

**Environment and Natural Resources Trust Fund  
2015 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 134-F**

Ecological Management Plans for Vegetation and Water

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**Category:** F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat

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**Total Project Budget:** \$ 204,412

**Proposed Project Time Period for the Funding Requested:** 1 year, October 2015 - October 2016

**Summary:**

Ecologically based management plans for vegetation and water, which will establish policies and procedures for natural resource protection, restoration, and enhancement in Minneapolis and the Mississippi River watershed.

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**Location**

**Region:** Metro

**County Name:** Anoka, Hennepin

**City / Township:** Minneapolis, Lauderdale, Columbia Heights, Hilltop, Fridley

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**Alternate Text for Visual:**

Topics addressed in water and vegetation management plans

|   |  |  |   |
|---|--|--|---|
| <input type="checkbox"/> Funding Priorities | <input type="checkbox"/> Multiple Benefits | <input type="checkbox"/> Outcomes              | <input type="checkbox"/> Knowledge Base |
| <input type="checkbox"/> Extent of Impact   | <input type="checkbox"/> Innovation        | <input type="checkbox"/> Scientific/Tech Basis | <input type="checkbox"/> Urgency        |
| <input type="checkbox"/> Capacity Readiness | <input type="checkbox"/> Leverage          | <input type="checkbox"/> TOTAL                 |   |



**I. PROJECT STATEMENT**

The Minneapolis Park and Recreation Board (MPRB) and the Mississippi Watershed Management Organization (MWMO) are in the midst of creating the first-ever ecological system plan. This plan is setting a vision for environmentally based management of public lands. On the heels of this effort, MPRB is requesting ENRTF funding to apply the ecological system plan to real-world, on-the-ground maintenance, operations, and capital improvements through the preparation of two detailed management plans: one for vegetation and another for water.

Today, our public lands are faced with multiple threats. Invasive species like buckthorn, reed canary grass, carp, and zebra mussels are transforming forests, wetlands, and waterways. Ever increasing urban runoff is reducing habitat and water quality in lakes, creeks, and rivers. Climate change exacerbates all these issues. Ecologically based management is the best opportunity to address threats and move forward with more effective habitat protection, restoration, and enhancement; invasive species management; water and air quality improvement; and climate change mitigation.

The main goal of the ecological management plans for vegetation and water is to deeply understand and work in concert with natural systems in order to achieve better performance in operations, maintenance, and capital improvements within the city and watershed. Managing a single park ecologically is not enough. These plans will unify environmental policies across the entire system. They will touch nearly every one of the city and watershed’s roughly 500,000 residents through the park and street tree system. They will educate people about the benefits of good environmental management—lessons they will take into greater Minnesota as they use, improve, purchase, and inherit cabins, recreational land, family businesses, and farms.

Building on the vision and foundational natural resource data of the in-progress ecological system plan, these two management plans will set new policies, describe best practices, establish evaluation and management procedures, and set measurable outcomes for protecting, restoring, and enhancing public lands, waters, and habitat. They will devise more effective ways of managing invasive species, like buckthorn, reed canary grass, and zebra mussels. They will consider how the urban forest can better contribute to improved water and air quality and climate change mitigation. The management plans will also include extensive environmental education and community involvement, in order to reach beyond public lands for the benefit of metro area lands and waters. With the ecological system plan, the two management plans will set the framework for a wholesale change in how public lands and waters are operated and maintained—by linking decision-making and on-the-ground practices to ecological systems and to the real threats facing our natural resources.

**II. DESCRIPTION OF PROJECT ACTIVITIES**

**Activity 1: *Vegetation and Water Management Plan***

**Budget: \$ 120,389**

Preparation of comprehensive, systems-based, agency-adopted management plans for the ecologically minded management of vegetation and water within the city and watershed. The plans will be utilized across the departments within the MPRB and MWMO, and will be made available to other collaborating agencies working in the region (Minnehaha Creek Watershed District, neighborhood groups, the City of Minneapolis, etc.)

| <b>Outcome</b>   | <b>Completion Date</b> |
|--|------------------------|
| <i>1. Approval of vegetation and water management plans</i>                                | <i>July 2016</i>       |
| <i>2. Introduction of management plans to agencies and departments, including training</i> | <i>August 2016</i>     |



**Environment and Natural Resources Trust Fund (ENRTF)**

**2014 Main Proposal**

**Project Title: Ecological Management Plans - Mississippi River Watershed and Minneapolis**

**Activity 2: Community Engagement**

**Budget: \$ 84,023**

Involvement of residents of Minneapolis and the watershed in the creation of the management plans, and education of residents about what they can personally do to improve the ecological health of vegetation and waters. Community engagement will involve meetings with neighborhood groups, open houses, a statistically valid citywide survey, and digital applications (civic tech) during the creation of the management plans. After completion of the management plans, ENRTF funding will support educational efforts.

| <b>Outcome</b>  | <b>Completion Date</b> |
|---|------------------------|
| <i>1. Community involvement events for the management plans that engage over 3,000 residents from across the city</i> | <i>July 2016</i>       |
| <i>2. Educational and informational events, brochures, and appearances</i>  | <i>October 2016</i>    |

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

*Minneapolis Park and Recreation Board:* Primary co-funder of the ecological system plan. Leader of the management plans process and primary decision-maker. Repository and disseminator for all generated data. Recipient of ENRTF funding.

*Mississippi Watershed Management Organization:* Primary co-funder of the ecological system plan. Will serve as major resource and decision-maker during the preparation of the management plans.

*Technical Team:* A group of scientific, engineering, and ecological consultants selected through competitive RFP process. Will generate ecological data and consult on the content of the ecological system plan and the two management plans.

**B. Project Impact and Long-Term Strategy**

The ecological system plan sets a course for more environmentally sound management of public lands in the state’s largest city. ENRTF funding will leverage the data and vision in that plan to create two critical management plans that will provide long-term strategies for maintenance, operations, and capital improvement activities related to vegetation and waters. The MPRB currently manages more than 6700 acres of public lands (16% of the city’s land area), and also the entire urban forest, which serves as a link to every household in the city and watershed. Managed in a more ecologically sound and community-driven way, these lands (and in fact all the land within the city and watershed) can improve habitat, combat invasive species, clean urban runoff, reduce flooding, and help mitigate climate change. Based on these management plans, MPRB and MWMO expect to change practices throughout their systems. This will have immediate impact and will also guide larger capital improvement projects over time. In addition, because of the extensive outreach and education MPRB plans to undertake, many Minneapolis residents will become aware of the principles of good environmental management—and will take these ideals into greater Minnesota when they visit their families, cabins, or parks.

**C. Timeline Requirements**

|                            |   |
|----------------------------|---|
| October 2015               | Completion of the ecological system plan (non-ENRTF funds) and commencement of vegetation and water management plans.                     |
| November 2015 – April 2016 | Research, data gathering, agency coordination, and preparation of management plans. Ongoing public involvement, including comment period. |
| May—June 2016              | Final writing, editing, and publication of the management plans   |
| July 2016                  | Management plans made publicly available  |
| July—October 2016          | Public education and promotion campaign   |

## 2015 Detailed Project Budget

Project Title: Ecological Management Plans - Mississippi River Watershed and Minneapolis

### IV. TOTAL ENRTF REQUEST BUDGET *ten months project duration*

| BUDGET ITEM   | AMOUNT   |           |
|---|--|-----------|
| Personnel:  | hours  | cost      |
| <i>MPRB Assistant Superintendent for Planning</i> : one full time salaried position throughout 10-month duration of project; 5.7% total project period salary = \$6,007; 5.7% total project period benefits = \$1,881                   | average 10<br>hours/month for<br>10 months   | 7,888     |
| <i>MPRB Planning Director</i> : one full time salaried position throughout 10-month duration of project; 9.2% total project period salary = \$7,118; 9.2% total project period benefits = \$2,627                                       | average 16<br>hours/month for<br>10 months   | 9,745     |
| <i>MPRB Planning Staff Member</i> : one full time salaried position throughout 10-month duration of project; 30% total project period salary = \$19,934; 25% total project period benefits = \$8,045                                    | average 52<br>hours/month for<br>10 months   | 27,979    |
| <i>MPRB Technical Staff</i> : administration, recreation, equipment/fleet, forestry, maintenance, natural/water resources, park police; 210 salary hours at an average of \$37.14/ hour   | seven<br>departmental<br>liaisons @ 30<br>hours each for<br>review and<br>meetings | 7,800     |
|   | \$   | 53,412    |
| <b>Contracts:</b>   |  |           |
| <i>Technical Team Members</i> (experts in the fields of ecology, hydrology, stormwater management, forestry, etc.): research, data collection, participation in community involvement events, writing of draft management plan elements | 500 hours @<br>\$150 / hour<br>average   | \$75,000  |
| <i>Phone Survey/Civic Tech Public Involvement</i> : utilizing digital media to expand respondent base in city and watershed, employing statistically valid citywide phone survey  |  | \$60,000  |
|   |  | \$135,000 |
| <b>Equipment/Tools/Supplies:</b>  |  |           |
| <i>Printing</i> : materials for community involvement, draft reports for review, letters and memoranda  |  | \$ 10,000 |
| <i>Distribution</i> : postage for community notifications and general correspondence  |  | \$ 6,000  |
|   |  | \$ 16,000 |
| <b>Acquisition (Fee Title or Permanent Easements):</b> N/A  |  | \$ -      |
| <b>Travel:</b> N/A  |  | \$ -      |
| <b>Additional Budget Items:</b> <i>In this column, list any additional budget items that do not fit above categories. List by item(s) or item type(s) and explain how number was reached. One row per type/category.</i>                |  | \$ -      |
| <b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>  | \$   | 204,412   |

### V. OTHER FUNDS

| SOURCE OF FUNDS  | AMOUNT     | Status  |
|--|------------|---------|
| <b>Other Non-State \$ Being Applied to Project During Project Period:</b> <i>whether the funds are secured or pending approval.</i>  | \$ -       | n/a     |
| <b>Other State \$ Being Applied to Project During Project Period:</b>  | \$ -       | n/a     |
| <b>In-kind Services During Project Period:</b>   | \$ -       | n/a     |
| <b>Remaining \$ from Current ENRTF Appropriation (if applicable):</b>  | \$ -       | n/a     |
| <b>Funding History:</b> MPRB and MWMO jointly funded an ecological system plan to be completed between May 2014 and September 2016. This plan creates the vision and the underlying data for the management plans. | \$ 190,000 | secured |

# ECOLOGICAL SYSTEM PLAN

## VEGETATION MANAGEMENT PLAN

### Vegetation Types

- »Emergent and submergent (lakes, creeks, and wetlands) ←
- »General park lands ←
- »Native grasslands
- »Forests
- »Park trees
- »Street trees ←
- »Boulevard turf and plants

### Management

- »Equipment (mowers, blowers, pruning, heavy equipment)
- »Nutrients, fertilization, and soil augmentation
- »Watering and irrigation ←
- »Plant materials and plant pots
- »Green waste
- »Burning

### Measurable Goals

- »Reduce fossil fuel use
- »Reduce synthetic fertilizer use ←
- »Reduce urban heat island effect
- »Increase habitat ←
- »Increase species diversity ←

### Collaborations

- »Homeowners and residents (habitat increase, boulevard plantings)
- »Hennepin County
- »City of Minneapolis
- »Watershed Districts
- »State of Minnesota
- »National Park Service

## WATER MANAGEMENT PLAN

### Water Types

- »Lakes
- »Creeks and Rivers
- »Wetlands
- »Groundwater
- »Runoff: park areas
- »Runoff: public roads and sidewalks
- »Runoff: private rooftops and yards
- »Potable water for landscape use

### Management

- »Runoff rate control (retention, storage)
- »Runoff volume control (infiltration, catchment)
- »Water quality
- »Groundwater recharge
- »Irrigation volume and sources
- »Habitat considerations

### Measurable Goals

- »Improve water quality in lakes and creeks
- »Reduce runoff into lakes and creeks
- »Increase wetland habitat
- »Increase diversity of open water habitat

### Collaborations

- »City public works departments (streets and sidewalks)
- »Homeowners and residents (roof runoff, water use)
- »Hennepin County
- »City of Minneapolis
- »Watershed Districts
- »State of Minnesota
- »National Park Service

FUTURE TOPICAL MANAGEMENT PLANS

**Environment and Natural Resources Trust Fund  
MPRB/MWMO Ecological Management Plans**

**Project Manager Qualifications: Adam Regn Arvidson, FASLA**

Mr. Arvidson is a registered landscape architect and a project manager with the Minneapolis Park and Recreation Board (MPRB). He will manage the ecological system plan and the vegetation and water management plans. He will work with MPRB staff to set the schedule, process, and timeline for these projects; design public involvement methods; manage the selection process for the technical team; manage the technical team; and serve as lead author and editor of the plans.

Management of the ecological system plan and the management plans requires a broad cross-section of expertise, ranging from an understanding of ecology and park design to project management to consultant selection to writing and editing. Mr. Arvidson has more than 16 years of experience in public park master planning and design, trail system planning and design, community involvement, and design writing. His writing has appeared in national and international design and literary magazines and he is a recipient of the Bradford Williams Medal for excellence in landscape architecture writing. He was named a Fellow of ASLA primarily for his contributions in writing, education, and editing. In 2012 he published “Greening the Landscape” (W.W. Norton): a guide to environmentally sound landscape installation and maintenance.

Prior to joining MPRB, he operated his own landscape architecture and communications consultancy—a firm that won numerous awards for both design and writing. During this time he was the long-time consultant for the Willmar Design Center, for which he managed consultant selection processes, oversaw technical consultants for specialized projects, and shepherded approvals through city government. He has and will continue to manage interdisciplinary design teams for major park projects and consult on communications and public involvement for park system planning projects.

**Organization Description – Minneapolis Park and Recreation Board**

With 197 park properties totaling nearly 6,744 acres of land and water, the Minneapolis Park and Recreation Board (MPRB) provides places and recreation opportunities for all people to gather, celebrate, contemplate, and engage in activities that promote health, well-being, community, and the environment. Each year, approximately 18 million visits are made to the nationally acclaimed Minneapolis park system. Its urban forests, natural areas and waters endure and captivate. Its Grand Rounds National Scenic Byway, neighborhood parks, recreation centers and diversified programming have made the Minneapolis park system an important component of what makes Minneapolis a great place to live, play and work.

**MPRB Mission:**

The Minneapolis Park and Recreation Board shall permanently preserve, protect, maintain, improve, and enhance its natural resources, parkland, and recreational opportunities for current and future generations.

The Minneapolis Park and Recreation Board exists to provide places and recreation opportunities for all people to gather, celebrate, contemplate, and engage in activities that promote health, well-being, community, and the environment.

To learn more about the Minneapolis Park and Recreation Board, visit [www.minneapolisparcs.org](http://www.minneapolisparcs.org).