

Environment and Natural Resources Trust Fund 2009 Phase 1 Request for Proposals (RFP)

LCCMR ID: A01

Project Title: Minnesota County Biological Survey

Total Project Budget: \$ \$4,200,000

Proposed Project Time Period for the Funding Requested: July 2009 - June 2012 (3 yrs)

Other Non-State Funds: \$ 750,000

First Name: Carmen

Last Name: Converse

Sponsoring Organization: DNR

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

Region:

Northwest, Northeast

County Name:

Beltrami, Clearwater, Cook,
Koochiching, Lake, Lake of the
Woods, St. Louis

City / Township:

Summary: Minnesota County Biological Survey provides foundations for conserving biological diversity by systematically collecting, interpreting, and delivering data on plant and animal distribution and ecology, native plant communities, and functional landscapes.

Main Proposal: 0808-1-059-proposal-0808-1-058-Main Proposal - Carmen Converse.doc

Project Budget: 0808-1-059-budget-0808-1-058-Budget - Carmen Converse.xls

Qualifications: 0808-1-059-qualifications-0808-1-058-Qualifications - Carmen Converse.doc

Map: 0808-1-059-maps-0808-1-058-Map - Carmen Converse.pdf

Letter of Resolution:

MAIN PROPOSAL

PROJECT TITLE: Minnesota County Biological Survey

I. PROJECT STATEMENT

The need to protect and manage functional ecological systems, including ecological processes and component organisms, continues to accelerate with increased demands for water and energy, continued habitat fragmentation, loss of species and genetic diversity, exotic species expansion, and climate change. Baseline data on the distribution and ecology of rare plants and rare animals, native plant communities, and functional landscapes are needed to prioritize actions to conserve and manage Minnesota's ecological systems and critical components of biological diversity. The Minnesota County Biological Survey (MCBS) systematically collects, interprets, and delivers these baseline data to private and public users to help guide decision-making. MCBS prioritizes sites of biodiversity significance for conservation and as potential sites for monitoring of critical habitat and ecological functions. MCBS provides educational products and assists with training, planning, and environmental review. Surveys have been completed in 65 of the state's 87 counties. Accelerated surveys in northern Minnesota and development of interpretive products are the primary focus of this three-year continuation proposal.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Field Surveys (see attached map). Budget: \$ 1,500,000

The status and distribution of rare resources will be identified, providing a basis for the maintenance of Minnesota's biological diversity and ecological systems through ecological management, planning, research, monitoring, and critical habitat acquisition.

Deliverable Completion Dates

1. Rapid assessment to determine preliminary sites for survey in the portion of northern Minnesota not previously surveyed by MCBS. (2010)
2. Review, site identification, and field survey: Remainder of Lake, Cook, and St Louis counties (Ongoing).
3. Review, site identification, and field survey: Beltrami and Clearwater counties (Initiate).

Result 2: Information System Expansion. Budget: \$ 1,400,000

MCBS will provide data and collections to information systems and museums, resulting in the long-term storage of biological collections and the distribution of information to individuals, organizations, and agencies with diverse natural resources goals.

Deliverable Completion Dates

1. Data entered in DNR's information systems (Fall of each field season).
2. Information system development, including data maintenance, quality control, integration, and linkages to related databases and procedures (Ongoing).
3. Preparation and delivery of physical collections to museums (Winter after each field season).

Result 3: Guidance for Conservation and Management. Budget: \$ 1,300,000

MCBS will provide interpretation of results through products and technical assistance to guide private and public conservation and management of ecological systems, rare resources, and sites of biodiversity significance.

Deliverable Completion Dates

1. Department of Natural Resources (DNR) Data Deli and DNR website populated with updated and accurate survey procedures, results and tools. (Example: Online booklet of vegetation sampling procedure made available to researchers.) (2012: Add shape files of 18 counties to DNR Data Deli.).
2. Ecological Evaluations written for sites of outstanding and high biodiversity significance to guide selection of potential natural areas and sites for long-term ecological monitoring (such as prairie management monitoring projects and rare species monitoring [e.g., rattlesnake and prairie fringed orchid]) and to provide interpretation for conservation and management planning (county park and open space plans, Forest Service project plans, Prairie Bank management plans, forest plans/forest certification, and landscape-watershed level collaboratives such as the Manitou Collaborative) (Ongoing).
3. Technical assistance and geographically specific products that interpret results provided to agencies, local communities/governments, individuals, and organizations. (Recent example of community assistance: MCBS report *Native plant communities and rare species of the Minnesota River Counties* was delivered

- to the region to assist in local conservation priorities complemented by ecologist-led field trips and meetings with river organizations and county representatives) (Ongoing).
4. Natural History/Guide Book with geographic focus on Minnesota's Prairie and Aspen Parkland provinces based on the results of MCBS (2012).
 5. Contribution to revision of *Amphibians and reptiles native to Minnesota* to include updates generated by MCBS (2012); initiation of a new publication on the mammals of Minnesota (2018).

III. PROJECT STRATEGY AND TIMELINE

A. Project Partners The University of Minnesota Bell Museum of Natural History and the Science Museum of Minnesota provide resources for the curation of specimens collected by MCBS. This request does not include funding for these partners.

B. Project Impact MCBS collects, delivers and interprets baseline data to private and public users to guide conservation and management decisions statewide.

C. Time MCBS is projected to complete the first statewide systematic assessment of critical components of Minnesota's biological diversity and ecological systems by 2018.

Strategy of this three-year proposal in anticipation of completion of the first statewide survey by 2018:

- 1) **A rapid assessment** to evaluate and prioritize the scope of areas yet to be surveyed will be focused in the northern portion of the state where ecological landscapes tend to be intact relative to other regions. Collaboration with other agencies, organizations, and researchers will ensure that field survey site selection and data collection are carefully targeted and efficiently completed (some cooperators include DNR divisions, Forest Service, National Park Service, counties, university researchers). The three-year schedule of this project will help retain experienced professional ecologists, and at the same time is also attractive to younger professional biologists who can be paired with senior staff to form effective field survey teams in some of the state's most remote areas.
- 2) **Information systems** development and maintenance is needed to ensure that data at the conclusion of the statewide survey are maintained with evolving computer technologies and archiving procedures. Additional resources are especially needed to improve web-delivery and to develop long-term monitoring databases.
- 3) **Natural history books, journal articles, and field guides produced by MCBS** have been well received (example: The three volume *Field guides to the native plant communities of Minnesota*). Regional natural history and species group books are priority outcomes as the Survey nears completion.

D. Long-Term Strategy. Funding will be requested for an ongoing Minnesota Biological Survey from the Minnesota Legislature and other cooperators such as the State Wildlife Grants that will extend beyond the completion of the first statewide assessment.

Proposed Strategies for continuation of a Minnesota Biological Survey after the completion of the first statewide survey in 2018:

- 1) **Increase technical assistance** from survey staff to interpret data (publications, web-products) and to train and deliver quality information to counties, municipalities, and managers making decisions that impact the state's ecological systems and rare resources.
- 2) **Data Gaps:** Survey areas where weather conditions, life-history cycles, lack of experts, etc. during the first assessment left data gaps and add areas once perceived as lower priority but threatened due to new issues (exotic species, climate change, disease, habitat fragmentation, demands for energy and genetic variability).
- 3) **Aquatics:** Expand upon MCBS aquatic surveys and integrate complimentary surveys to identify outstanding aquatic landscapes and sites (lakeshed, watershed, etc.).
- 4) **Establish long-term change-detection monitoring** of ecological conditions in priority sites of outstanding and high biodiversity significance and other representative systems (watersheds, ecological land type associations). Track the distribution of plants and animals, with more detailed monitoring of selected species. Monitoring also will be required as related to specific resource management issues (examples: prairie grazing, recreational impacts, groundwater/calcareous fens, forest certification, climate change).
- 5) **Continue collaboration** with other resource agencies and with universities, colleges, and museums that provide results of new research, innovative tools and new concepts, collection repositories, and educational opportunities for the public.
- 6) **Continue information system development** to enter, archive, manage, and deliver data and information.

Project Budget
Minnesota County Biological Survey 2009 (3 year proposal)

IV. TOTAL PROJECT REQUEST BUDGET

BUDGET ITEM (See list of Eligible & Non-Eligible Costs, p. 17)	AMOUNT	% FTE
Personnel: .	\$ -	
Botanists (3)	\$ 700,000	300%
Ecologists (10)	\$ 2,200,000	1000%
Information systems staff (3)	\$ 675,000	300%
Information officer	250,000	100%
Equipment/Tools: Data recorders	\$ 15,000	
Travel	\$ 130,000	
Fleet	\$ 170,000	
Supplies	\$ 60,000	
	\$ -	
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 4,200,000	

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Leveraged During Project Period: State Wildlife		
Action Grant (Federal) for animal surveys	\$ 750,000	Pending
Other State \$ Being Spent During Project Period: Heritage Enhance	\$ 1,740,000	Pending
Other State \$: General Fund	\$ 900,000	Pending
Other State \$: RIM General Fund	\$ 270,000	Pending
TOTAL	\$ 3,660,000	
Past Spending: 2-year timeframe prior to July 1, 2009	\$ 3,579,400	

LCCMR Proposal 2009 Minnesota County Biological Survey

Project Manager: Carmen Converse

Affiliation: Minnesota County Biological Survey, Division of Ecological Resources
Minnesota Department of Natural Resources (DNR)

The project manager has coordinated MCBS since 1987. She prepares work plans, funding proposals, manages the budget, develops procedures and work plans, hires and supervises staff, provides direction for information management, and has oversight on technical assistance, publications, and other products related to the delivery of MCBS results. Her past work experience also includes botanical and ecological field surveys and natural area research and management.

Employment

Aug. 1993-present Natural Resources Supervisor Senior
Minnesota Department of Natural Resources. Supervisor of the Minnesota County Biological Survey (MCBS). Coordination involves the planning and implementation of a systematic survey of significant natural areas and rare biological features to include hiring and supervision of employees, and preparation of schedules, budgets, contracts and reports

Nov. 1991-Oct. 1992 Natural Resources Supervisor Senior
Minnesota Department of Natural Resources. Acting Supervisor of the Natural Heritage Program. Overall coordination of the program including the Research and Policy Unit and MCBS.

Mar.-Oct. 1991 Natural Resources Supervisor
Nov. 1992-
Minnesota Department of Natural Resources. Coordinator of MCBS. New classification July 1993 due to expansion of the Survey.

1987 -1990 Natural Resources Specialist Senior Plant Ecologist/Botanist
Minnesota Department of Natural Resources, Natural Heritage Program. Coordinator of MCBS.

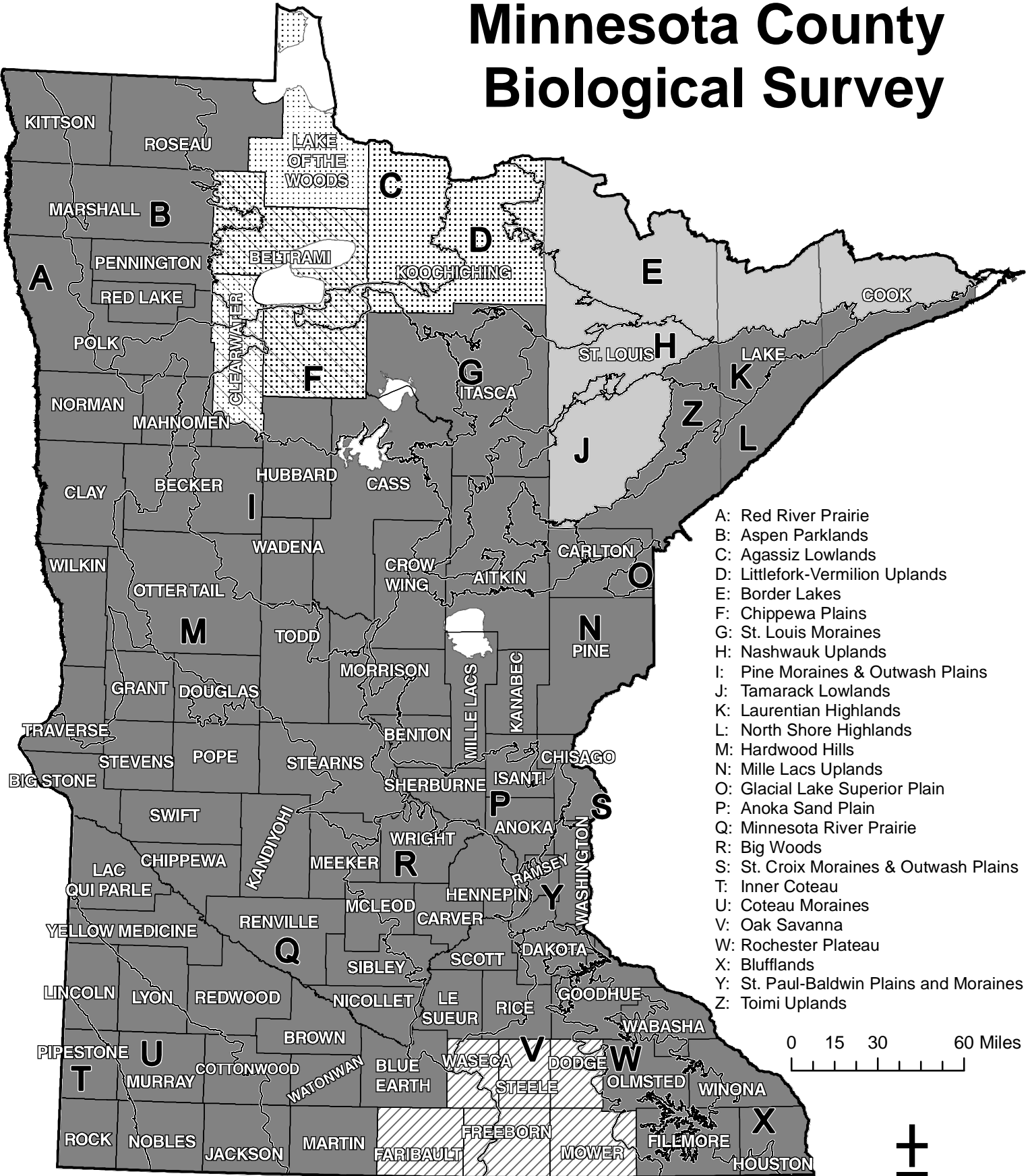
1987 Natural Resource Specialist Plant Ecologist/Botanist
Minnesota Department of Natural Resources, Natural Heritage Program. Evaluated natural areas, identified rare plant locations, assisted with data management and environmental review.

Education






1970-75 UNIVERSITY OF WISCONSIN-MADISON
Bachelor of Science
Natural Resources. Majored in horticulture with emphasis in botany.

1981-82 UNIVERSITY OF MINNESOTA
Course work in library science, Spanish, statistics, and management information systems.

Minnesota County Biological Survey



- A: Red River Prairie
- B: Aspen Parklands
- C: Agassiz Lowlands
- D: Littlefork-Vermilion Uplands
- E: Border Lakes
- F: Chippewa Plains
- G: St. Louis Moraines
- H: Nashwauk Uplands
- I: Pine Moraines & Outwash Plains
- J: Tamarack Lowlands
- K: Laurentian Highlands
- L: North Shore Highlands
- M: Hardwood Hills
- N: Mille Lacs Uplands
- O: Glacial Lake Superior Plain
- P: Anoka Sand Plain
- Q: Minnesota River Prairie
- R: Big Woods
- S: St. Croix Moraines & Outwash Plains
- T: Inner Coteau
- U: Coteau Moraines
- V: Oak Savanna
- W: Rochester Plateau
- X: Blufflands
- Y: St. Paul-Baldwin Plains and Moraines
- Z: Toimi Uplands

 Survey completed 1987-2009	 Survey completion 2009	 Survey in progress 2009	 Rapid Assessment for site identification: proposed completion 2010	 Survey to begin 2011
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