oak savannahs will create suitable habitat for deer, turkey, ruffed grouse, and other cavity nesting birds.

Specifically, on the Winger WPA (Polk County Winger Township 147, Range 42, Section 2) we restored two oak savannahs for 35 acres by shearing and piling undesirable trees such as boxelder, cottonwood, willow, and aspen which opened the landscape to promote savannah habitat. Large and small oak trees were not cut and the seedlings were flagged to prevent accidental damage.

All work was done in partnership with the USFWS Detroit Lakes Wetland Management District and other funds were secured and provided by the Minnesota Deer Hunters Association Hides for Habitat funds.

M.L. 2009 Projects Completed 2011-2012

Project Results Use and Dissemination

MDHA has restored a total of two oak savannahs (35 acres total) on public land that is permanently protected and open to public hunting. These restored oak savannahs provide upland habitat for a variety of wildlife with a large scale benefit to hundreds of acres on the Winger WPA as well as the surrounding private land habitats. Future management of grasslands will be conducted by the USFWS Detroit Lakes Wetland Management District.

Since this initial project was submitted, MDHA changed project managers from Phase IV. In phase V our funds from matching came mostly from the Hides for Habitat funds through MDHA which is why there are less "other funds" contributed to this Phase V work plan. MDHA strives to identify projects that capitalize on our chapter system and will improve on this into the future.

Project completed: 6/30/2011

2b FINAL REPORT - HCP VI - Partners for Wildlife U.S. Fish and Wildlife Service (\$50,000)

Overall Project Outcome and Results

Since 1987, the USFWS's Partners for Fish and Wildlife Program (Partners) has restored more than 16,280 drained wetlands (74,300 acres) and more than 1,240 upland sites (54,100 acres) to native grasses and forbs, on private lands in Minnesota. Through its Partners Program, the USFWS works with other federal and state agencies, local units of government, tribal entities, conservation organizations, and individual landowners to restore or enhance fish and wildlife habitats on private land. This program emphasizes restoring habitats and native vegetation for fish and wildlife in concert with the goals of individual private landowners. These projects also benefit the general public by providing habitat for fish, wildlife and plants, improving water quality and watershed health, reducing non-point source pollution, and creating opportunities for outdoor recreation and education.

The \$50,000.00 of Minnesota Environment and Natural Resources Trust Fund (ENRTF) funding obtained through this work program, accelerated the USFWS' existing Partners Program with an additional voluntary restoration or enhancement of 38 wetland basins covering 54 acres of wetland habitat and five grassland sites covering 491 acres of upland habitat. With this funding, a total of 6 projects were completed on private land within HCP Project Area 12. The ENRTF funds were expended from July 2009 through June 2011. The USFWS Partners Program provided \$33,138.00 of Other Funds cost-sharing to complete these projects.

The USFWS Partners Program also provided \$13,400.00 of Other Funds to complete two additional upland enhancement projects totaling 43 acres.

Under the Partners Program, wetlands are restored or enhanced by plugging or filling drainage ditches, removing excess sediment, breaking up sub-surface tile systems, embankment construction, and/or installing water control structures. Upland grassland areas are restored or enhanced by removing invasive woody vegetation and re-seeding former cropland to a native prairie seed mixture. All seeded areas complied with requirements to utilize local native ecotype seed as available.

Project selection for ENRTF cost-share via the Partners Program is based on the project's contribution to building wetland and upland habitat complexes or corridors and/or restoring or enhancing native habitats in the focus project areas.

Project Results Use and Dissemination

M.L. 2009 Projects Completed 2011-2012

These projects were completed within the nine HCP Project Areas across the state of Minnesota. Without the willingness of the landowners involved, and the variety of other partners, this important wetland, upland and river/riparian wildlife habitat would not be restored.

Numerous presentations including information about ENRTF habitat restorations have been made over the past ten years at various meetings - i.e., Minnesota State Private Lands Meeting, the Wetland Summit, the Shallow Lakes Forum, MNDNR Roundtable, and at Kiwanis, Rotary, and Lion's Club presentations. One project completed with ENRTF dollars was also featured on the Minnesota Bound television program hosted by Ron Schara.

Project completed: 6/30/2011

2c FINAL REPORT - HCP VI - Shallow Lake Enhancement - Ducks Unlimited, Inc. (\$225,000)

Overall Project Outcome and Results

The objective of this project was to accelerate Ducks Unlimited (DU) bio-engineering assistance to help agencies design and construct enhancement projects on shallow lakes for waterfowl using water control structures. DU biologists and engineers provided technical assistance to Minnesota DNR, U.S. Fish & Wildlife Service, and private landowners around shallow lakes with a goal of:

- Enhancing at least one shallow lake totaling 100 wetland acres with a new water control structure and/or fish barrier,
- Engineering at least four new shallow lake enhancement structure projects for DNR on designated shallow lakes or basins within state Wildlife Management Areas (WMAs) and for the Service on federal Waterfowl Production Areas (WPA), and
- Providing technical assistance to agency field staff on other shallow lake projects throughout HCP project areas.

Through this grant project, DU biologists and engineers surveyed and designed six new water control structures for the Minnesota DNR and US Fish & Wildlife Service, including Sandborn Lake in LeSueur County, Lindsey Lake in Becker County, Everglade Wildlife Management Area in Stevens County, Harder Lake and Wolf Lake Waterfowl Production Areas (WPA) in Cottonwood County, and Henjum WPA in Kandiyohi County. These six bio-engineering projects will be implemented in the future as permits and easements are secured. In addition, DU enhanced 453 wetland acres by constructing previously designed water control structures on the outlets of three shallow lakes, including Block WPA in Grant County, Perch Lake in Blue Earth County on Perch Lake WPA, and Gislason Lake in Lincoln County on the Northern Tallgrass Prairie National Wildlife Refuge. This far surpasses our target goal of enhancing at least one shallow lake totaling 100 wetland acres or more. Finally, DU shallow lakes field biologist provided ongoing technical assistance to Minnesota DNR and the Service on 30 shallow lake projects in HCP Project Areas to help assess and develop new projects for future possible bio-engineering, implementation, and management by those conservation agencies.

DU's total cost to provide these bio-engineering services to enhance shallow lakes was \$526,225, and included reimbursement of \$225,000 from the Environment & Natural Resources Trust Fund through this grant, and the expenditure of \$1,249 in Other State Funds and \$299,977 in Other Funds (DU and federal funds) that far exceeds the \$100,000 in Other Funds that we originally proposed to spend.

Project Results Use and Dissemination

This grant helped DU, DNR, and the Service accelerate the assessment and enhancement of shallow lakes throughout southern, central and western Minnesota. DU provided six detailed engineering design

M.L. 2009 Projects Completed 2011-2012

plans to state and federal agency staff, and informed the public of shallow lake improvement projects through public meetings, news releases sent to the media, and in articles in DU publications. Shallow lake assessment data collected by DU biologists was provided to DNR's shallow lake program and area wildlife managers, and shared with MPCA to aid in their impaired waters assessment.

Project completed: 6/30/2011

2d FINAL REPORT - HCP VI - Shallow Lake Assessment - MN DNR (\$145,000)

Overall Project Outcome and Results

DNR spent \$140,689 to continue on-site field investigations to accelerate management of shallow lakes and adjacent wetland complexes and support the accomplishments of Ducks Unlimited through HCP 2c and 3c. Temporary field personnel (1 full time and up to 6 temporary) documented shallow lake habitat occurrence and quality. Habitat surveys were conducted on 171 lakes within seven HCP project areas. The lakes surveyed totaled over 82,831 acres. The surveys were distributed more broadly than in the past with:

- 9 surveys conducted within Area 1,
- 9 surveys conducted within Area 2,
- 71 surveys conducted within Area 3,
- 15 surveys conducted within Area 4,
- 11 surveys conducted within Area 6,
- 30 surveys conducted within Area 9, and
- 26 surveys conducted within Area 10.

Data was entered into the DNR Shallow Lake Database, checked and verified.

Project Results Use and Dissemination

The habitat survey information was used to support DNR's shallow lake management efforts identified in the 2006 Duck Recovery Plan and Ducks Unlimited's efforts under Restoring Minnesota's Fish and Wildlife Habitat Corridors IV - Wildlife Shallow Lakes Enhancement 2(c). Dissemination of project accomplishments will be through the LCCMR reporting process and normal DNR budgeting and accomplishment reporting. Data collected on the habitat quality of shallow lakes will be available as part of the DNR shallow lakes database managed by Division of Fish and Wildlife staff in Brainerd.

Project completed: 6/30/2011

2g FINAL REPORT - HCP VI - Wildlife Areas Management - MN DNR (\$50,000)

Overall Project Outcome and Results

Through this project DNR-Wildlife provides oversight for infrastructure management and habitat restoration on lands acquired by Habitat Conservation Partners (HCP). Partners acquire priority land and transfer it to the DNR for long term management as Wildlife Management Areas. This funding source ensures DNR will not incur a significant short-term liability for initial site development from these acquired lands. Temporary project staff or intermittent labor is hired as needed to implement development on lands acquired. Infrastructure management may include but is not limited to boundary surveys, boundary signing, professional services, public access, parking lots and user facilities, and clean up of old buildings or wells. Habitat restoration may include but is not limited to grassland development or improvement, wetland restoration or impoundment development, forest or woody cover development or improvement, brush land management, professional services, and food plot development. Digital boundary, habitat inventory and facilities files will be developed as part of the management plans. DNR cannot start work until the Partners have completed acquisition on each

M.L. 2009 Projects Completed 2011-2012

parcel. Once the new acquisitions are transferred to the DNR site development and habitat restoration work can occur.

Specifically in this phase, \$6,128 was expended on habitat and development work at Benderberg WMA, including thirty acres of former cropland that were site prepped, seeded, and mowed. \$43,872 went unspent due to when acquisitions were transferred to DNR, season for habitat work, and field staff availability.

Citizens of the state of Minnesota benefit from this project by having more public hunting and recreation land available in high priority landscapes throughout the state. These new public lands are managed as State Wildlife Management Areas (WMAs) by the Minnesota Department of Natural Resources (DNR) - Section of Wildlife for wildlife habitat.

Project Results Use and Dissemination

Information on HCP project results have been shared and disseminated through all partner organizations. Signs are posted on completed project sites identifying the ENRTF funding source. These signs provide information to the general public on how the lottery funds are spent for natural resource activities.

Project completed: 6/30/2011

2h FINAL REPORT - HCP VI - Fisheries Habitat Restoration - MN DNR (\$100,000)

Overall Project Outcome and Results

Citizens of the state of Minnesota benefit from this project by having a better fish community structure in Mills Lake, Blue Earth Co, and Horseshoe Lake, Rice County. They also benefit from improved stream habitat for trout on Winnebago Creek, Houston Co. This then creates better fishing and recreation available in high priority waterbodies. The portions of the work that the DNR was responsible for was completed on June 30, 2011. Design and planning for two barriers to prevent carp migration was the basis for these two projects. The projects were installed with the assistance of partners. The Horseshoe Lake barrier is completed while high water resulted in the Mills Lake installation being delayed until this fall. Once both are completed, we will have enhanced approximately 654 acres total. Another project done was plans, designs, and purchase of materials to restore 3,200 feet of trout waters on Winnebago Creek. Due to high waters, the partners will finish the installation this fall. Long term maintenance of these projects is going to be shared with the partners. These funds were also used to get the designs done for the Hartley Lake fish passage project.

Project Results Use and Dissemination

Information on HCP project results have been shared and disseminated through all partner organizations. The Environmental Trust Fund provides information to the general public on how the lottery funds are spent for natural resource activities.

Project completed: 6/30/2011

2i FINAL REPORT - HCP VI - Set Out Seedlings/Bluffland Restoration - National Wild Turkey Federation (\$85,000)

Overall Project Outcome and Results

This project contained two types of habitat enhancement that resulted in the enhancement of a total of 72 acres of habitat.

M.L. 2009 Projects Completed 2011-2012

In Habitat Corridor Area 11 in southeastern Minnesota, we contracted to have invasive eastern red cedar and buckthorn removed and controlled on south-facing bluffs on 60.75 acres of private land (5 parcels). These "goat prairies" were historically maintained by wind, freeze/thaw cycles, thin soils, and frequent wildfires. Fire suppression has allowed trees, shrubs, and exotic species to encroach upon the prairies. The contractor hand cut, piled, and burned trees and shrubs, and treated invasive species to ensure they would not resprout. This project enhanced prairie and outcrop habitat for state-threatened timber rattlesnakes, as well as three other at-risk snake species and numerous at-risk plant species found in this unique habitat. The resulting open grasslands will also be used as nesting and brood-rearing habitat for wild turkeys and other birds. Participating landowners have signed a 10-year maintenance agreement. Project cost was \$67,259.50.

In Habitat Corridor 9, we purchased seedlings to plant 150 bur oak, 150 black walnut, and 175 hackberry trees on 11 acres on the Talcot Lake WMA. These trees were protected from herbivory by tree shelters and weed mats. In addition, we purchased 475 seedlings of each of the following fruiting shrubs - chokecherry, red osier dogwood, elderberry, and American plum. All seedlings were planted by DNR staff. This project restored oak savanna and lowland hardwood forest to provide roosting sites for wild turkeys along southwestern Minnesota river corridors, and provided natural winter food resources by planting fruit-bearing shrubs. Project cost was \$7,070.23. We had hoped to accomplish more tree planting, but a staff change near the end of the project prevented us from finding a suitable location and order materials before the project deadline.

Project Results Use and Dissemination

Our intention is to make NWTf Chapters and volunteers aware of the accomplishments of this Environmental Trust Fund project by posting an article on our website and Facebook page. In addition, we plan to release a press statement announcing the completion of the project to the general public.

Project completed: 6/30/2011

2j FINAL REPORT - HCP VI - Lakescaping for Wildlife and Water Quality - MN DNR (\$75,000)

Overall Project Outcome and Results

For Phase 6 of the Habitat Corridors Partnership project a total of eight lakescaping buffer zones were proposed for selection, planning, and installation in habitat corridors 3, 4, 7, and 9. This project exceeded that goal for a total of nine buffer zones, which were completed on schedule and under budget, totaling 1298 frontage feet of shoreline. This equates to an average cost of \$55.82 per foot for planning, installing, and maintaining these shoreline buffer zones which are designed to improve water quality and fish and wildlife habitat.

In addition to the buffer zones, two field days were provided for the public in 2010 to view buffer zones that had previously been installed. One field day was held near Grand Rapids and one was held in the Alexandria vicinity.

The final component of this activity was to collect native origin plant seeds and propagules in 2009 and 2010 for propagation and subsequent planting on buffer zone sites. The goal was to collect seeds for a total of 80 plant species. However, a total of 92 species of native plant seeds and propagules were collected and subsequently used in the plantings.

This has been a very successful effort and an excellent partnership between the DNR's Division of

M.L. 2009 Projects Completed 2011-2012

Ecological and Water Resources and the Division of Fish and Wildlife to carry out this effort to promote stewardship of lakeshore habitat on private shorelands.

Project Results Use and Dissemination

Completion of Phase 6 brings to 73 the total number of lakescaping buffer zone demonstration areas that have been installed in 7 habitat corridors in 22 Minnesota counties since May of 2000 with LCMR and LCCMR support provided from the Minnesota Environment and Natural Resources Trust Fund. This initiative has been instrumental in promoting this concept of lakeshore stewardship not only throughout Minnesota but also in adjacent states and as far off as Washington state and South Carolina. The book *Lakescaping for Wildlife and Water Quality* and the new on-line version of *Restore Your Shore* provide a continuing source of information for people to learn how to plan and install their own buffer zones. Also, the DNR Shoreland Habitat Program continues to offer on-the-ground assistance to local lakeshore associations, landowners, and local and county units of government to initiate lakeshore buffer zones throughout the state. The LCCMR deserves considerable credit for providing funding to help promote this essential concept for stewardship of privately owned lakeshore in Minnesota.

Project completed: 6/30/2011

2k FINAL REPORT - HCP VI - Prairie Management - MN DNR (\$75,000)

Overall Project Outcome and Results

A total of 536 acres of native and reconstructed prairie (largely native) were prescribed burned. This includes 318 acres on Scientific and Natural Areas (SNA) and 218 acres on perpetual Native Prairie Bank (NPB) easements. Due to a lack of qualified prescribed burn vendors, most burns were implemented by agency crews. Invasive species control treatments were completed on a total of 113 acres, including 48 acres on SNAs and 65 acres on NPB lands. Invasive species treated include buckthorn, siberian elm, red cedar, knapweed, leafy spurge, and cow-vetch. Due to the availability of qualified contractors, many woody invasive species projects were contracted. One reconstruction project totaling 30 acres was completed on the Zilmer WMA, which is part of the larger Felton Prairie Complex. Seed for the reconstruction was collected from surrounding lands. In total, 679 acres of prairie habitat was improved during this project.

Project Results Use and Dissemination

Ecological and Water Resources invests considerable time in publishing and distributing results in a variety of formats for various audiences. SNA Program staff make presentations that describe prairie management methodologies and results to a wide range of audiences including county boards, local planning groups, land managers, citizen and technical advisory groups, and at professional meetings.

Project completed: 6/30/2011

2n FINAL REPORT - HCP VI - Campaign for Conservation - Restoration - The Nature Conservancy (\$315,000)

Overall Project Outcome and Results

The Nature Conservancy's (TNC) 2009 work program focused on 6 habitat restoration projects totaling 3,664 acres (3,118-ENRTF funds; 546-other funds). Additional details, beyond the short summary below, are found in the more detailed reporting provided for each project.

Northern Tallgrass Prairie: Prairie was restored on 183 acres (88 acres-ENRTF; 95 acres-other funds) of TNC land on this key parcel for building connections within the Bluestem Prairie complex. Project

M.L. 2009 Projects Completed 2011-2012

activities included seed collection, site preparation, sowing, and follow work to control invasives in the restoration area.

Western MN Invasives Control & Prescribed Fire: TNC accelerated management activities on 1,067 acres (798 acres-ENRTF; 269 acres-other funds) of TNC lands. Activities included planning/implementing prescribed fire on 1,060 acres, buckthorn removal, and a focused effort on controlling leafy spurge.

Prairie Coteau Restoration: Prairie was restored on 84 acres (all acres-ENRTF) of TNC land in a key parcel for connecting remaining areas of native prairie in the Lac qui Parle complex. Completed work included preparing and seeding 71 acres, clearing trees, buckthorn removal, and fence removal.

Prairie Forest Border Restoration: This project accelerated prescribed fire and invasives management on 2,091 acres (1,932 acres-ENRTF; 159 acres-other funds) of TNC and public grassland, wetland and forest at 7 sites in Central and Southeastern Minnesota. Individual activities included planning/implementing prescribed fire on 1,392 acres, invasive surveys/treatment on 560 acres, brush removal on 135 acres, and buckthorn removal on 19 acres.

NE MN Conifer Restoration: 114 acres (all acres-ENRTF) of TNC and public land was managed to encourage the regeneration of conifers in Northeast Minnesota. Project tasks included installing exclosures and budcaps to prevent browsing and using brush saws, grass mats, and grubbing to control competing vegetation.

Sand Prairie Restoration: Prairie was restored on 90 acres and existing habitat was enhanced on an additional 35 acres of TNC land buffering the outstanding native prairie on the adjoining Weaver Dunes SNA (102 acres-ENRTF; 23 acres-other funds). Project activities included seed collection, site preparation, three rounds of sowing with a high-diversity 115-species mix, brush clearing, and surveying/treating invasive species.

One thing to note when reviewing detailed information on the individual projects: the completed acres shown for each project may be lower than the number of acres listed for the separate restoration activities. The lower total reflects the fact that multiple activities may have been done on the same acres.

Project Results Use and Dissemination

All restored lands are open to the public. TNC continues to coordinate with public and private partners to apply lessons learned from this project to work at these and other sites.

Project completed: 6/30/2011

2o FINAL REPORT - HCP VI - Prairie Landscape Restoration: Oak, Savanna, Grasslands, and Wetlands - Friends of the Detroit Lakes Wetland Management District (\$50,000)

Overall Project Outcome and Results

This project restored approximately 40 acres of oak savanna on Kruger Waterfowl Production Area. Oak savanna is even rarer in Minnesota than tallgrass prairie and there are numerous plant and wildlife species that depend on this habitat. We removed invasive trees from these areas, restored an open, park-like structure to the vegetation, and created enough light gaps in the tree canopy to support a herbaceous understory. The biomass we removed was stacked and is drying. This fall the biomass will be chipped, hauled to the biomass burning plant in Benson, and converted to electrical power. This was a

M.L. 2009 Projects Completed 2011-2012

significant savings. Money that would have been spent burning or removing the biomass from the site was used for additional habitat work. After all the equipment is done at the site, FWS staff will oversee the areas where the trees were removed and any place equipment damaged the soil with a diverse mix of local ecotype grass and forb seed. The long-term maintenance of the site will be done through the FWS's fire management program.¹

Originally we planned to do both wetland and oak savanna restoration at the site. However, with the persistent rains over the period of this grant, we were not able to get heavy equipment into the wetlands to restore them. Therefore, we requested and were granted an amendment to spend the wetland funds on additional oak savanna work at the site.¹

Project completed: 6/30/2011

3a FINAL REPORT - HCP VI - Shoreland Protection Program - Minnesota Land Trust (\$210,000)

Overall Project Outcome and Results

In the sixth phase of our Shorelands Protection project, the Minnesota Land Trust continued to work with landowners to secure permanent conservation easements on quality habitat along or containing critical riparian lands. We initiated or continued contact with more than 50 landowners and completed five conservation easements. Collectively, these easements preserve 566 acres of land (508 acres-ENRTF; 58 acres-other funds)- exceeding our original goal of 300 to 500 acres - and protect nearly 17,000 feet of fragile shoreline. Two of the five easements completed involved significant bargain purchases, while the other three projects were donated easements:

- Rabbit Lake in Aitkin County: 171 acres (all acres-ENRTF) containing forest, wetland, grassland, and hay field being restored to prairie.
- Blackhoof River in Carlton County: 248 acres (all acres-ENRTF) containing a mix of forest, wetlands, grasslands, and woodlands.
- Encampment River in Lake County: 88 acres (40 acres-ENRTF; 48 acres-other funds) containing a mature conifer forest with black ash lowlands and wetlands along the Encampment River.
- Blacklock Nature Sanctuary along Lake Superior in Lake County: 11 acres (1 acre-ENRTF; 10 acres-other funds) containing forest and cobblestone beach along Lake Superior.
- Lake Elysian in Waseca County: 48 acres (all acres-ENRTF) containing oak savanna and big woods.

All five projects met the following selection criteria:

1. Habitat: quality and quantity of existing habitat on site; protects riparian areas and buffers water resources
2. Context: proximity and relationship to other protected lands
3. Opportunity cost-benefit ratio: which landowners will participate now
4. Other Benefits: meeting multiple objectives, including visual and physical access, forestry goals, water quality, etc.

Additionally, the Land Trust prepared baseline property reports for each easement, detailing the condition of the property for future monitoring and enforcement. To fund this required perpetual obligation, the Land Trust dedicated funds to its segregated Stewardship and Enforcement Fund for several completed projects. For these projects, we estimated the anticipated annual expenses of each project and the investment needed to generate annual income sufficient to cover these expenses in perpetuity - all in accordance with our internal policies and procedures as approved by LCCMR. We will report to LCCMR annually on the status of the Stewardship and Enforcement Fund and the easements

M.L. 2009 Projects Completed 2011-2012

acquired with funds from this grant.

The value is known for only one of the easements. The donated value of this easement is \$515,000. The cost to the State of Minnesota to complete the five projects completed under this phase of the grant was just over \$370 per acre.

Cumulatively, across all phases of the HCP program, the Land Trust has protected 7,461 acres of critical habitat and more than 218,000 feet of shoreline, at a cost to the State of \$283 per acre.

The Land Trust's work on this project continues to demonstrate the cost effectiveness of working with conservation easements to protect natural and scenic resources along Minnesota's lakes, rivers, and streams, as the cost to the State was well below the cost to purchase land along our increasingly threatened shorelines. This grant continued to generate interest among landowners, and therefore, ongoing funding will be important to sustained success. Additionally, our experiences during this phase of the grant indicate that funds to purchase easements will be necessary in the future as work becomes more targeted, selective, and focused on building complexes of protected land.

Project Results Use and Dissemination

The Land Trust disseminated information about the specific land protection projects completed under this grant through our newsletter, email updates, web site, and press releases. The Land Trust also shared information about conservation easements generally and our experience with our partner organizations, other easement holders, local communities, as well as policy makers including members of the LCCMR and L-SOHC.

Project completed: 6/30/2011

3c FINAL REPORT - HCP VI - Shallow Lake Easements - Ducks Unlimited, Inc. (\$250,000)

Overall Project Outcome and Results

The objective of this project was to accelerate Ducks Unlimited (DU) efforts to help improve and protect shallow lakes managed for waterfowl. To protect shallow lakes, DU worked with private shallow lake shoreline landowners to secure permanent conservation easements on managed shallow lakes prioritized by DU for their importance to waterfowl and threat of development. The goal was to permanently protect at least 200 shallow lake shoreland acres.

DU land protection staff worked with several private landowners on multiple shallow lakes over the course of this two year grant, and eventually began negotiations with five landowners on four different shallow lakes who expressed a desire to proceed with appraisals and discuss easement terms. Through that process, two of the five easement negotiations were successful and became viable land protection deals. DU subsequently proceeded to close on a fully purchased conservation easement on 76 acres on Fish Lake in Stearns County in February 2011. DU then proceeded to seek approval to split the cost of a second larger easement of 150 acres on Garden and Johnson Lakes in Crow Wing County using the remaining funds from this 2009 Trust Fund appropriation (60%) and a related 2010 Trust Fund appropriation (40%). Overall, DU successfully closed two conservation easements through this grant and permanently protected 226 acres in total, which was slightly more than our 200-acre goal.

The total project cost to protect shallow lakes through conservation easements was \$353,532, which includes reimbursement of \$250,000 from the Trust Fund through this grant plus the expenditure of \$61,532 in Other Funds by DU and \$42,000 donated to DU for easement stewardship.

M.L. 2009 Projects Completed 2011-2012

Project Results Use and Dissemination

This grant helped DU accelerate the protection of shallow lakes by working with private landowners to secure conservation easements and promote conservation easement concepts. Conservation easements with private landowners are sensitive land deals that don't lend themselves to widespread publicity, however, DU has recognized individual landowners and has publicized our work to protect shallow lake shorelines and shoreland locally through local conservation groups, soil and water districts, and tribal organizations supportive of our work to protect wild rice lakes. DU also informed the foundations supporting our Living Lakes Initiative of our conservation accomplishments. The accomplishment of securing two new permanent conservation easements through this grant has helped encourage other private landowners to consider working with DU to protect their shorelines, and news of our progress may be further disseminated through DU news releases and articles DU publications in the future.

Project completed: 6/30/2011

3d FINAL REPORT - HCP VI - Wetland Reserve Program - Ducks Unlimited, Inc. and USDA Natural Resource Conservation Services (\$420,000)

Overall Project Outcome and Results

In partnership with the USDA's Natural Resources Conservation Service (NRCS), Ducks Unlimited (DU) contracted with six Wetlands Reserve Program (WRP) technicians that began HCP Phase 6 work on September 10, 2009 with combined funding support from Environment and Natural Resources Trust Fund funds and NRCS grants. The purpose of these contracted technicians was to provide technical assistance to private landowners and USDA - NRCS complete applications and enroll new lands into the WRP, and to help USDA-NRCS and private landowners plan, design, and implement restoration measures on lands previously enrolled in the WRP. The delivery goal for these technicians was to provide Technical Assistance (TA) to help NRCS protect 1,000 acres through new WRP easements and help restore wetlands and associated upland habitat on WRP easements in prairie Habitat Conservation Partnership (HCP) project areas at an estimated Other Funds cost of \$1,500,000 to NRCS.

During the life of this grant, the contract specialists made 275 landowner contacts, helped process 80 applications, developed 96 easement conservation plans, completed 21 wetland restoration designs, and managed construction of 55 wetland restoration projects. Overall, NRCS closed (purchased) 25 new WRP easements protecting 2,721 acres with the assistance of these six contracted wetland specialists funded through this grant, which exceeds the easement acre goal of this project. This includes WRP easements protecting 1,031 acres of wetlands and 1,690 acres of adjacent uplands. Other Fund expense incurred by NRCS to purchase these easements and by DU to hire and manage the contractors totals \$3,923,321 in non-state funding, more than double our Other Funds expense pledge of \$1.5 million.

Project Results Use and Dissemination

Information on the WRP signups has been publicized through news releases from the USDA's NRCS and local Soil and Water Conservation Districts, and through hundreds of individual landowner contacts made by DU wetland restoration specialists. Additional announcements and landowner contacts continue to be made and publicized by DU and USDA's NRCS.

Project completed: 6/30/2011

4a FINAL REPORT - HCP VI - Critical Lands Conservation Initiative - Pheasants Forever (\$350,000)

Overall Project Outcome and Results

M.L. 2009 Projects Completed 2011-2012

To help slow the loss of habitat and declining wildlife populations, Pheasants Forever purchased in fee-title two parcels totaling 93 acres to permanently protect quality wildlife habitat lands within Chippewa and Lac Qui Parle Counties, MN. Of the 93 acres, 38 acres were acquired with \$72,987 from the Environment and Natural Resources Trust Fund (ENRTF) and the other 55 acres with \$56,000 in non-state funds. These lands have been or are in the process of being enrolled into the state Wildlife Management Area System and will be protected and managed in perpetuity by the Minnesota Department of Natural Resources. In addition, these newly acquired WMAs will provide access and recreational opportunities for all Minnesotans.

Of the total 93 acres, 49 acres are grassland (including native prairie) and 43 acres hold wetlands. Striving to build landscape level habitat complexes that will protect and sustain wildlife populations, both projects are additions to existing WMAs and build upon past investments in wildlife habitat conservation.

Due to the volatile real estate market and county board approval requirements, a balance of \$277,013 was left unspent and returned to the ENRTF. A project by project accounting and supporting context can be found in the final work program report and all accomplishment reports are available at www.mnhabitatcorridors.org.

Accomplishments were achieved by working with many local, state, and federal partners. Effective partnerships are the backbone of conservation in Minnesota. Through this project we have continued the effort to build and enhance effective conservation partnerships that provide wildlife and recreation benefits to all Minnesotans.

Project Results Use and Dissemination

All projects acquired through the Habitat Conservation Partnership acknowledge the funding from the Minnesota Environment & Natural Resources Trust Fund. These new public land additions will be incorporated into the DNR Wildlife Management Area System and will be added to appropriate maps, websites, and other WMA information dissemination outlets. Detailed accomplishment report information is available at www.mnhabitatcorridors.org.

Project completed: 6/30/2011

4b FINAL REPORT - HCP VI - Fisheries Land Acquisition - MN DNR (\$300,000)

Overall Project Outcome and Results

This project focused on the acquisition of habitat linkages that provided environmental protection of the shoreline and riparian zone, exhibited a high risk of development, supplied angler access, and afforded management access necessary for implementing habitat improvement projects.

Project goals were to protect 120 acres (1.4 miles of lake and stream shoreline) with the help of partner and other state funding. Partner funding includes donations of land value and cash.

This project resulted in the acquisition of four parcels with a grand total of approximately 54.2 acres and 1.3 miles of lake and stream shoreline. Because of the extreme variation in shoreline values it is hard to accurately predict a reliable acre benchmark. Most years, including the 2008 Environment and Natural Resources Trust Fund (ENRTF) appropriation, we far exceeded our acres goal. For the 2009 ENRTF appropriation, we fell short of the acres goal, but nearly reached our "miles of shoreline" goal. ENRTF dollars directly acquired approximately 35.12 acres of the total, including 0.4 miles of lake and stream

M.L. 2009 Projects Completed 2011-2012

shoreline. Donations of land value ("other funds" \$396,600) and resulting Reinvest In Minnesota Critical Habitat match ("other state monies" \$165,000), leveraged with trust dollars, totaled \$561,600. These contributions helped acquire the remaining acres of the grand total, including 4.0 acres and 0.2 shoreline miles using other state dollars and 8.5 acres and 0.4 shoreline miles from donations of land value. Preece Point was acquired jointly using both 2009 and 2010 Supplemental grants to Minnesota's Habitat Conservation Partnership - Fish and Wildlife Acquisition (4b). Results for Preece Point were proportionately distributed for each grant.

As a result of this project, 54.2 acres, including 1.3 miles of critical shoreline fish and wildlife habitat are now permanently protected and open to public angling and/or hunting - as well as other light use recreational activities. Acquired parcels are now designated and managed as Aquatic Management Areas (AMAs).

Project Results Use and Dissemination

Accomplishment Reports and press releases are available at www.mnhabitatcorridors.org, and all AMAs will be added to DNR's Public Recreational Information Maps (PRIM).

Project completed: 6/30/2011

4c FINAL REPORT - HCP VI - Critical Lands Protection Program - Trust for Public Land (\$350,000)

Overall Project Outcome and Results

On September 30, 2011, the Trust for Public Land (TPL) acquired 510 acres in Le Sueur County containing high-quality wetlands and 1.64 miles of naturally flowing Cannon River just upstream from a concentration of rare freshwater mussels. Of the 510 acres, 104 acres were acquired with \$350,000 from the Environment and Natural Resources Trust Fund (ENRTF) and the other 406 acres with \$1,369,493 in other state funds. TPL immediately conveyed the property to the Department of Natural Resources (DNR) who will manage the land as a new Wildlife Management Area ("Dora Lake WMA"). In addition to conserving a large area of Minnesota County Biological Survey (MCBS) identified native habitat, acquisition of these tracts provides an opportunity to restore approximately 200 acres of tilled land in a sensitive water quality area. The DNR will restore them to wetlands, grassland and eventual guided succession to Big Woods. Protection of the property ensures habitat for fish, game and wildlife in the Cannon River watershed.

Project Results Use and Dissemination

Accomplishment Reports and press releases about the overall Habitat Conservation Partnership are available at www.mnhabitatcorridors.org. Information about this acquisition and the Cannon River Headwaters Habitat Complex effort will be posted on TPL's website: www.tpl.org. Information about the Cannon River Headwaters Habitat Complex effort has also been disseminated through its network of supporters which include: the Cannon River Watershed Partnership, the Tri-Lake Sports Club, the Dark House Anglers Southern Chapter, Minnesota Deer Hunters Association South Central Prairieland Bucks Chapter (Le Sueur, Rice, Waseca, and Steele Counties), Waterville Sportsman's Club, Montgomery Sportsmen's Club, Minnesota Waterfowl Association Scott- LeSueur Chapter, the Izaak Walton League Owatonna Chapter, and the Minnesota Department of Natural Resources.

Project completed: 9/30/2011

4f FINAL REPORT - HCP VI - Campaign for Conservation - Acquisition - The Nature Conservancy (\$50,000)

M.L. 2009 Projects Completed 2011-2012

Overall Project Outcome and Results

In this phase, The Nature Conservancy's (TNC) proposed acquiring fee title to 115 acres of habitat with Environment and Natural Resources Trust Fund (ENRTF) and other funds. These projects would emphasize protecting and linking existing public and private conservation lands, helping to build larger, more sustainable areas of habitat.

Using ENRTF and private funds, TNC purchased two parcels adjoining Weaver Dunes SNA. The Conservancy purchased the Cox tract (30.6 acres) on November 16, 2010 and the Carroll-Fitzgerald tract (21.7 acres) on December 10, 2010. Together, these parcels total 52.3 acres.

Both parcels are located in an area identified as critical in both TNC's and the Habitat Conservation Partnership's planning processes. As part of the Conservation by Design process, The Conservancy develops a Conservation Area Plan (CAP) and Rapid Protection Plan (RPP) for each landscape where we are active. These plans define conservation objectives, management strategies, and areas targeted for action. Both parcels were identified as targets in TNC's 2007 Conservation Area and Rapid Protection Plans for the Weaver Dunes-Zumbro Delta landscape.

Purchasing these parcels protects the native prairie found on portions of both properties. These prairies were ranked as having outstanding biodiversity significance by the Minnesota County Biological Survey. The protection and restoration of the remaining areas of converted or degraded prairie on these tracts will provide a valuable buffer to the large areas of outstanding native prairie on the 6,000 acres of adjoining TNC-, state-, and federally-protected lands.

The Conservancy will retain ownership and manage both properties as additions to the Weaver Dunes SNA. Funds for the continuing management of these acquisitions were ensured by placing 20% of the fair market value of the properties in a dedicated stewardship endowment. The income from this endowment provides the resources for approximately 50% of the ongoing costs of land management. The remaining 50% of future funding needs will be raised through private fundraising and private and public grants.

TNC was unable to reach our original goal for acres protected. The relatively -high cost of land in Southeastern Minnesota where these tracts are located and the continuing state-wide escalation in rural land prices made this difficult to achieve.

The Conservancy spent an additional \$235,754.57 of its private funds in transaction-related expenses for these fee title acquisition projects. For more details on the purchases, the associated costs, and their conservation significance, see the Transaction Cost Reporting Guidelines memo submitted to LCCMR on January 14, 2011.

Project Results Use and Dissemination

All acquired lands are open to the public. The Conservancy publicizes its work on these projects via press releases, membership publications, presentations and/or the Conservancy's website. TNC has also participated in publicizing the overall accomplishments of the Habitat Corridors Partnership project as it has reached significant milestones.

Project completed: 6/30/2011

4h FINAL REPORT - HCP VI - Habitat Acquisition for Minnesota Valley Wetland Management -

M.L. 2009 Projects Completed 2011-2012

Minnesota Land Trust (\$100,000)

Overall Project Outcome and Results

The Minnesota Valley Trust acquired 78.5 acres of priority lands in Lincoln Township of Blue Earth County to expand the Lincoln Waterfowl Production Area for the Minnesota Valley Refuge and Wetland Management District, US Fish and Wildlife Service. Of the 78.5 acres, 21 acres were acquired with Environment and Natural Resources Trust Fund; the other 56.5 acres were acquired with nonprofit / other, non-state funds.

This acquisition expands upon prior acquisitions for the Lincoln WPA that were funded in part by the Environment and Natural Resources Trust Fund in HCP Phases III and V, as recommended by the LCCMR. This and another acquisition completed concurrently by the Trust bring the total acreage of the Lincoln WPA to approximately 720 acres.

All parcels acquired to create the Lincoln Waterfowl Production Area, including this one, were identified by the US Fish and Wildlife Service as a high priority within an established USFWS Focus Area. Acquisition and restoration will complete USFWS objectives in the area for a host of waterfowl species.

After wetland and upland restoration on the lands is completed, the lands will be donated to the US Fish and Wildlife Service for perpetual management as part of the Minnesota Valley Wetland Management District. They will be managed for wildlife and wildlife-dependent recreation, including hunting, fishing, wildlife observation, photography, wildlife interpretation and environmental education.

Project Results Use and Dissemination

The Minnesota Valley Trust will publicize the completion of this project through its website and news releases. All funding partners will be acknowledged on Refuge kiosks, including the Environment and Natural Resources Trust Fund, as recommended by the Legislative Citizen Commission on Minnesota Resources.

Project completed: 6/30/2011

4i FINAL REPORT - HCP VI - Professional Services - MN DNR (\$25,000)

Overall Project Outcome and Results

This project focused on paying professional services related to the conveyance of habitat corridor lands to the DNR by HCP partners. Parcels acquired from HCP partners will be placed in public ownership and administered as State Wildlife Management Areas.

Project goals were to pay professional services as parcels are conveyed to DNR by nonprofit HCP partners. During this appropriation only Pheasants Forever (PF) projects were conveyed to DNR.

This project resulted in professional services being paid on 15 different parcels as they were processed for conveyance to DNR by HCP Partners. Project funding by PF changed as time went by, with some projects not being acquired with Environment and Natural Resources Trust Fund (ENRTF) dollars at closing, and other unanticipated parcels changing to ENRTF dollars at closing. Some of these PF projects were closed last year, but continued to have residual professional services for closing the project out. Some projects have just started the acquisition process and will continue into the next phase of 4i: Habitat Acquisition - Professional Services. Consequently the range of dollars spent on projects varied greatly, but ranged from \$20 to \$3,700.

M.L. 2009 Projects Completed 2011-2012

As a result of this project, DNR was able to pay for professional services and processing costs related to land acquisition transfers to the DNR from HCP partners. Costs include the following: staff time for Division of Lands and Minerals (\$83/hour) and the Attorney General's Office (\$110/hour), survey costs, recording and abstracting fees, and deed tax.

Project Results Use and Dissemination

Accomplishment Reports and press releases are available at www.mnhabitatcorridors.org and all WMAs acquired with professional services funds will be added to DNR's Public Recreational Information Maps (PRIM).

Project completed: 6/30/2011

Metro Conservation Corridors (MeCC) - Phase V

Subd. 04f \$3,375,000

Sarah Strommen

Minnesota Land Trust
2356 University Avenue West, Suite 240
St. Paul, MN 55114

Phone: (651) 647-9590

Email: sstrommen@mnland.org

Web: <http://www.dnr.state.mn.us/metroconservationcorridors/index.html>

Appropriation Language

\$3,375,000 is from the trust fund to the commissioner of natural resources for the fifth appropriation for acceleration of agency programs and cooperative agreements. Of this appropriation, \$2,185,000 is for Department of Natural Resources agency programs and \$1,190,000 is for agreements as follows: \$380,000 with the Trust for Public Land; \$90,000 with Friends of the Mississippi River; \$155,000 with Great River Greening; \$250,000 with Minnesota Land Trust; \$225,000 with Minnesota Valley National Wildlife Refuge Trust, Inc.; and \$90,000 with Friends of the Minnesota Valley for the purposes of planning, restoring, and protecting important natural areas in the metropolitan area, as defined under Minnesota Statutes, section 473.121, subdivision 2, and portions of the surrounding counties, through grants, contracted services, technical assistance, conservation easements, and fee title acquisition. Land acquired with this appropriation must be sufficiently improved to meet at least minimum management standards as determined by the commissioner of natural resources. Expenditures are limited to the identified project corridor areas as defined in the work program. This appropriation may not be used for the purchase of residential structures, unless expressly approved in the work program. All conservation easements must be perpetual and have a natural resource management plan. Any land acquired in fee title by the commissioner of natural resources with money from this appropriation must be designated as an outdoor recreation unit under Minnesota Statutes, section 86A.07. The commissioner may similarly designate any lands acquired in less than fee title. A list of proposed restorations and fee title and easement acquisitions must be provided as part of the required work program. All funding for conservation easements must include a long-term stewardship plan and funding for monitoring and enforcing the agreement. To the maximum extent practical, consistent with contractual easement or fee acquisition obligations, the recipients shall utilize staff resources to identify future projects and shall maximize the implementation of biodiverse, quality restoration projects in the project proposal into the

M.L. 2009 Projects Completed 2011-2012

first half of the 2010 fiscal year.

OVERALL PROJECT OUTCOMES AND RESULTS

During the fifth phase of the Metro Conservation Corridors project, the Metro Conservation Corridors Partners continued their work to accelerate protection and restoration of remaining high-quality natural lands in the greater Twin Cities Metropolitan Area by strategically coordinating and focusing conservation efforts within a connected and scientifically-identified network of critical lands. This corridor network stretches from the area's urban core to its rural perimeter, including portions of 16 counties. The Partners employed a multi-faceted approach, which included accomplishments in four specific result areas:

- **Partnership and Program Coordination:** Partners met several times a year to review project accomplishments and coordinate activity. With DNR support, Version 2 of the online database was refined and implemented to facilitate tracking and reporting of MeCC projects over time. Additionally, DNR and Minnesota Land Trust have worked together to complete cumulative accomplishment mapping, gathering as much information as possible from previous grant phases, which allows the partnership to conduct historical analysis of our collective work.
- **Restore and Enhance Significant Habitat:** Partners have restored and enhanced a total of 775 acres of significant habitat using Phase V funding plus an additional 450 acres with other funds.
- **Acquire Significant Habitat:** Partners protected 977 acres of land, including nearly 7 miles of shoreline through acquisition of fee title and conservation easements and leveraged an additional 585 acres of land and 0.4 miles of shoreline using other funds.
- **Other Conservation Tools and Incentives:** The Metro Greenways Program assisted eight cities, two counties, and one park district with the development and gathering of natural resources information to identify sites for protection or restoration and/or to implement conservation measures. Additionally, Metro Greenways organized and facilitated two annual events that brought all 25 DNR Community Assistance grantees together for a day of information-sharing and peer-to-peer learning, and also funded the development and offering of six new natural resource-based workshops for local government staff and appointed officials.

Since 2003, MeCC partners have protected more than 9,600 acres and restored more than 7,800 acres. These strategic and coordinated efforts address a number of recommendations of the Statewide Conservation and Preservation Plan, including, protecting priority land habitats, protecting critical shorelands of streams and lakes, restoring land, wetlands, and wetland-associated watersheds, and improving connectivity and access to outdoor recreation.

OVERALL PROJECT RESULTS USE AND DISSEMINATION

As projects were completed, the individual partners were encouraged to publicize accomplishments through press releases, organization newsletters, and websites. These efforts resulted in information being distributed to the public through websites, email lists, daily and weekly newspapers, newsletters, and other print materials. Additionally, an interactive public web map is now fully functional and shows the locations of MeCC projects over time. This web map can be accessed at:

<http://www.dnr.state.mn.us/maps/MeCC/mapper.html>.

Project completed: 6/30/2011

ABSTRACTS AND FINAL REPORTS OF INDIVIDUAL PARTNER PROJECTS

1.1/1.2 - MeCC V - Mapping and Coordination - Minnesota Land Trust (\$100,000)

2.3 - MeCC V - Restore and Enhance Significant Watershed Habitat - Friends of the Mississippi River

M.L. 2009 Projects Completed 2011-2012

(\$90,000)

2.4 - MeCC V - Lower Minnesota River Watershed Restoration and Enhancement Friends of the Minnesota Valley (\$90,000)

2.5 - MeCC V - Restore and Enhance Significant Habitat - Great River Greening (\$155,000)

2.6/3.4/4.1 - MeCC VI - Metro Greenways Grants for Restoration, Acquisition, Easements, and Other Conservation Tools - MN DNR (\$1,175,000)

2.7/3.6 - MeCC V - Scientific and Natural Area Restoration and Acquisition - MN DNR (\$646,955)

2.9/3.5 - MeCC V - Fish and Wildlife Habitat Restoration and Acquisition - MN DNR (\$500,000)

3.1 - MeCC V - TPL's Critical Land Protection Program - Trust for Public Land (\$380,000)

3.2 - MeCC V - Protecting Significant Habitat by Acquiring Conservation Easements - Minnesota Land Trust (\$250,000)

3.3 - MeCC V - Expansion of Minnesota Valley National Wildlife Refuge - Minnesota Valley National Wildlife Refuge Trust, Inc. (\$225,000)

1.1/1.2 FINAL REPORT - MeCC V - Mapping and Coordination - Minnesota Land Trust (\$100,000)

Project Outcome and Results

The Metro Conservation Corridors (MeCC) Partnership completed its fifth phase of work to accelerate protection and restoration of remaining high-quality natural lands in the greater Twin Cities metropolitan area. Work was accomplished by strategically coordinating and focusing conservation efforts within a connected network of critical lands that stretches from the area's urban core to its rural perimeter, including portions of 16 counties.

Projects and activities took place within science-based corridors and were guided by the Minnesota Statewide Conservation and Preservation Plan, Minnesota's Comprehensive Wildlife Conservation Strategy, as well as numerous local and resource-specific plans. This project addressed several recommendations of the Statewide Conservation and Preservation Plan:

- Protect priority land habitats
- Protect critical shorelands of streams and lakes
- Restore land, wetlands, and wetland-associated watersheds
- Improve connectivity and access to outdoor recreation

The Mapping and Coordination element of the MeCC Partnership provided coordination and leadership for the partnership by Minnesota Land Trust staff and improved prioritization through enhanced database development and mapping of the corridors by DNR staff.

During this phase of work, the coordination activity included regular meetings of the partners to share information and accomplishments, assisting partners with preparation of reports, compiling overall partnership results, and assisting DNR staff with the mapping, database development, and results tracking. The mapping activity included successful development and refinement of a GIS-based database to track historic and current MeCC projects. The database allows partners to generate tables and reports for status and accomplishment reporting for a variety of MeCC components - from project types, to funding sources, to activities, to partnerships, to location analysis. It also links to an interactive web map where the public can see the locations of completed projects.

Although we had originally hoped to complete a mini-evaluation of the MeCC Partnership, due to the time involved in mapping and compiling historic project data, there was not time to complete the evaluation.

M.L. 2009 Projects Completed 2011-2012

Project Results Use and Dissemination

The Metro Conservation Corridors Partnership primarily distributed information through individual partners as projects were completed. Partners publicized accomplishments through press releases and organization newsletters and websites. Additionally, the Partnership now has a public web map where the public can view MeCC projects. This web map can be accessed at:

<http://www.dnr.state.mn.us/maps/MeCC/mapper.html>.

Project completed: 6/30/2011

2.3 FINAL REPORT - MeCC V - Restore and Enhance Significant Watershed Habitat - Friends of the Mississippi River (\$90,000)

Project Outcome and Results

The Twin Cities contains significant habitat areas. There is a concerted effort to protect, improve and link these areas. FMR's goal with this project was to partner with landowners to restore and enhance habitat at a number of these areas. During this phase of the MeCC project, FMR conducted activities at 9 distinct sites resulting in the restoration of a total of 287 acres, including 179 acres using Environment and Natural Resources Trust Fund funds and 108 acres using leveraged funds. A management plan exists for each site, which served as guide for the restoration and enhancement activities. These sites included:

1. Pine Bend Bluffs Natural Area: Spot treated weeds on a 17-acre restored prairie and conducted exotic brush control on 28 acres of woodland. Conducted follow up buckthorn control on 3-acres of woodland.
2. Sand Coulee Prairie. Conducted prescribed burns, mowing, and spot-spraying on 83- acres. Volunteers assisted in collecting seeds and removing weeds.
3. Rosemount Wildlife Preserve. Conducted a prescribed burn on 16 acres of woodland.
4. Wilmar. Mowed a 25-acre prairie restoration & treated exotic invasive plants in a 15-acre woodland.
5. Mississippi River Gorge. Volunteers installed native tree and shrubs on 2-acre and installed prairie plants to enhance a 4-acre prairie restoration within Crosby Park. Volunteers also hand weeded the site. At the Riverside Park in Minneapolis, volunteers installed native plants within 4-acre of woodland.
6. Hastings Riverflats Park. Applied basal bark treatment to buckthorn on 27 acres of floodplain forest.
7. Gores Pool Wildlife Management Area and Aquatic Management Area. Exotic brush was removed and sprouts treated on 67 acres of woodland. Native grass seed was broadcasted over this woodland. Prairie restoration activities took place on a 4-acre old field. A 4-acre reed canary grassland was treated as part of a re-forestation effort.
8. Ravenna Block Greenway-Dakota County. Buckthorn was removed from 12 acres of woodland, while a prescribed burn was conducted and native prairie seed was broadcasted on a 24-acre grassland.
9. Emrick. 22 acres of a former farm field were seeded to prairie, followed by a mowing. Nine acres of exotic dominated woodland were removed and chipped for biofuels.

Project Results Use and Dissemination

FMR organizes many tours and stewardship events at the sites where we conduct restoration activities. We share information about this project with the participants of these events. FMR also occasionally publishes articles in its paper and electronic newsletters regarding restoration projects that it is involved in.

M.L. 2009 Projects Completed 2011-2012

Project completed: 6/30/2011

2.4 FINAL REPORT - MeCC V - Lower Minnesota River Watershed Restoration and Enhancement Friends of the Minnesota Valley (\$90,000)

Project Outcome and Results

Friends of the Minnesota Valley (FMV) undertook restoration of habitat for the Lower Minnesota River Watershed portion of the Metropolitan Conservation Corridors Project (MeCC) as a continuation of our wildlife habitat restoration within the Minnesota Valley National Wildlife Refuge and Wetland Management District (Refuge) and within the Lower Minnesota River Watershed. FMV sought to restore native habitats within the Refuge and to work in concert with the U.S. Fish & Wildlife Service and other partners on critical, publicly-owned habitat on Refuge lands. During this phase of the MeCC project, FMV and our partners were able to successfully restore and enhance 17 acres of native wet prairie, 48 acres of native dry sand-gravel oak savanna, and 28 acres of native dry sand-gravel prairie with Environment and Natural Resources Trust Fund funds for a total acreage of 93 acres. We were also able to restore additional match acreage of 59 acres of native dry sand-gravel oak savanna with non-LCCMR, non-state funds, bringing total acres impacted by this project to 152 acres.

The FMV objectives were to complement and connect habitat restoration and management of Refuge lands with that being done by other entities. Restoration sites were selected to address primary management issues and challenges, including the need to restore hydrology within floodplain communities and to restore upland communities such as native oak savanna and wet and dry prairies. Public access to restored lands for recreation and education and the assurance of permanent protection were also primary factors. Due to persistent flooding, our access to wetland sites was severely limited and, as a result, we shifted our focus to upland restoration, as reflected in our amended work program.

All work was completed on four Refuge Units. Work included cutting and herbicide treatment of non-native woody brush species such as buckthorn, honeysuckle, prickly ash, eastern red cedar, and Siberian elm. Minnesotans will be able to access and appreciate the restored sites through the access and education provided to Minnesota Valley National Wildlife Refuge visitors. Our project data is publicly accessible by contacting FMV, through information disseminated through our newsletter and on our website, and through information provided by the MeCC Partnership.

Project Results Use and Dissemination

As projects were completed, Friends of the Minnesota Valley publicized project accomplishments through the Friends' quarterly newsletter, our annual report, publication of a habitat restoration prospectus, and the posting of projects on our website. Other dissemination of information occurred through the Metro Conservation Corridors partnership and on the Metro Corridors website.

Project completed: 6/30/2011

2.5 FINAL REPORT - MeCC V - Restore and Enhance Significant Habitat - Great River Greening (\$155,000)

Project Outcome and Results

Great River Greening, along with our volunteers and partners, restored and enhanced a total of 204 acres of habitat with Environment and Natural Resources Trust Fund dollars, exceeding our goal of 155 acres, and an additional 140 acres with over \$153,000 in leveraged non-state funds. Habitats included prairie, savanna, and forest, including nine native plant communities with biodiversity of statewide significance (as rated by Minnesota County Biological Survey), and habitat for 18 documented rare plant

M.L. 2009 Projects Completed 2011-2012

species (1 invertebrate, 2 bird, and 15 plant species). Restorations/enhancements also occurred at sites in priority watersheds rich with rare terrestrial and aquatic rare species, including the St. Croix, Mississippi, and Minnesota; as well as Valley Creek and Eagle Creek trout stream watersheds. A total of 15 different sites were restored/enhanced.

Enhancement of native plant communities with existing significant biodiversity occurred at:

- Arcola Mills Historic Foundation (Stillwater);
- St Croix Valley Early Detection/Rapid Response Garlic Mustard (Taylors Falls and Marine locations);
- Spring Lake Regional Park (Scott Co);
- Spring Lake Park Reserve (Dakota Co);
- Hidden Valley Park (Savage);
- Snail Lake Regional Park (Shoreview);
- St. Croix Savanna SNA (Bayport);
- Lost Valley Prairie SNA (Denmark Township); and
- Pond Dakota Mission (Bloomington).

Restoration/enhancement of habitats in important and strategic locations were:

- prairie/savanna establishment at Pilot Knob Hill (Mendota Heights), located in an area identified by DNR as a top-tier township for habitat for Species of Greatest Conservation Need;
- a large prairie/savanna restoration/enhancement at Belwin Conservancy's Lake Edith site (Afton), in the Valley Creek watershed;
- early detection and control of garlic mustard at a Valley Creek watershed location;
- prairie restoration/enhancement at Central Corridor (Woodbury and Cottage Grove), historically connected to Lost Valley Prairie SNA;
- savanna maintenance at Eagle Creek AMA (Savage), a metro trout stream;
- floodplain forest enhancement at Heritage Village Park (Inver Grove Heights) to expand on existing significant floodplain forest on the banks of the Mississippi River;
- and a prairie reconstruction burn at OH Anderson Elementary (Mahtomedi), habitat that is also used extensively in classroom studies.

Volunteers contributed over 2500 hours to these habitat projects.

Project Results Use and Dissemination

In January, 2010, Great River Greening included a feature article on the ENRTF, LCCMR, and the Metro Conservation Corridors program and projects in our e-postcard, circulation 3200. A write up on the Metro Conservation Corridors program with features of select projects was included in our Spring 2011 Newsletter, and an article featuring the Pond Dakota Mission restoration was featured in our Fall 2010 newsletter. These are available for continued viewing at <http://www.greatrivergreening.org/news.asp>. In addition, project descriptions are included in our volunteer recruitment efforts to all the volunteers in our database. In addition, Greening is in active partnership with landowners and other land managers, resulting in a dynamic and timely exchange of information and results.

Project completed: 6/30/2011

2.6/3.4/4.1 FINAL REPORT - MeCC VI - Metro Greenways Grants for Restoration, Acquisition, Easements, and Other Conservation Tools - MN DNR (\$1,175,000)

Project Outcome and Results

M.L. 2009 Projects Completed 2011-2012

The DNR Metro Greenways Program has worked since its inception in 1998 toward the goals of protecting, restoring, and reconnecting remaining natural areas in the Twin Cities greater (12-county) metropolitan region. The principal strategies employed by the Program to achieve these goals included: 1) competitive grants to local and regional governments to restore degraded habitats; 2) competitive grants that support the acquisition of or conservation easements on strategically important parcels of terrestrial, wetland, or riparian habitat; 3) incentive grants to local governments to address other conservation needs such as land cover inventories, natural resource based land use decision tools, and ordinance revisions to support conservation efforts; and 4) natural resource based workshops on topics of interest to local government staff and officials.

The 2009 appropriation concludes DNR Central region's Metro Greenways Program, which is sun setting after 13 years. This final allotment of \$1,175,000 was used to fund a total of 21 projects and to develop and offer six new natural resource-based workshops. Combined, the restoration and protection projects conserved an additional 375 total acres in the 12-county greater metropolitan region, almost meeting Metro Greenways' combined target of 385 acres of lands restored and protected:

- Five restoration grants totaling \$90,000 were awarded to three counties and one city. In combination with other funds, a total of approximately 255 acres of city, county, and regional park lands were restored to native vegetation, primarily prairie and savanna. The newly restored acreage was over two times more than targeted for this result (120 acres).
- Six protection projects were awarded a total of \$650,000. Only three projects totaling \$370,000 were initiated and completed (Lindstrom, Grannis, and Niebur), resulting in the protection of just 120 acres of the 325 acre projected target for Metro Greenways. The city of Lindstrom acquired a new 64 acre Allemansratt "wilderness" park that will give residents the chance to explore its several clear lakes and deciduous hardwood forest. Two grants to Dakota County added a total of 56 acres under conservation easements to its green infrastructure network being created by the Farmland and Natural Areas Program. Unfortunately, a \$200,000 grant to Anoka Conservation District did not materialize and a \$10,000 grant awarded to Chanhassen was turned down. These funds were put toward other projects. A Washington County project fell through very late in the biennium, leaving an \$80,000 balance for this result category.
- Metro Greenways' Community Conservation Assistance Program awarded 13 grants to cities, counties and special districts that supported a variety of locally-specific conservation needs: a) to obtain land cover and urban tree canopy (UTC) inventories; b) to develop natural resource-based land use decision models; c) to create interjurisdictional partnerships to protect high quality natural areas; and d) to write new or revise existing ordinances to protect natural resources. In addition to these grants, the Program organized and facilitated two annual events (Rendez-Vous) that brought all DNR Community Assistance grantees (2008 and 2009 appropriations) together for full days of information-sharing and peer-to-peer learning. The DNR also convened the three cities undertaking urban tree canopy (UTC) inventories, along with the University of Minnesota forestry and extension service, U.S. Forestry Service, and Minneapolis Park and Recreation Board, to hear about each city's findings and proposed applications of UTC data.

This third result area also funded the development and offering of six new natural resource-based workshops in 2010/2011 for local government staff and appointed officials. These workshops were offered in the metro area and were promoted by Government Training Services to its clientele (local government commissioners). Almost 325 local government staff and officials (62% from cities; 14% counties; 10% townships; and 14% special districts and others) attended these workshops on shoreland conservation, stormwater management, and the incorporation of natural resources into land use

M.L. 2009 Projects Completed 2011-2012

planning and engineering design. The workshops all received excellent evaluations from attendees.

Project Results Use and Dissemination

Press releases were sent to local newspapers where projects were funded. The DNR convened all of the Community Conservation Assistance (CCA) project managers in November of 2009 and in February 2011 to share the findings of their conservation work. CCA Project Profiles were drafted and posted on the DNR website. Protection and restoration project information is available through the Metro Conservation Corridor partnership map created for public use. The CCA deliverables will be tried and tested as part of the Results Outcomes effort by the State of Minnesota.

Project completed: 6/30/2011

2.7/3.6 FINAL REPORT - MeCC V - Scientific and Natural Area Restoration and Acquisition - MN DNR (\$646,955)

Project Outcome and Results

Nearly 150 acres of high quality native habitat threatened by urban development was acquired and added to two metro Scientific and Natural Areas (SNAs). First, 80 acres were acquired (36.7 acres pro-rated to this appropriation) and added to the Hastings Sand Coulee SNA. The addition contains native oak savanna and prairie and increases this SNA to 267 acres. Thus, more than half of this largest remaining prairie complex in Dakota County is protected for its 13 resident rare species (including 3 snake and 2 butterfly species) and for public use, including hiking and nature observation. Second, about 70 acres - including public fishing frontage on the Credit River - was acquired (6.2 acres pro-rated to this appropriation) and added to the Savage Fen SNA in Scott County. These sites offer urban residents close-to-home nature-based recreation, including a new archery hunting opportunity on 300 acres at Savage Fen SNA.

SNA restoration and enhancement activities were completed on 187 acres at 13 SNAs in 7 counties in the greater metropolitan area. For example, a 55-acre prairie was reconstructed (restored) at Lost Valley Prairie SNA with the help of volunteers and a Sentence-to-Serve crew using seed collected on site by hand and mechanically harvested by the SNA crew. Almost 100 acres was prescribed burned at 5 SNAs. About 34 acres received invasive species control actions, including work by Conservation Corps Minnesota. These activities result in better habitat for the SNAs' rare features and improved quality for users of SNAs.

Project Results Use and Dissemination

Information about Scientific and Natural Area (SNA) sites, including those SNAs with new acquisition, restoration, enhancement and development activities through this appropriation, is available on the DNR website (www.mndnr.gov/snass). DNR-sponsored volunteer events, such as those involved in the Lost Valley Prairie, are regularly posted at: www.dnr.state.mn.us/volunteering/sna/index. Both of the acquisition projects received publicity in local newspapers and in partner organization newsletters. Specifically, Savage Fen SNA acquisition was publicized in the Shakopee Valley News and in the Trust for Public Land's electronic newsletter and electronic invite. The Hastings Sand Coulee SNA acquisition was referenced in articles in the Hastings Gazette and the Friends of the Mississippi River website.

Project completed: 6/30/2011

2.9/3.5 FINAL REPORT - MeCC V - Fish and Wildlife Habitat Restoration and Acquisition - MN DNR (\$500,000)

M.L. 2009 Projects Completed 2011-2012

Project Outcome and Results

This project had a two pronged focus. Result 1 (4f2.9) focused on a trout stream habitat restoration project located within Vermillion River Aquatic Management Areas (AMA), in Dakota County. This stretch of the Vermillion River channel had been altered by ditching. Result 2 (4f3.5) focused on securing fee title parcels on the Vermillion River in Dakota County and Eagle Creek in Scott County. Parcels include habitat linkages that provided environmental protection of the shoreline and riparian zone, exhibit a high risk of development, supply angler access, and afford management access necessary for implementing habitat improvement projects. Project goals were to restore 0.6 miles of stream habitat and acquire 60 acres with 1.0 mile of shoreline. Partner funding includes donations of land value and cash.

Result 1 (4f2.9): Restoration of 0.9 miles of Vermillion River channel. Environmental and Natural Resources Trust Fund (ENRTF) dollars directly restored approximately 0.44 miles of the total restored channel. Other State dollars (TU OHC = \$140,000) restored 0.41 miles, and other funding (Vermillion River Watershed = \$20,000) restored 0.05 miles of the total.

Result 2 (4f3.5): Acquisition of four parcels with a grand total of approximately 50.5 acres and 1.1 miles of stream shoreline. Because of the extreme variation in shoreline values it is hard to accurately predict a reliable acre benchmark. Most years, including the 2008 ENRTF appropriation, we far exceeded our acres goal. For the 2009 ENRTF appropriation, we fell short of the acres goal, but reached our "miles of shoreline" goal. ENRTF directly acquired approximately 38.8 acres of the total, including 0.7 miles stream shoreline. Donations of land value ("other funds" \$106,800) accounted for 11.7 acres and 0.4 shoreline miles. One of the Vermillion River parcels (parcel 7) was acquired jointly using both 2008 and 2009 grants to Metro Corridors Conservation Partnership. Results for Vermillion River, P7 were proportionately distributed for each grant.

Overall, as a result of this project, 0.9 miles of Vermillion River channel was restored to its original course, after being ditched for 50 or more years. Also, as a result of this project, 50.5 acres, including 1.1 miles of critical shoreline fish and wildlife habitat are now permanently protected and open to public angling and/or hunting - as well as other light use recreational activities. Due to failed negotiations, two acquisitions went into abeyance towards the end of the grant, resulting in \$57,975 being turned back to the ENRTF. Acquired parcels are now designated and managed as AMAs.

Project Results Use and Dissemination

All new AMA lands will be added to DNR's Public Recreational Information Maps (PRIM).

Project completed: 6/30/2011

3.1 FINAL REPORT - MeCC V - TPL's Critical Land Protection Program - Trust for Public Land (\$380,000)

Project Outcome and Results

In its Critical Lands Protection Program, The Trust for Public Land (TPL) used \$380,000 ENRTF funds to secure fee title on 21.63 ENRTF acres of 402 total acquired acres. TPL conveyed these lands to public agencies for permanent protection. Individual project successes include the following:

- TPL spent \$318,000 2009 ENRTF funds to protect 14.43 ENRTF acres of land as part of a larger 64-acre purchase of shoreline designated by the Minnesota Department of Natural Resources as a "regionally significant ecological area." TPL conveyed the land to the City of Lindstrom to create the Allemansratt Wilderness Park.

M.L. 2009 Projects Completed 2011-2012

- TPL spent \$62,000 2009 ENRTF to protect 7.2 ENRTF acres of land as part of a 338-acre acquisition of one of the largest undeveloped and contiguous tracts of open space in the Twin Cities Metro Area. TPL then conveyed the land to Anoka County. Located at the confluence of Cedar Creek and the Rum River, this land will be managed by the County as the Cedar Creek Conservation Area.

TPL leveraged \$380,000 in TPL Metro Conservation Corridors (MeCC) 2009 funding on these projects with \$992,000 in non-state funds to protect 87.79 additional pro-rated acres of land. \$652,000 of this was non-state public funds and \$339,500 of this was from private land value donations. Additionally, \$500,000 in state remediation grant funds were used to protect 22.7 pro-rated acres and \$1,900,000 in Outdoor Heritage Funds were used to protect 221.4 pro-rated acres. TPL's 2010 ENRTF funds in the amount of \$338,000 and DNR's 2008 ENRTF funds in the amount of \$200,000 were used to protect 39.4 pro-rated acres and 9.08 pre-rated acres respectively. All acres acquired total 402.

*Please note, since a portion of TPL's 2010 ENRTF funding was used for the Cedar Creek Conservation Area project, a portion of these results will also be reflected in TPL's 2010 MeCC Work Program update and Final Report.

Project Results Use and Dissemination

As conservation transactions were completed, The Trust for Public Land disseminated information on the TPL website www.tpl.org, broadcast emails to Embrace Open Space (EOS) and TPL list serve members, distributed press releases, and included information in TPL's newsletters as appropriate. TPL also worked with the long-term stewards to ensure information was distributed to their listserves and posted on their websites as well.

Project completed: 6/30/2011

3.2 FINAL REPORT - MeCC V - Protecting Significant Habitat by Acquiring Conservation Easements - Minnesota Land Trust (\$250,000)

Project Outcome and Results

During the fifth phase of the Metro Corridors project, the Minnesota Land Trust continued to work with landowners throughout the greater metropolitan area to permanently protect lands that are key components of Minnesota's remaining natural areas in the region. Eight perpetual conservation easements were completed that collectively protect 765 acres of land and more than 13,000 feet of shoreline. Three easements were purchased, and the remaining five easements were donated. While two of the purchased easements used both 2009 and 2010 ENRTF funding, we are reporting the accomplishments as part of our 2009 report. We will not report these acres in future 2010 reports to avoid double-counting. All eight projects represent unique opportunities to protect high quality natural habitat, riparian areas, and to build upon prior land protection work by the Land Trust at several priority sites. The specific project sites of the conservation easements include:

- 45 acres, including 1,095 feet of shoreline, along Deer Lake in Anoka County (purchased using both ML 2009 and ML 2010 ENRTF appropriations);
- 148 acres, including 2,527 feet of shoreline, along Elk River in Sherburne County (donated);
- 44 acres, including 3,065 feet of shoreline, on Kingswood Pond in Hennepin County (purchased using both ML 2009 and ML 2010 ENRTF appropriations);
- 157 acres near Hardwood Creek in Washington County (donated);
- 5 acres in Scandia in Washington County (donated);
- 126 acres near the headwaters of Valley Creek in Washington County (donated);

M.L. 2009 Projects Completed 2011-2012

- 39 acres adjacent to Wild River State Park in Chisago County (purchased using ML 2009 ENRTF appropriation only);
- 201 acres near Baypoint Park in Goodhue County (donated).

Additionally, the Land Trust prepared baseline property reports for each easement, detailing the condition of the property for future monitoring and enforcement. To fund this required perpetual obligation, the Land Trust dedicated ENRTF and other funds to its segregated Stewardship and Enforcement Fund for all completed projects. We estimated the anticipated annual expenses of each project and the investment needed to generate annual income sufficient to cover these expenses in perpetuity - all in accordance with our internal policies and procedures as approved by LCCMR. We will report to LCCMR annually on the status of the Stewardship and Enforcement Fund and the easements acquired with funds from this grant.

Values are known for only five of the eight easements acquired, and this value totals \$854,500, with a known donated value of \$413,500. The cost to the State of Minnesota to complete these projects was just over \$326 per acre.

Cumulatively, across phases I-V of the Metro Corridors program, the Land Trust has protected 3,298 acres of critical habitat and more than 75,000 feet of shoreline, at a cost to the State of \$520 per acre.

The Minnesota Land Trust's work on this project continues to demonstrate the cost effectiveness of working with conservation easements to protect natural and scenic resources within developed and developing areas, as the cost to the State was well below the cost to purchase land in the Twin Cities region. This grant continued to generate interest among landowners, and therefore, ongoing funding will be important to sustained success. Additionally, our experiences during this phase of the grant continue to indicate that funds to purchase easements, as opposed to obtaining donated easements, will be necessary in the future as work becomes more targeted, selective, and focused on building complexes of protected land.

Project Results Use and Dissemination

The Minnesota Land Trust disseminated information about the specific land protection projects completed under this grant through our newsletter, email updates, web site, and press releases. The Land Trust also shared information about conservation easements generally and our experience with our partner organizations, other easement holders, local communities, as well as policy makers including members of the LCCMR and L-SOHC.

Project completed: 6/30/2011

3.3 FINAL REPORT - MeCC V - Expansion of Minnesota Valley National Wildlife Refuge - Minnesota Valley National Wildlife Refuge Trust, Inc. (\$225,000)

Project Outcome and Results

The Minnesota Valley National Wildlife Refuge Trust, Inc. acquired 96 acres of priority lands in the Minnesota River Valley floodplain in Sibley County to expand the Jessenland Unit of the Minnesota Valley National Wildlife Refuge. Of the 96 acres acquired, the Environment and Natural Resources Trust Fund paid for 90 acres and the Minnesota Valley Trust paid for 6 acres with nonprofit and other non-state funds.

Using other non-state funds, the Minnesota Valley Trust also acquired 44.67 acres of priority lands in the

M.L. 2009 Projects Completed 2011-2012

Minnesota River Valley in Scott County to expand the Blakely Unit of the Minnesota Valley National Wildlife Refuge. The Blakely and Jessenland Units are on opposite (facing) sides of the Minnesota River and, together, form a large contiguous block of priority wildlife habitat.

Both of these acquisitions expand upon prior acquisitions funded in part by the Environment and Natural Resources Trust Fund, as recommended by the LCCMR. The parcels acquired are adjacent to other lands protected by the Minnesota Valley Trust for the Minnesota Valley National Wildlife Refuge.

The Blakely and Jessenland Units of the Refuge were identified through a planning process by the US Fish and Wildlife Service as priority expansion units of the Minnesota Valley National Wildlife Refuge. The parcels acquired are within the expansion boundaries of those Refuge units.

After any needed restoration, the lands will be donated to the USFWS for perpetual management as part of the Minnesota Valley National Wildlife Refuge. They will be managed for wildlife and wildlife-dependent recreation, including hunting, fishing, wildlife observation, photography, wildlife interpretation and environmental education.

Project Results Use and Dissemination

The Minnesota Valley Trust will publicize the completion of this project through its website and news releases. All funding partners will be acknowledged on Refuge kiosks, including the Environment and Natural Resources Trust Fund, as recommended by the Legislative Citizen Commission on Minnesota Resources.

Project completed: 6/30/2011

Statewide Ecological Ranking of Conservation Reserve Program (CRP) and Other Critical Lands

Subd. 04g \$107,000

Greg Larson

BWSR
520 Lafayette Road N
Saint Paul, MN 55155

Phone: (651) 297-7029

Email: greg.a.larson@state.mn.us

Fax: (651) 297-5615

Web: http://www.bwsr.state.mn.us/ecological_ranking/

Appropriation Language

\$107,000 is from the trust fund to the Board of Water and Soil Resources to continue the efforts funded by the emerging issues account allocation to identify and rank the ecological value of conservation reserve program (CRP) and other critical lands throughout Minnesota using a multiple parameter approach including soil productivity, landscape, water, and wildlife factors.

Overall Project Outcomes and Results

To allocate scarce fiscal resources to natural resource programs, identifying the location and ranking the ecological value of critical lands is important. Using parameters of soil productivity, soil erosion risk,

M.L. 2009 Projects Completed 2011-2012

water quality risk, and habitat quality, an ecological ranking tool was developed. An economic model was also incorporated to analyze CRP (Conservation Reserve Program) parcels and determine the likelihood of contract renewal given anticipated crop prices and land quality. A parameter for soil erosion risk was developed using several factors from the Universal Soil Loss Equation. To identify lands posing a risk to water quality, or lands that are most likely to contribute overland runoff to surface waters, terrain analysis was used. Runoff rankings from terrain analysis were then integrated with a proximity analysis of surface water features based on DNR 24k surface water data. A parameter for habitat quality was derived from an update to the work done as part of the Minnesota Conservation and Preservation Plan (LCCMR, 2008). Combining the data sets therein, and assessing them with a "weight of evidence" approach, produced a ranking of wildlife quality. These several parameters were combined into an environmental benefits index (EBI). High EBI translates into high risk. Therefore, a high EBI score implies a site has a high value for conservation. CRP or other parcels deemed critical for conservation can be assessed simultaneously on the basis of multiple ecological benefits. The EBI tool has demonstrated utility as users can establish thresholds for EBI values based on program goals and amount of funding available.

Project Results Use and Dissemination

The EBI was first presented to a general audience through a WEBINAR. A follow-up technical training session, geared to GIS professionals, was developed. The technical sessions were attended by 42 conservation professionals representing local units of government, state and federal agencies, non-governmental organizations, and private companies.

A majority (70%) of participants at the three technical training sessions said they planned to use the ecological ranking tool in their professional work. Given the diverse professional affiliations of the participants, their active involvement in conservation planning and delivery, and their connection to the network of natural resource professionals, it is likely that the Ecological Ranking Tool will be integrated into many conservation activities throughout Minnesota.

Presentations of the project and project results were provided to the LCCMR, Lessard-Sams Outdoor Heritage Council and the Board of Water and Soil Resources.

A final report was prepared. The report describes all results in more detail and includes maps and graphics and suggestions for use. A website was established by the Board of Water and Soil Resources that provides an overview of the ranking methodology. The BWSR website also includes links to an interactive ranking tool (located at the University of Minnesota, Natural Resources Research Institute (NRRI) and the final report, which is available in downloadable format.

Project Publication:

Statewide Ranking of Ecological Value of CRP and other Critical Lands

Project completed: 06/30/2011

Protection of Granite Rock Outcrop Ecosystem

Subd. 04h \$1,500,000

Thomas Kalahar

Renville Soil and Water Conservation District

M.L. 2009 Projects Completed 2011-2012

1008 West Lincoln
Olivia, MN 56277

Phone: (320) 523-1559

Email: kalahar@yahoo.com

Fax: (320) 523-2389

Web: <http://www.renvilleswcd.com>

Appropriation Language

\$1,500,000 is from the trust fund to the Board of Water and Soil Resources, in cooperation with the Renville Soil and Water Conservation District, to acquire perpetual easements of unique granite rock outcrops located in the Upper Minnesota River Valley and to restore their ecological integrity.

Overall Project Outcome and Results

A total of 560.4 acres of rare and unique Minnesota River Valley landscape were permanently protected and sixteen landowners were paid \$1,379,814 for voluntarily placing perpetual conservation easements on those acres. Five counties participated in the project including Lac qui Parle, Chippewa, Yellow Medicine, Redwood and Renville. Easement applications were scored by resource professional teams and funding was based on those scores.

Soil & Water Conservation District (SWCD) employees saw a need to protect the natural environment and to provide economically viable choices for the landowners. The Minnesota River Valley contains exposed ancient granite rock outcrops that provide unique landscape features and habitat for specialized plant and animal communities rarely found elsewhere in Minnesota. No programs existed that would give landowners a payment if they chose to protect the area from development by mining, overgrazing and other development interests. Rock outcrops are a component of the Minnesota River's riparian zone, and destruction of this unique habitat degrades water quality and wildlife habitat in the Minnesota River and its tributaries. Removal of the rock results in severe degradation and permanent loss of these unique landscape features. The Minnesota River Corridor is easily susceptible to fragmentation because it comprises such a small percentage of the Minnesota River Watershed. Past development activities and mining operations have already fragmented large areas of the fragile Minnesota River Corridor.

Demand for aggregate is growing as our population and infrastructure grow. Interest in mining exposed granite rock outcrops in the Minnesota River Valley is high because the rock is readily available and there is no overburden to remove. This encourages the practice of horizontal mining, removing the easiest and most profitable rock, and moving on. Unlike gravel mining operations, there is no reclamation plan possible for replacing this unique landscape feature once it is removed.

Project completed: 06/30/2012

MN Farm Bill Assistance Project

Subd. 04i \$1,000,000

Tabor Hoek

Board of Water and Soil Resources (BWSR)
520 Lafayette Rd N

M.L. 2009 Projects Completed 2011-2012

St. Paul, MN 55155

Phone: (507) 537-7260

Email: tabor.hoek@state.mn.us

Fax: (507) 537-6368

Web: <http://www.bwsr.state.mn.us>

Appropriation Language

\$1,000,000 is from the trust fund to the Board of Water and Soil Resources to provide funding for technical staff to assist in the implementation provisions of conservation programs including the federal farm bill conservation programs. Documentation must be provided on the number of landowner contacts, program participation, federal dollars leveraged, quantifiable criteria, and measurement of the improvements to water quality and habitat.

Overall Project Outcome and Results

A joint effort of MN Board of Water and Soil Resources, MN Dept. of Natural Resources, MN Pheasants Forever, and local Soil and Water Conservation Districts, the focus was acceleration of technical assistance to private landowners for enrollment in federal USDA conservation programs as they relate to grassland and wetland resources. This effort provided 16 full time equivalents at the field level with a goal to establish or restore 50,000 ac. of grassland and wetlands during the 2 year period ending June 1, 2011. This goal was exceeded with a total enrollment of 69,081 acres resulting in \$79,000,000 of USDA program payments coming to MN landowners for implementing conservation practices on their land. Efforts of this project will continue for at least another 2 years under new funding from the Environment and Natural Resources Trust Fund and partner agency contributions.

Project Results Use and Dissemination

Overall project results and its impact can be found in the Minnesota Conservation Lands Summary table found at http://www.bwsr.state.mn.us/easements/COENROL_083111.pdf.

Project completed: 06/30/2011

SUBD. 05 WATER RESOURCES

Intensified Tile Drainage Evaluation

Subd. 05d \$300,000

Shawn Schottler

Science Museum of Minnesota
16910 152nd Street N
Marine on St. Croix, MN 55047

Phone: (651) 433-5953 x18

Email: schottler@smm.org

Fax: (651) 433-5924

RESEARCH

M.L. 2009 Projects Completed 2011-2012

Appropriation Language

\$300,000 is from the trust fund to the Science Museum of Minnesota for the St. Croix watershed research station to conduct a comparative assessment of hydrologic changes in watersheds with and without intensive tile drainage to determine the effects of climate and tile drainage on river erosion. This appropriation is available until June 30, 2012, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

Overall Project Outcome and Results

Agricultural rivers throughout Minnesota are impaired by excess sediment, a significant portion of which comes from non-field, near-channel sources, suggesting that rivers have become more erosive over time. In the upper Mississippi basin, crop conversions have led to an intensification of artificial drainage, which is now a critical component of modern agriculture. Coincident with the expansion of drainage networks were increases in annual rainfall. To disentangle the effects of climate and land-use we compared changes in flow, runoff ratio, precipitation, crop conversions, and extent of drained depressional areas in 21 watersheds over the past 70 years. Major findings from this study are:

- Flow and runoff ratio have increased by more than 50% in about half of the watersheds.
- Increases in rainfall generally account for less than half of the increases in flow.
- The largest increases in flow are correlated to the largest conversions to soybeans and extent of artificial drainage.
- Using a water budget, calibrated to the first 35 years of record, we calculate that artificial drainage accounts for the majority of the statistically significant increases in flow.
- Artificial drainage of depressional areas reduces water residence time on the landscape, consequently; a significant portion of annual rainfall that was once returned to the atmosphere via evapo-transpiration, is now routed to the rivers.
- Loss of depressional areas and wetlands are strongly correlated to increases in excess flow in the 21 watersheds, thus supporting the proposed linkage between facilitated drainage of depressional areas and increases in river flow.
- Rivers with increased river flow have experienced channel widening of 10-40%.
- Climate, crop conversion and artificial drainage have combined to create more erosive rivers, with drainage as the largest driver of this change.

Project Results Use and Dissemination

Results of this study have been submitted for publication to the journal Hydrological Processes and have been accepted pending final review. Summaries and findings and implications of this study have been presented at more than 30 technical meetings in Minnesota and nationally. Many of these presentations have been in conjunction with local watershed groups, and have an audience of County Commissioners, farmers, SWCD staff, and agricultural consultants. These meetings have been highly successful at delivering the findings of this study to people who are directly involved in watershed management but are less likely to attend scientific meetings or read scientific journals.

Project completed: 06/30/2012

Citizen-Based Stormwater Management

Subd. 05e \$279,000

Becky Rice

Metro Blooms

M.L. 2009 Projects Completed 2011-2012

PO Box 17099
Minneapolis, MN 55417

Phone: (651) 699-2426

Email: becky@metroblooms.org

Web: <http://www.metroblooms.org>

Appropriation Language

\$279,000 is from the trust fund to the commissioner of natural resources for an agreement with Metro Blooms, in cooperation with Minnehaha Creek Watershed District and the city of Minneapolis, to install and evaluate the effectiveness of rain gardens on improving the impaired water of Powderhorn Lake in Minneapolis. This appropriation is available until June 30, 2012, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

Overall Project Outcome and Results

The long term success in reducing impairments to local water bodies will require better citizen-based approaches to increase public awareness and affect behavior change. This project demonstrates a fast-paced approach to citizen engagement for the installation of raingardens within a 28-acre area that drains to Powderhorn Lake (Minneapolis). A paired watershed study was undertaken to evaluate the effectiveness of raingardens in reducing runoff and pollutant loads generated solely on private property.

230 community members participated in project installation events and activities demonstrating the connection between runoff and water quality of Powderhorn Lake. Approximately 50% of homeowners in the test neighborhood received a free raingarden for a total of 125 project-installed raingardens. Two congregations also installed raingardens and permeable pavement strips in their parking lots. Youth and young adult job programs excavated and planted the majority of gardens. More than 70,000 sq. ft. of impervious area was redirected to a stormwater best management practice (BMP). Additionally, 50% of participants also exhibited behavior change by taking voluntary steps to reduce run off from their property (redirecting downspouts, installing rainbarrels, or additional raingardens).

Performance was measured by monitoring the quality and quantity of stormwater discharged to Powderhorn Lake from the test and control sites and comparing results. Minneapolis Park and Recreation Board installed and maintained equipment for three years, providing stormwater runoff characteristics before and after raingarden installation.

Fewer water quality samples were collected than planned due to challenges posed by the urban storm sewer system and climatic conditions. While the paired watershed analysis results do not show a statistically significant outcome, the few water quality samples collected in 2011 provide promise that the test neighborhood efforts could have reduced pollutant loads when compared with the control area. Continued stormwater monitoring is planned in both areas (funded by the City of Minneapolis).

Project Results Use and Dissemination

The project has continued to engage others in similar efforts across the Twin Cities metropolitan area, including 14 additional Neighborhood-of-Raingardens style projects led by Metro Blooms and another 170+ raingardens installed.

Neighborhood of Raingardens is also a film produced by University of Minnesota's Mark Pedelty, and funded by the Institute on the Environment. The film gives an introduction to raingardens and

M.L. 2009 Projects Completed 2011-2012

stormwater runoff and highlights the Powderhorn Park project. It aired on the MN Channel (TPT MN) on April 22, 2011 at 7:30pm, with repeats on April 23, 2011 at 1:30am and 7:30am, and during the month of June. The film has been shown at neighborhood events and co-ops and is available to be viewed online or for download at <http://www.raingardenmovie.org>.

Metro Blooms has created a Powerpoint presentation on the project, which has been presented to the Watershed Partners and Blue Thumb partners, as well as staff of the Ramsey Washington Metro Watershed District. We will be presenting our project at the 2012 Water Resources Conference, a state-wide event that showcases innovative, practical, and applied water resource engineering solutions, management techniques, and current research about Minnesota's water resources.

All project partners received a copy of the final report and executive summary. All project participants received a copy of the executive summary with accompanied raingarden maintenance brochure. The full report and executive summary are available on our website at <http://www.metroblooms.org/neighborhood-of-raingardens.org>. Additional copies of the executive summary will be made available at outreach events and upon request, while supplies last.

Project Publication:

A Citizen-Based Approach to Stormwater Management: Raingardens to Improve Impaired Waters (PDF - 12.6 MB)

Project completed: 06/30/2012

Minnesota Drainage Law Analysis and Evaluation

Subd. 05f \$87,000

Louis Smith

Smith Partners PLLP
400 Second Ave S, Suite 1200
Minneapolis, MN 55401

Phone: (612) 344-1400

Email: smith@smithpartners.com

Fax: (612) 344-1550

Web: <http://www.smithpartners.com>; <http://www.waterlaws.com>

Appropriation Language

\$87,000 is from the trust fund to the commissioner of natural resources for an agreement with Smith Partners PLLP to identify and analyze legal and policy issues where the drainage code conflicts with other laws impacting protection of public waters and wetlands.

Overall Project Outcome and Results

The Environment and Natural Resources Trust Fund enabled this study to analyze Minnesota drainage laws and related economic and environmental considerations, and to explore alternative strategies that would best protect both the state's surface waters and the rights of property owners to make beneficial use of their land through drainage. This study presents an overview of the drainage code and related water resource laws; identifies critical issues where potential conflicts between the drainage code and

M.L. 2009 Projects Completed 2011-2012

other laws create barriers to successful resource protection; and identifies three prototypical demonstration scenarios (Red River Valley, Minnesota River Valley, and Developing Watershed) to inform the study's analysis of these critical issues.

A study advisory committee composed of individuals from diverse backgrounds and expertise met nine times, from December 2009 through May 2011. We also presented this study to the Minnesota Association of Watershed Districts annual meeting in 2009 and 2010; three times to the Board of Soil and Water Resources Drainage Work Group; and to the Red River Watershed Management Board in June 2011.

Key recommendations include:

- Give drainage authorities more tools and resources for watershed-based planning.
- Give drainage authorities more tools and resources to implement projects with integrated drainage, flood control, conservation and water quality benefits.
- Better integrate effects on wetlands and water quality into drainage authority decisions about drainage system work.
- Provide drainage authorities with more clarity in legal authority to address drainage system alignment, grade, cross section, and hydraulic capacity of bridges and culverts for multipurpose design of drainage system establishment, improvement, or repair.
- Extend the authority to establish a locally based wetland regulatory framework under a comprehensive wetland protection and management plan (CWPMP) to public water wetlands.
- Foster reliability of CWPMP outcomes through coordination of local land use authority and wetland regulatory authority.

The policy recommendations include both pertinent findings, specific recommended actions, and draft legislation.

Project Results Use and Dissemination

This project will be presented at the University of Minnesota Water Resources Conference on October 18-19, 2011, the Annual conference of the Minnesota Association of Watershed Districts on December 2, 2011, and at the Annual Convention for the Minnesota Association of Soil and Water Conservation Districts on December 6, 2011.

Project Publication:

MN Drainage Law Analysis and Evaluation (PDF - 3.3 MB)

Project completed: 06/30/2011

SUBD. 06 AQUATIC AND TERRESTRIAL INVASIVE SPECIES

Ballast Water Sampling Method Development and Treatment Technology

Subd. 06a \$366,000 (\$300,000 TF / \$66,000 GLPA)

Rebecca Walter, MPCA; Principal Investigator, Allegra Cangelosi (Northeast Midwest Institute)

MPCA

520 Lafayette Rd N

St. Paul, MN 55155

M.L. 2009 Projects Completed 2011-2012

Phone: (651) 757-2807

Email: rebecca.walter@state.mn.us

RESEARCH

Appropriation Language

\$300,000 is from the trust fund and \$66,000 is from the Great Lakes protection account to the commissioner of the Pollution Control Agency in cooperation with the Department of Natural Resources to conduct monitoring for aquatic invasive species in ballast water discharges to Minnesota waters of Lake Superior and to test the effectiveness of ballast water treatment systems.

Overall Project Outcome and Results

Safe and effective ballast water treatment (BWT) is the best way to prevent ship-mediated introductions of invasive species in the Great Lakes. However, knowing whether a proposed BWT works in freshwater, and whether it is used properly by a ship is a difficult challenge for the Minnesota Pollution Control Agency (MPCA) and other regulators. BWTs with International Maritime Organization (IMO) approval have never been tested in natural fresh water, and there are no agreed methods for monitoring ballast discharge from ships. This project assisted the MPCA through accomplishing a) IMO-consistent freshwater validations of two promising BWTs at the Great Ships Initiative (GSI) freshwater testing facility, and 2) design, installation and demonstration of a credible and feasible ballast discharge sampling method for Great Lakes ships. The IMO-approved PureBallast system (AlfaLaval), performed well in tests overseas, but did not function effectively in the GSI test, likely due to clogging by freshwater filamentous algae (see <http://www.nemw.org/GSI/GSI-LB-F-A-2.pdf>). This outcome informs MPCA that IMO-approval does not by itself assure freshwater effectiveness. The other BWT tested, a lye-based system aimed at US lakers, performed better (see <http://www.nemw.org/GSI/GSI-LB-F-A-3.pdf>), warranting refinement and shipboard testing. The project's ship sampling system proved a) applicable to the Great Lakes fleet, as demonstrated by project installation plans for 10 ships; b) cost-effective, as demonstrated by installations on 5 ships; and c) feasible, as demonstrated by sampling exercises on 2 ships. A detailed guidebook (see <http://www.nemw.org/GSI/ballastDischargeMonitoringGuidebook.pdf>) equips MPCA with the project method. All sample ports are permanent installations. The remaining four installations and seven tests will take place in 2012 using Department of Transportation, Maritime Administration funds. GSI will collect and analyze data on live organisms in ballast water discharge sampled in 2011 and 2012, and will post outcomes on the GSI website (<http://www.greatshipsinitiative.org>) and forward them to the MPCA.

Project Results Use and Dissemination

Final reports on ballast treatment tests performed pursuant to this grant, and the guidebook developed for ship discharge sampling, have been posted on the GSI public website (www.greatshipsinitiative.org). The project forwarded final reports on ballast treatment performance tests to the United States Environmental Protection Agency (USEPA) Science Advisory Board which reported to the USEPA and the USCG on availability of ballast treatment technology in 2011. NEMWI presented the sampling method developed through this project to an international gathering of ballast discharge researchers and regulators (Global R&D Forum and Exhibition on Ballast Water Management in a session on ballast treatment testing and compliance monitoring in Istanbul Turkey in the fall of 2011), and will submit the guidebook as a manuscript for the conference proceedings.

Project Publications:

Final Report of the Land-Based, Freshwater Testing of the AlfaWall AB PureBallast Ballast Water

M.L. 2009 Projects Completed 2011-2012

Treatment System (PDF - 1.8 MB)

Final Report of the Land-Based, Freshwater Testing of the Lye (NaOH) Ballast Water Treatment System (PDF - 2 MB)

A Ballast Discharge Monitoring System for Great Lakes Relevant Ships: A Guidebook for Researchers, Ship Owners, and Agency Officials (PDF - 1.5 MB)

Project completed: 06/30/2011

Emergency Delivery System Development for Disinfecting Ballast Water

Subd. 06b \$125,000

Scott Smith

USGS

6505 - 65th Street NE

Seattle, WA 98115

Phone: (206) 427-8374

Email: sssmith@usgs.gov

Fax: (206) 526-6654

RESEARCH

Appropriation Language

\$125,000 is from the trust fund to the commissioner of the Pollution Control Agency for an agreement with the United States Geologic Survey to test the viability of treating ballast water through tank access ports or air vents as a means to prevent the spread of invasive species.

Overall Project Outcome and Results

This project was part of Phase III of an overall effort to produce an Emergency Response Guide to Handling Ballast Water to Control Non-Indigenous Species. Phase I (\$25,000) was funded by National Oceanic and Atmospheric Administration and resulted in a study plan entitled "Mixing Biocides into Ships' Ballast Water: Efficiency of Novel Methods." Phase II (\$185,000) was funded by the Great Lakes Fisheries Trust and studied in-line injection, bulk dye dosing, perforated hose dosing, and passive mixing methods, such as ship's motion.

Similar to Phase II, this effort (Phase III) prepared ballast tank mixing and sampling equipment, field work on a working ship to trial promising ballast mixing methods, and analysis/report. The active methods being studied in Phase III are venturi eductors and air lifts. The outcome will be the incorporation of these methods (if determined to be effective and practical) into a best practices guide for treating the ballast water of ships either:

- Arriving in port with high risk ballast water,
- Leaving a port that contains ballast known to be high risk for the destination port, or
- Grounded and laden with high risk, untreated ballast water.

Project Results Use and Dissemination

Preliminary information from Result 1 and Result 2 activities were shared at the May 18, 2010 Great Lakes Ballast Water Collaborative meeting in Montreal, QC and at the June 1, 2010 Lake Superior

M.L. 2009 Projects Completed 2011-2012

Binational Program - Invasive Species Workshop in Duluth, MN.

The final project results consisting of two reports entitled "Emergency Response Guidance for Handling Ballast Water to Control Aquatic Invasive Species" and "Mixing Biocides into Ship's Ballast Water-Great Lakes Bulk Carrier Field Trials" are posted on the National Park Service web site at <http://www.nps.gov/isro/naturescience/handling-ballast-water-to-control-non-indigenous-species.htm>.

Project Publication:

Emergency Response Guidance for Handling Ballast Water to Control Aquatic Invasive Species (PDF - 2.2 MB)

Mixing Biocides into Ship's Ballast Water: Great Lakes Bulk Carrier Field Trials (PDF - 3.5 MB)

Project completed: 06/30/2012

Improving Emerging Fish Disease Surveillance in Minnesota

Subd. 06c \$80,000

Katharine Pelican

U of M
1333 Gortner Avenue
St. Paul, MN 55108

Phone: (612) 625-8561

Email: pelicank@umn.edu

Fax: (612) 624-4906

Web: <http://www.vdl.umn.edu>

RESEARCH

Appropriation Language

\$80,000 is from the trust fund to the Board of Regents of the University of Minnesota to assess mechanisms and control of the transmission of Heterosporosis, an emerging fish disease in Minnesota, to assist in future management decisions and research.

Overall Project Outcome and Results

Heterosporosis is an emerging disease of importance to Minnesota fish populations. The disease is caused by the previously undescribed microsporidian parasite, *Heterosporis* sp., which effectively destroys the skeletal muscle of susceptible fish hosts. The resulting damage from advanced infection renders the fillet unfit for human consumption and likely results in indirect mortality due to increased predation and reduced fitness. With no treatment of the disease in wild fish populations, management is limited to preventing the spread to naive fish populations. The goal of this study was to improve diagnostic testing capabilities and perform a survey to prevent the further spread of this important fish disease. To that end, a highly sensitive and specific quantitative PCR (qPCR) assay was developed to detect sub-clinical *Heterosporis* disease in fish. This assay vastly improved our capacity to detect the pathogen and was used to survey 50 waterbodies in Minnesota. From this survey and three additional MDNR submitted samples, six new waterbodies were identified as *Heterosporis*-positive, including: North Long Lake, (Crow Wing County), Mary Lake (Douglas County), a private pond in both Douglas and

M.L. 2009 Projects Completed 2011-2012

Pope Counties, Wabana Lake (Itasca County), and Black Hoof Lake (Crow Wing County). Positive fish species from this study included: walleye, yellow perch, cisco, northern pike, and for the first time spottail shiners. Further evaluation to characterize the parasite identified very low genetic variability in the species *H. sutherlandae*, collected from inland waters of Minnesota. However, there was a unique *Heterosporis* species (*H. superiorae*) in Lake Superior. This suggests a distant evolutionary divergence between the parasite species, but a rapid distribution once introduced into inland waters. These findings highlight the importance of continued surveillance and research to improve our understanding and control this important pathogen in Minnesota.

Project Results Use and Dissemination

The results from this project have been important for the management of the emerging fish disease, Heterosporosis, in Minnesota. This was achieved, in part, by increasing laboratory capacity and diagnostic confidence. The Minnesota Veterinary Diagnostic Laboratory now offers this highly sensitive and specific qPCR assay for surveillance testing and research. In addition, the ability to make science based management decisions at the MDNR has been greatly improved following the survey performed in this study. Understanding the distribution of *Heterosporis* is essential to controlling the spread.

The results from this project will be widely disseminated online, in press, and presented to a variety of stakeholders. A summary report will be made available on the University of Minnesota Extension's aquaculture website for review by aquaculture producers, veterinarians, MDNR, LCCMR, and other groups. A more detailed published paper will be prepared for submission to the Journal of Parasitology and presented at the American Fisheries Society - Fish Health Section Annual Meeting to update the scientific community on these important findings.

Project completed: 06/30/2012

SUBD. 7 ENERGY

Projecting Environmental Trajectories for Energy-Water-Habitat Planning

Subd. 07b \$180,000

Peter Reich

U of M
220f Green Hall, Upper Buford Circle
St. Paul, MN 55108

Phone: (612) 624-4270

Email: preich@umn.edu

Fax: (612) 625-5212

Web: <http://www.cbs.umn.edu/climatetracker>

Appropriation Language

\$180,000 is from the trust fund to the Board of Regents of the University of Minnesota to combine detailed climatic records of Minnesota with present and past ecosystem boundaries to forecast future fine-scale flow of climate across the state impacting human activities and natural resources.

M.L. 2009 Projects Completed 2011-2012

Overall Project Outcome and Results

Just as weather flows across the surface of the earth, so does climate-only much more slowly. Understanding the flow of climate is of particular importance in Minnesota because Minnesota encloses the junction of the three great ecosystems of North America western prairie, northern needle-leaf forests, and eastern broad-leaf forests. Conditions here are particularly sensitive to local changes, and therefore can also be indicators for the nation as a whole.

We applied new methods for understanding this flow of climate, in terms of direction and speed, to actual historical Minnesota weather data. Utilizing established data on both average temperature and total precipitation, we found the lines along which precipitation and temperature do not change and where those lines intersect across Minnesota's landscape. Tracking the advancement of an intersection over time, artifacts of historic importance on climate are identifiable, such as the beginning and end of the dust bowl era. For the present and future, the data show climate in recent years moving northward at a few miles per year.

Results have two major implications, first, as a new confirmation of rate of climate shifts from projections based on global circulation models, and second, as a fine-scale mapping of climate migration in Minnesota. In addition to the average migration, we found differences between longitudinal and lateral migration and differences within Minnesota's ecoregions.

This report outlines the significance of climate migration on habitat for trees, tree pests and diseases, and insects in Minnesota. The project has spawned future research to apply the implications of climate flow, such as how it relates to degree days and other agricultural parameters for the bioenergy industry.

A public product of this project is the Climate Tracker, found on the project website: <http://www.cbs.umn.edu/climatetracker>. Climate Tracker allows citizens to follow the flow of climate at any point in Minnesota over the past century, including where it has been and where it is going.

Project Results Use and Dissemination

This was a two-year project. Its first year involved data assembly, algorithm validation, analysis, and preparation of preliminary maps and tables. In its second year, results were correlated with ecological, hydrological, physical, and social aspects. Included in the second year are a final report, public presentations, and web dissemination, which can be found at <http://www.cbs.umn.edu/climatetracker>. This website is designed to be user-friendly, useful, and interesting to both scientists and the general public. The interactive Climate Tracker application was developed as a novel way to dynamically view a century of data at a glance, while the brief video introduction presents information in a broader context and allows visitors to the website to meet some of the project researchers.

Future publications in scientific journals are expected to result from this project. Impacts of shifting climate on crops important to Minnesota's economy are being explored through collaborations with the Department of Agronomy and Plant Genetics at the University of Minnesota. A collaboration with the University of Minnesota's Department of Forest Resources is considering the interaction of climate and tree growth, tree ranges, and tree pests. A methods paper is underway documenting the methodology used in this project and comparing the resulting climate velocities with those found using Global Circulation Models.

Project completed: 06/30/2011

M.L. 2009 Projects Completed 2011-2012

Energy Efficient Cities

Subd. 07c \$2,000,000

Carl Nelson

Center for Energy and Environment
212 3rd Avenue N, Suite 560
Minneapolis, MN 55436

Phone: (612) 335-5871

Email: cnelson@mncee.org

Fax: (612) 335-5888

Web: <http://www.mncee.org>

Appropriation Language

\$2,000,000 is from the trust fund to the commissioner of commerce for an agreement with the Center for Energy and Environment for demonstration of innovative residential energy efficiency delivery and financing strategies, training, installation, evaluation, and recommendations for a utility residential energy conservation program.

Overall Project Outcome and Results

The Energy Efficient Cities project was developed to demonstrate innovative residential energy efficiency program delivery to reduce energy use and environmental impact in at least 6,000 homes through a community-wide partnership approach. With strong and crucial support from local gas and electric utilities, city-specific programs were developed in a total of 8 cities: Apple Valley, Austin, Duluth, Minneapolis, Owatonna, Park Rapids, Rochester, and St. Paul. While each city developed a customized approach, each program was designed to provide a "one-stop shop" comprehensive whole-house approach that makes taking energy efficiency actions as easy as possible for the homeowner, while maximizing participation and energy savings opportunities. This comprehensive approach involved the following components shared by each program:

- Community-based marketing strategies to recruit participants to workshops and for training participants to take low-cost energy actions;
- Home energy visits that include installation of low-cost materials and identify other energy-saving opportunities;
- Energy usage feedback reports to encourage individual energy-saving actions;
- Follow-up assistance, including providing cost-share, for completion of major efficiency upgrades including insulation, air sealing and major mechanicals replacement; and
- Training and quality control for insulation and air sealing contractors.

The project exceeded its original goals for participation, with 8,243 people attending workshops, 6,922 of those households completing a home energy visit, and 1,474 homes completing major energy efficiency upgrades. Over 36 contractors were trained in high performance installation techniques for insulation and air sealing jobs. The upgrades completed under this program generated \$4.8 million in work for Minnesota's insulation and heating contractors. The total energy savings from measures installed in these homes will result in an estimated \$13.8 million dollars in energy savings for the homeowners over the life of the measures. The programs will be continued in at least 5 of the participating cities.

M.L. 2009 Projects Completed 2011-2012

Project Results Use and Dissemination

Dissemination of information to homeowners was an integral part of the program. Our outreach activities for the program reached tens of thousands of Minnesotans, resulting in over 7,500 households attending a workshop that was produced by the project. The workshops educated people on basic energy conservation concepts and strategies, such as how a home loses energy, low-cost or no-cost methods for reducing energy, and what the process is for doing major energy efficiency upgrades in your home. The "Home Energy Resource Minnesota" website was also designed for education and outreach on energy efficiency issues. In addition, each city program had an on-line presence for dissemination of information about the program.

In addition to outreach targeted to homeowners as part of program activities, efforts were made to communicate to utilities, cities and other potential program sponsors of energy efficiency programs the Energy Efficient Cities program results, and increase uptake of similar residential programs. A presentation was given in August 2010 at the American Council for an Energy-Efficient Economy's (ACEEE) Summer Study on Buildings in Pacific Grove, California. Based on interest at that conference, another webinar presentation on the program was given as part of a series sponsored by the U.S. Department of Energy and attended by over 500 participants. A second webinar presentation was conducted for a national network of local government officials organized by the Institute for Sustainable Communities. A presentation was also conducted for the Clean Energy Teams (CERTs) conference in February 2011. Both Minneapolis's and St. Paul's programs were featured in a national study of retrofit programs by Lawrence Berkeley National Lab entitled "Driving Demand for Home Energy Improvements." As a result of the initial program success, programs in Minneapolis, Duluth, Owatonna, Rochester and Austin will continue beyond the grant period, funded by utilities and other sources.

Finally, a report was completed to document the project and communicate lessons learned to utilities and other potential program sponsors. The report will be disseminated to Minnesota utilities, and presentations will be scheduled with interested parties. A presentation has been scheduled for October in Owatonna for the Midwest chapter of the Association of Energy Service Professionals.

Project Publication:

Energy Efficient Cities: Using a Community-Based Approach to Achieve Greater Results in Comprehensive, Whole-House Energy-Efficiency Programs

Project completed: 06/30/2011

SUBD. 08 ADMINISTRATION AND OTHER

Contract Management

Subd. 08a \$158,000

Kristel Lynch

DNR
500 Lafayette Rd
St. Paul, MN 55155

M.L. 2009 Projects Completed 2011-2012

Phone: (651) 259-5533

Email: kristel.lynch@state.mn.us

Web: <http://www.dnr.state.mn.us>

Appropriation Language

\$158,000 is from the trust fund to the commissioner of natural resources for contract management for duties assigned in Laws 2007, chapter 30, section 2, and Laws 2008, chapter 367, section 2, and for additional duties as assigned in this section.

Overall Project Outcome and Results

This appropriation was used to provide continued contract management services to pass-through recipients of Environment and Natural Resources Trust Fund dollars. The DNR provided this fiduciary service to ensure funds were expended in compliance with session law, state statute, grants policies, and approved work plans. Contract management ensured oversight of reimbursement for project deliverables and met the requirements of the Department of Administration's Grants Management procedures.

Ensuring timely access to the funds through streamlined grant agreements and prompt processing of reimbursement requests was an overarching goal of DNR's contract management. Services provided under this appropriation included the following:

- **Contract Management Services**
 - Prepare grant agreements and amendments.
 - Encumber/unencumber funds.
 - Execute Use of Funds agreements.
 - Communicate with LCCMR staff and pass-through grant recipients, informally and formally.
 - Continue to work on process improvements that improve efficiency and ease for grantee while ensuring fiscal integrity.
 - Contract management documentation, including file management.
- **Training and Communications**
 - Train recipients on state grant requirements, including reporting procedures, proper documentation of expenses, and the Department of Administration's grants management policies, to ensure grantees follow state law and grants management policies set forth by the state's grant agreement.
 - Work with recipients to ensure grantees understand the state's reimbursement procedures and requirements.
 - Provide ongoing technical assistance/guidance to recipients.
- **Reimbursement Services**
 - Review reimbursement requests to ensure claimed reimbursements include sufficient documentation and comply with state and session laws, LCCMR approved Work Plan and grants policies.
 - Arrange for prompt payment once grantee has submitted a completed reimbursement request and expenses have been deemed eligible for reimbursement.
 - Detailed accounting by pass-through appropriation for each recipient.
- **Fiscal and Close-out Services**
 - Financial reconciliation/reporting.
 - Contract management reporting (fund balance/expenditures).

M.L. 2009 Projects Completed 2011-2012

- Examine records of recipients.
- Work with recipients to successfully close-out grants.

Project Results Use and Dissemination

This project's grants specialists are in frequent contact with pass-through grant recipients. The grants manager and DNR's liaison communicate with LCCMR staff. In addition, grant agreement requirements are communicated through manuals, emails, and letters.

Project completed: 06/30/2012

Legislative-Citizen Commission on Minnesota Resources (LCCMR)

Subd. 08b \$1,254,000

Susan Thornton

Legislative-Citizen Commission on Minnesota Resources
100 Rev Dr Martin Luther King Jr Blvd, Rm 65
St. Paul, MN 55155

Phone: (651) 296-2406

Email: lccmr@lccmr.leg.mn

Fax: (651) 296-1321

Web: <http://www.lccmr.leg.mn>

Appropriation Language

\$1,254,000 is from the trust fund for fiscal years 2010 and 2011 and is for administration as provided in Minnesota Statutes, section 116P.09, subdivision 5.

Overview

Per M.S. 116P.09, up to 4% of the amount available for appropriation from the Environment and Natural Resources Trust Fund (ENRTF) for a biennium is available for expenses related to LCCMR administration - this includes expenses pertaining to project selection, approval, and ongoing oversight of projects funded by the ENRTF, including new projects funded during the biennium and existing projects funded in previous bienniums. Historically, LCCMR has always used less than 3% of available funds for administration. This appropriation, which represents 2.33% of the amount available for the biennium, funds LCCMR administration expenses for FY 2010-11.

Project completed: 6/30/2012