Environment and Natural Resources Trust Fund
2010 Request for Proposals (RFP)

LCCMR ID: 155-E2

Project Title:

Wildlife/Aquatic Management Area Work Planning Information System

LCCMR 2010 Funding Priority:

E. Natural Resource Conservation Planning and Implementation

Total Project Budget: $ $545,000

Proposed Project Time Period for the Funding Requested: 3 years, 2010 - 2013

Other Non-State Funds: $ $0

Summary:

Develop a DNR WMA/AMA Enterprise Information System to facilitate wildlife and fish habitat and user facility maintenance and enhancement work planning, budgeting and reporting.

Name: Steve   Benson

Sponsoring Organization: DNR

Address: 1201 E Hwy 2

Grand Rapids   MN   55744

Telephone Number: (218) 327-4149

Email: steve.benson@dnr.state.mn.us

Fax: (218) 327-4263

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

Location:

Region: Statewide

County Name: Statewide

City / Township:

_____ Knowledge Base	_____ Broad App.	_____ Innovation
_____ Leverage	_____ Outcomes	
_____ Partnerships	_____ Urgency	_____ TOTAL

Project Title: Wildlife and Aquatic Management Area Work Planning Information System

I. PROJECT STATEMENT

Minnesota manages over 1.3 million acres contained within 1,480 State Wildlife Management Areas (WMAs) and 39,000 acres in 699 Aquatic Management Areas (AMAs). Public land enhancement, restoration and maintenance is one of the core functions of the Department of Natural Resources (DNR) Division of Fish and Wildlife (FAW). The extent of the ongoing obligation for maintenance and enhancement of state lands after acquisition is not known. The DNR has spent a considerable effort in developing a Geographic Information System (GIS) that identifies WMA/AMA boundaries, and WMA cover types and facilities. This GIS forms the basis of current rudimentary WMA/AMA project planning and is the core of WMA public use information on the DNR's web site.

Building on this vast data base, the DNR needs a comprehensive and strategic approach to WMA management project planning and funding. AMAs within the Section of Fisheries have similar needs, although the specifics of the data are somewhat different. This approach must include the ability to prescribe the desired future conditions of our WMA lands, develop an ongoing list of work necessary to accomplish these management objectives, record accomplishments, and update our WMA/AMA GIS. The DNR needs the ability to get immediate answers to questions on a variety of needed work including: prairie, wetland and forest habitat development and enhancement, prairie and wetland habitat maintenance; biomass harvesting, grassland conversions, prairie seed collection/origin, climate change mitigation, water and fish control structure maintenance and replacement, and user facility management. DNR will then be able to match this work need with a wider spectrum of available funding sources beyond the traditional Game and Fish license dollars such as bonding, Outdoor Heritage Fund, private foundation/NGO grants, federal grants or state and federal economic stimulus funds. Designing a system to accommodate both WMA and AMA data will allow the sections to coordinate management activities within a common framework, thus improving DNR Fisheries and Wildlife divisional operations (e.g., planning, mapping, reporting).

The objectives of the project are: (1) create an enterprise system to update and use existing GIS data on WMAs and AMAs statewide, including vegetation, facilities, and recreation potential, (2) create tools for assessing and analyzing the unmet needs for WMA/AMA habitat and facility maintenance and enhancement, (3) create tools to collect and record information (e.g. seed source) on projects for habitat/facilities enhancement and maintenance activities, and (4) make the resulting information and reports available to the public and resource management partners.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Build a WMA/AMA module within the DNR Enterprise System   **Budget:** $ 200,000

A WMA/AMA Management Module will be created within the DNR Enterprise Information System to capture and manage existing GIS information on WMAs/AMAs; boundaries, vegetation, facilities and public recreation opportunities. Management and improvement activities on both habitat and facilities will be tracked and used to summarize accomplishments and future needs. Convert/update existing information.

Deliverable	Completion Date
1. *Management and administrative database and system*	*December 2011*

2. Vegetation database and system (WMA only)	*December 2011*
3. Facilities database and system	*December 2011*
4. Recreation database and system	*December 2011*

Result 2: Build a WMA field data recording system   **Budget:** $ 190,000

Design and build multiple modules for field data capture, e.g., seeding, prescribed burning, planting, invasives management, habitat restoration, grassland conversions, food plots.

Deliverable	**Completion Date**
1. Field data collection and recording system (WMA only)	*December 2011*
2. Field data entered into system	*June 2013*

Result 3: Create habitat analysis; project prioritizing and planning tools   **Budget:** $ 155,000

Assess habitat restoration and enhancement requirements. Define facilities management and maintenance project needs. Prioritize these needs for habitat and facilities, and use the information to build WMA/AMA management plans, guidance documents and provide direction for work planning on WMAs and AMAs.

Deliverable	**Completion Date**
1. Analytical tools to summarize habitat and facilities management needs	*December 2012*
2. Tools for project planning and coordination	*December 2012*
3. Work planning tools	*December 2012*
4. Data, information and reports available on the web	*June 2013*

III. PROJECT STRATEGY

A. Project Team/Partners
FAW IT staff, field staff and DNR MIS IT staff will work to design, build and populate this system. FAW will contract and work closely with MIS for system design and programming; field staff will provide direction, guidance and create data on needed field projects.   FAW IT staff will assist with design and development, project management and provide support as the system is rolled out at offices across the state. A temporary position will be required in project support, product testing and training. Primary proposal contacts: (1) Steve Benson, Wildlife GIS Supervisor, steve.benson@dnr.state.mn.us; (218) 327-4149 (2) Tim Loesch, MIS GIS Program Manager, tim.loesch@dnr.state.mn.us ; (651) 259-5475.

B. Time line Requirements
The timeline for this project is estimated to be 36 months

C. Long-Term Strategy
FAW has spent over ten years building WMA/AMA data, and an existing system as funds were available. This proposal is intended to build on that effort, and produce a product that will allow unprecedented access to up-to-date WMA/AMA information, and the ability to use that information to identify project needs (habitat and facilities); and prioritize and plan efforts to fund and carry out wildlife management activities on WMA/AMAs.   The use of this system will be long term, and will support WMA/AMA habitat and facilities management, enhancement, planning and funding into the foreseeable future.

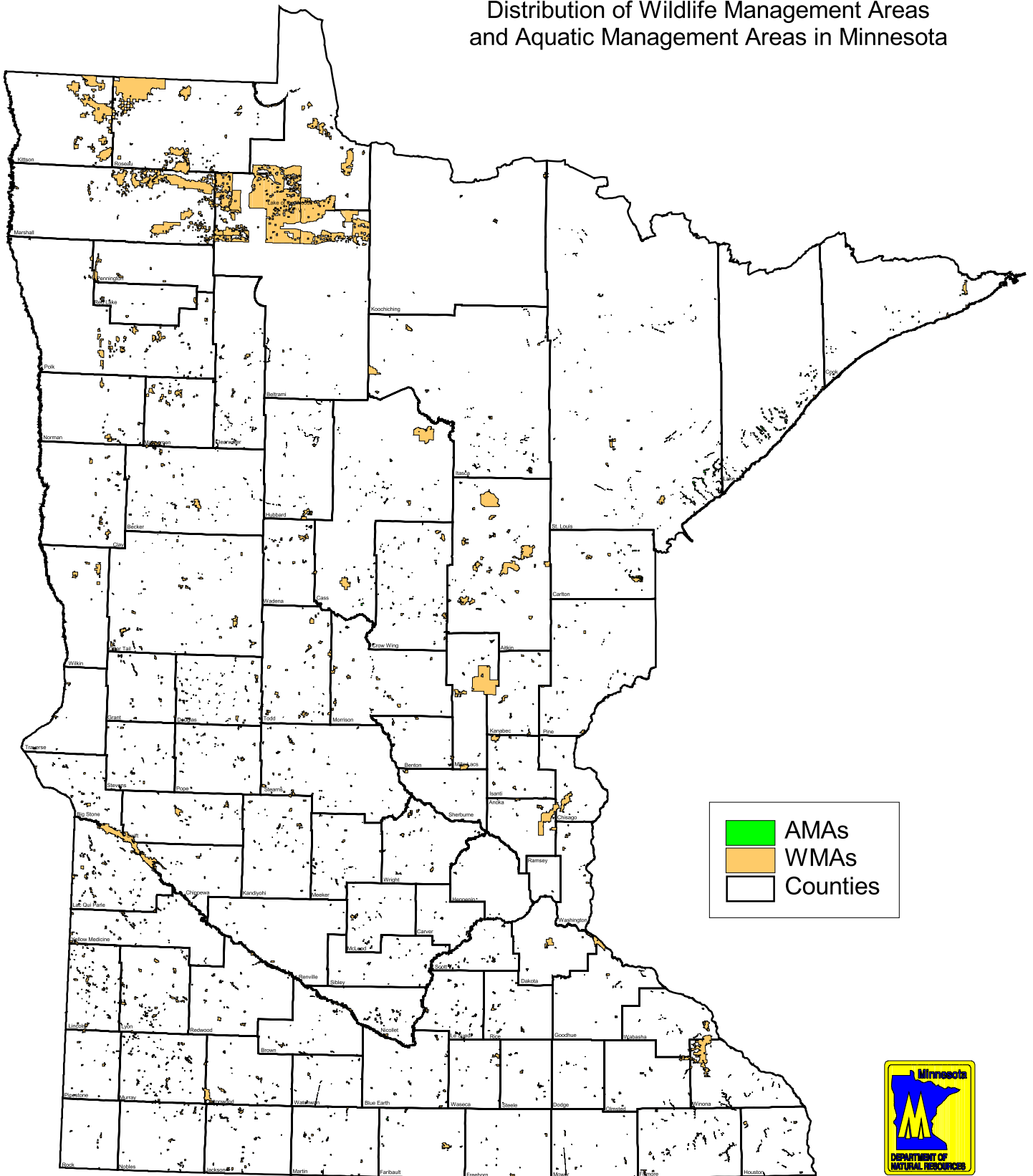**Project Title: Wildlife/Aquatic Management Area Work Planning Information System**

IV. TOTAL PROJECT REQUEST BUDGET (*3* years)

Budget Item		AMOUNT
Personnel: 1 full time project support position to manage requirements gathering, project tracking, project and system design documentation, product testing, training of field staff and field support. This would be a three year unclassified position. Benefits calculated at base salary + 25%	$	159,000
Contracts: Contract with DNR MIS for professional services; system design, programming, hardware and software support.	$	290,000
Equipment/Tools/Supplies:	$	-
2 network servers and software licenses sufficient to allow field staff to remotely use GIS tools to enter and manage data	$	16,000
Indirect Operations Support	$	30,000
25 field data recorders and software	$	50,000
TOTAL PROJECT BUDGET REQUEST TO LCCMR	$	545,000

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
In-kind Services During Project Period: DNR Fish and Wildlife IT staff time for three years; all levels of systems development from needs assessment to system roll out and support.	$ 290,000	
Funding History: The Fish and Game fund has been used to build the existing WMA/AMA GIS system and databases.	$ 750,000	

C:\Documents and Settings\dgriffit\My Documents\ML2010\RFP\2010 Proposals - JUNE FINALS\155-E2 - Benson Steve 0509-2-079 - Budget

06/22/2009   **Page 4 of 6**   **LCCMR ID: 155-E2**

Distribution of Wildlife Management Areas
and Aquatic Management Areas in Minnesota

AMAs
WMAs
Counties

Project Title: Wildlife/Aquatic Management Area Work Planning Information System

---

Steve Benson   MN DNR Wildlife GIS   1201 E Hwy 2, Grand Rapids MN 55744
Contacts: work (218) 327-4149 home (218) 327-2776 steve.benson@dnr.state.mn.us

---

Education
- BS Forest Management, University of Minnesota, 1980
- AAS Architecture, North Hennepin Community College, 1974

Experience
- **GIS Supervisor, DNR Wildlife, Grand Rapids MN, 2007 – present**
    - Provide program direction, supervision and technical leadership for GIS staff involved in large projects including statewide natural resource, habitat and wildlife population modeling and analysis, statewide systems development, database development and management, research and disease management, large map production projects and delivery of statewide user support.

- **GIS Coordinator, DNR Wildlife, Grand Rapids MN, 1990 – 2007**
    - Provide overall leadership in DNR Wildlife for the design and development of GIS applications; data management; and research and analysis projects using GIS tools; establish common approaches and practices for application development, and lead efforts to develop and deliver training for GIS users.

- **Adjunct Instructor, Itasca Community College, Grand Rapids, MN 1999 – 2002**
    - Work with Curriculum Advisory Committee to develop a 2-year GIS curriculum. Develop and plan out all coursework, teach GIS classes (1 introductory, 2 levels of advanced GIS and a forest modeling course) for 3.5 years. Assist search committee in recruiting, interviewing and hiring a full time replacement.

- **GIS Specialist, DNR Forestry, Grand Rapids, MN, 1985 – 1990**
    - Develop and manage the statewide GIS databases used by Forestry and other clientele. Update the databases and provide current data to clients. Work in a team of 5 to 8 staff, managing data covering 9 million acres of state and county lands. Provide data analysis and produce maps, summaries and reports.

- **Forester, DNR Forestry, Grand Rapids, MN, 1983 – 1985**
    - Conduct forest inventories on Forestry owned lands. Interpret aerial photos, map and cruise timber, produce summaries and reports. Hand - draw final large format forest inventory maps for DNR and County use.

- **Forestry Technician, Clearwater National Forest, Kooskia ID, 1978 – 1982**
    - Cruise timber, traverse and survey future timber sale sites, conduct forest inventories, inspect contract work (forest inventory and thinning), supervise pre-commercial tree thinning crews, supervise planting crews, fight fires and supervise firefighting crews.

- **Committee / other activities**
    - MN GIS/LIS Consortium: Chair-elect, State Government rep for the last four years
    - Governor's Council on GIS: Emergency Preparedness Committee, past member of Data Standards Committee
    - DNR: GIS Policy and Planning, GIS Technical Coordinators, IT Strategic Planning, IT Liaisons, WMAGIS Steering Group, Web Liaisons, Wildlife GIS Committee