

**Environment and Natural Resources Trust Fund
2017 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 170-G

SNA Acquisition, Restoration, Citizen Science and Engagement

Category: G. Land Acquisition, Habitat and Recreation

Total Project Budget: \$ 6,022,220

Proposed Project Time Period for the Funding Requested: 2 years, July 2017 – June 2019

Summary:

The SCIENCE in state Scientific and Natural Areas (SNAs) will be strengthened through strategic acquisition and land protection, monitoring-based restoration and improvements, and citizen science-based action and outreach.

Name: Margaret (Peggy) Booth

Sponsoring Organization: MN DNR

Address: 500 Lafayette Rd, Box 25
St. Paul MN 55155

Telephone Number: (651) 259-5088

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Web Address mndnr.gov/snas

Location

Region: Statewide

County Name: Statewide

City / Township:

Alternate Text for Visual:

SNA acquisition priorities are located in Conservation Opportunity Areas and restoration priorities are located in existing or proposed SNAS across the state.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ TOTAL	_____ %



PROJECT TITLE: SNA Acquisition, Restoration, Citizen Science & Engagement

I. PROJECT STATEMENT

The SCIENCE in state Scientific and Natural Areas (SNAs) will be strengthened through strategic acquisition and land protection, monitoring-based restoration and improvements, and citizen science-based action and outreach. About 500 acres of at risk native plant communities and wildlife habitat of state significance identified by the Minnesota Biological Survey (MBS) and the updated SNA Strategic Land Protection Plan will be acquired and designated as SNAs. Ecological information and more monitoring will help guide or evaluate native habitat restoration, enhancement, and site improvement activities on about 1000 acres of SNAs threatened by human impacts, invasive species, and lack of natural disturbance regimes. Furthermore, in cooperation with Conservation Corp of Minnesota, science-based information and citizen science projects will be basis for an expanded SNA outreach initiative including 120 events and a network of SNA site stewards at 130 SNAs.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Protection of Sites of Biodiversity Significance

Budget: \$3,091,943

The SNA Program will protect and buffer MBS-recommended sites of biodiversity significance by acquisition and SNA designation of ~ 500 acres. Proactive landowner contacts will be targeted in 10 high priority opportunity areas identified in the SNA Strategic Plan, including prairie core areas in the Minnesota Prairie Conservation Plan. In order to be acquired and designated as SNA, the site must be recommended for SNA designation in an Ecological Evaluation report which serves as the site’s baseline assessment for fee acquisitions. Candidate sites are numerically evaluated with priority to MBS-mapped biodiversity significance sites that are predominantly MBS-mapped native plant communities with habitat for rare species and Species in Greatest Conservation Need. The attached map and acquisition list identifies priority projects for this appropriation. The DNR may request to add other qualifying sites to the list. Most acquisition will be of fee title, but if more appropriate, acquisition could be of an SNA-administered conservation easement with SNA designation. Monitoring will be done of about 6 SNA conservation easements. The SNA Program manages 18 SNA conservation easements at 10 designated SNAs. In order to refine priorities and increase coordinated rare resource protection with partners and to implement Minnesota Wildlife Action Plan, new MBS and other scientific data (including information on sites of statewide geological significance) will be incorporated into an updated SNA Strategic Plan and GIS maps. Natural Area Registry agreements will be established about 8 biodiversity significance sites.

Outcome	Completion Date
1a. acquisition as SNA of ~500 acres of high quality habitat	6/30/19
1b. proactive landowner contact in ~10 priority areas for acquisition/protection	6/30/19
1c. monitoring for ~6 SNA conservation easements	6/30/19
1d. acquisition prioritization – refinement of acquisition decision tools/Plan	6/30/19
1e. ~8 Natural Area Registry agreements on biodiversity significant sites	6/30/19

Activity 2: Native Habitat Restoration, Enhancements & Improvements

Budget: \$1,983,415

Native habitat restoration and site improvements activities will be completed on about 1000 acres at about 50 SNAs as guided by ecological data and monitoring. Management plans will be completed for about 20 SNAs (including sites acquired through these funds). Ecological resources and management practices at about 24 SNAs will be monitored to improve adaptive management for better habitat for rare species and Species of Greatest Conservation Need. Interpretive signs-kiosks will be developed and installed at about 10 SNAs. SNA staff will provide ecological and technical guidance and on-site verification for 10 projects implemented by partners on SNAs. Restoration and improvement activities will be carried out by DNR staff- SNA crews,



Environment and Natural Resources Trust Fund (ENRTF)

2017 Main Proposal

Project Title: SNA Acquisition, Restoration, Citizen Science & Engagement

Conservation Corps of Minnesota, Sentence to Service, volunteers, and/or contractors. Activities include seed collection, site preparation, planting and aftercare, invasive species control, woody encroachment removal, site clean-up, signing, interpretive kiosks, fencing, prescribed burns (or alternative prescribed disturbance for ecological management purposes, such prescribed haying, mowing or grazing, necessary where use of fire is limited), management plan preparation, monitoring, and coordination-oversight of projects implemented by partners. Restoration uses seeds of a local ecotype, collected from onsite or within 25 miles. Restoration and enhancement of degraded and rare land features helps implement the Minnesota Wildlife Action Plan and achieve Habitat Recommendation 5 of the SCPP. This activity includes work to bring acquired parcels up to the DNR’s minimum standards and includes restoration and improvements of acquired sites if ecologically advisable and feasible within the appropriation period.

Outcome	Completion Date
2a. ~55 acres of restoration of forest, prairie, & outcrop sites	6/30/19
2b. ~360 acres of woody removal & exotics species treatment	6/30/19
2c. ~660 acres of prescribed burns	6/30/19
2d. ~10 SNA interpretive kiosks installed AND development work on ~32 sites	6/30/19
2e. ecological/technical guidance for ~9 partnership projects	6/30/19
2f. management plans completed for ~21 SNAs	6/30/19
2g. adaptive management monitoring on ~30 SNA sites	6/30/19

Activity 3: Citizen Science & Public Engagement in Natural Areas

Budget: \$946,862

Science-based information will drive the engagement of Minnesotans in citizen science, monitoring and education activities on SNAs. A partnership with the Conservation Corps of Minnesota will sustain a network of 130 SNA volunteer site stewards; organize about 120 events focusing on citizen science monitoring and bio-blitzes, plus volunteer work days, and recreation-educational events (guided nature hikes, etc.) and evaluating the effectiveness of these actions. New and refined electronic/social media communications tools, maps and interpretive information will be developed and disseminated to advance the public’s understanding of natural systems and biodiversity science and to enhance appropriate recreational use of SNAs.

Outcome	Completion Date
3a. SNA website, e-book, social media, maps & other interpretive info	6/30/19
3b. ~ 120 citizen science & volunteer events (management work days & ed. events)	6/30/19
3c. network of volunteer site stewards at ~130 SNAs	6/30/19

III. PROJECT STRATEGY

A. Project Team/Partners

This proposal includes the DNR’s work and funding to be used by the SNA Program towards partnership project work on SNAs. Partners include entities, such as The Nature Conservancy, Friends of the Mississippi River, Great River Greening, Sugarloaf Northshore Stewardship Assn., local units of governments, and other non-profits.

B. Project Impact and Long-Term Strategy

Achieving the goals of the SNA Strategic Land Protection Plan to protect 136,000 more acres as SNAs this century, as well as the science-based land management and public engagement depends upon ongoing support from the Environment and Natural Resources Trust fund of \$5M to \$10M per biennium. Annual/biennial appropriations will also be sought from the Outdoor Heritage Fund and state bonding.

C. Timeline Requirements

Two years (July 1, 2016 through June 30, 2018) provides multiple field seasons for restoration and development work and evaluation and to take protection projects through basic improvements needed.

2017 Detailed Project Budget

Project Title: SNA Acquisition, Restoration, Citizen Science & Engagement

IV. TOTAL ENRTF REQUEST BUDGET 2 years

BUDGET ITEM	AMOUNT
Personnel: ~ 12.1 FTE (for 2 years) for direct project activities spread across ~25 classified & unclassified staff paid primarily through grants (e.g. LCCMR, LSOHC, etc.) including ~15-20% fringe benefits as per state union contracts: 2.1 FTE coordinators (acquisition, outreach, management) & planner/GIS (~\$385,380) 8.1 FTE specialists, naturalists, technicians, full time laborers (~\$1,131,260) 1.9 FTE seasonal laborers & crews (~\$135,800)	\$ 1,652,800
Contracts - Professional-technical: e.g. mgmt plan prep, monitoring, video/photo, etc. (~\$128,000) CCM & Field Operations: e.g. invasives, woody removal, rxburn; & CCM for outreach assistance (~\$788,000)	\$ 916,000
Equipment/Tools/Supplies: e.g. posts, signs, fencing, safety supplies, equipment repair/parts, herbicide, seed cleaning/testing, field tools, citizen science & outreach materials, etc.	\$ 110,800
Acquisition (Fee Title or Permanent Easements): 500 acres to be designated SNA & administered by SNA program; in fee or conservation easement; includes transaction costs	\$ 2,890,000
Travel: DNR fleet charges (for operation of trucks, cars, & special fieldwork equipment) & instate travel costs (as per state contracts)	\$ 239,350
Additional Budget Items: printing (designation orders, interpretive kiosk graphics, & info. materials (~\$30,900) MNIT Adaptive Management database ecological data & monitoring upgrades (~\$30,000) DNR's direct and necessary costs (~\$152,370 total) pay for activities that are directly related to and necessary for accomplishing appropriated programs/projects. Direct and necessary costs cover HR Support (~\$35,598), Safety Support (~\$9,970), Financial Support (~\$34,088), Communication Support (~\$6,580), IT Support (~\$60,588), Planning Support (~\$4,560), and Procurement Support (~\$985) that are necessary to accomplishing funded programs/projects.	\$ 213,270
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 6,022,220

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period: Potential: partial landowner & partner donations; any actual \$s would be reported & accomplishments pro-rated.	\$ -	
Other State \$ Being Applied to Project During Project Period: Some SNA acquisitions are funded with a combination of state appropriations (e.g. OHF and RIM). If any activities are split funded their accomplishment acres will be pro-rated.	\$ -	
In-kind Services During Project Period: DNR office facilities, copiers, computer, communications; supervisor & manager time (but contributions not tracked).	\$ -	
Funding History FY2013-2017 (SNA portion of the following appropriations only): <u>LCCMR appropriations:</u> 2013 SNA Conservation, Restoration, Enhancement & Citizen Engagement \$1,500,000 2014 SNA Acquisition, Restoration, Improvements & Citizen Engagement \$2,540,000 2015 SNA Acquisition, Restoration, Enhancement & Public Engagement \$4,000,000 2016 SNA Acquisition & Restoration (\$4,000,000 (pending)) <u>LSOHC appropriations:</u> 2012 DNR Prairie/Grassland Habitat Restoration & Enhancement \$276,900 2013 DNR Accelerated Prairie Grassland Restoration & Enhancement \$144,200 2013 WMA, SNA & NPB Acquisition \$246,500 2014 DNR Accelerated Prairie Grassland Restoration & Enhancement \$360,800 2014 WMA & SNA Acquisition \$1,070,000 2015 DNR Accelerated Prairie Grassland Restoration & Enhancement \$762,000 2015 WMA & SNA Acquisition \$1,000,000 2016 DNR Accelerated Prairie Grassland Restoration & Enhancement \$622,900 (pending) 2016 WMA & SNA Acquisition \$TBD (pending) <u>Bonding:</u> none. <u>Federal:</u> none	\$ 16,523,300	2012-13 LSOHC approps will be expended prior to this proposals timeframe
Remaining \$ from Current ENRTF Appropriation: BALANCES AS OF 3/1/15: 2013 SNA Cons., Resto., Enhance & Citizen Engage. - Balance: \$242,900; to be spent in FY16 2014 SNA Acq., Resto., Improvements & Citizen Engagement - Balance: \$825,300 2015 SNA Acquisition, Restoration, Enhancement & Public Engagement - Balance: \$3,098,100	\$ 4,166,300	portions to be spent in FY16 & early FY17

**Environment and Natural Resources Trust Fund
2017 Proposed Acquisition/Restoration List**

Project Title: SNA Acquisition, Restoration, Citizen Science & Engagement

Project Manager Name: Margaret (Peggy) Booth

Organization: Mn Department of Natural Resources

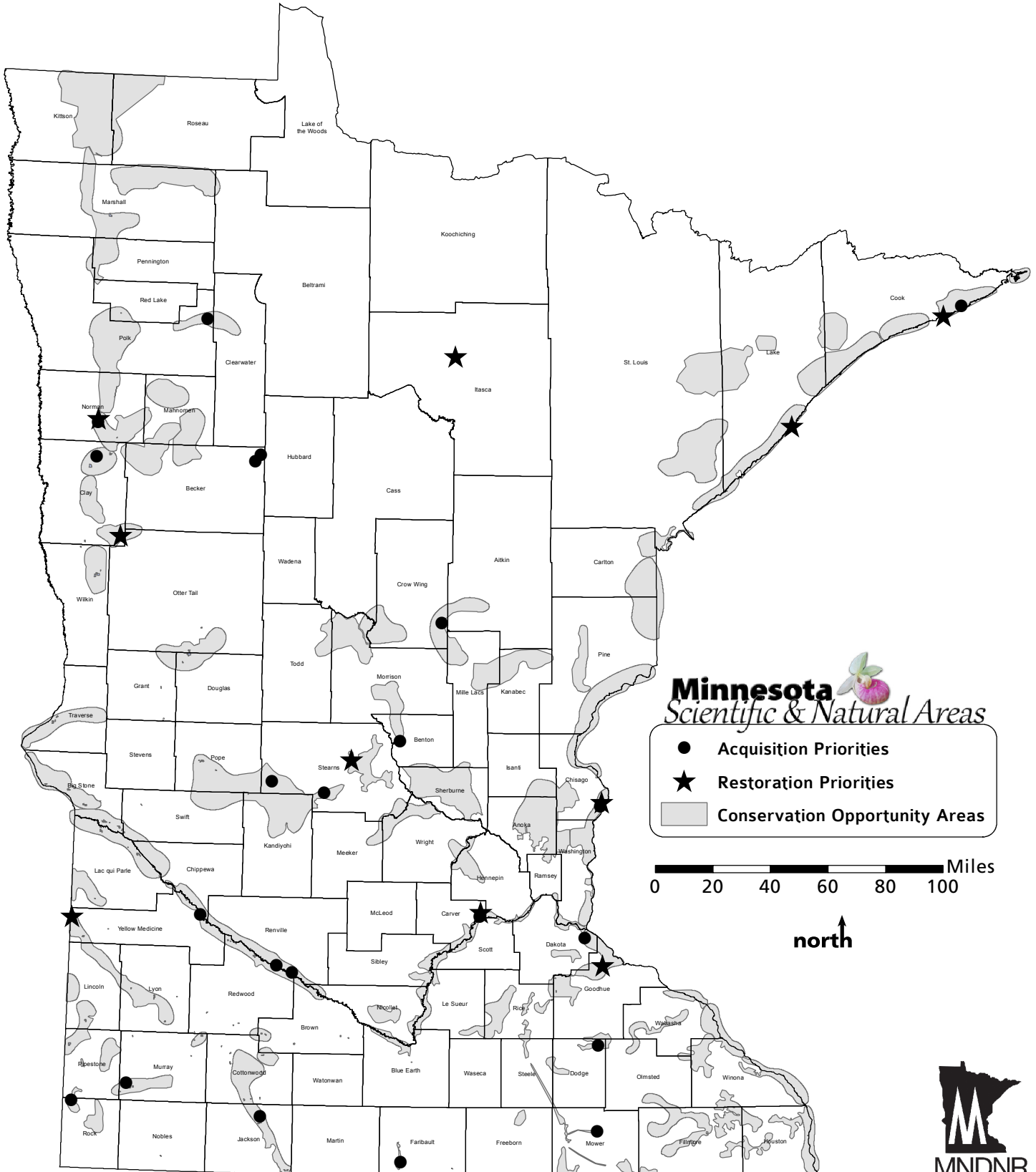
ENRTF \$ Request: \$6,022,220

#	Acquisition or Restoration Parcel Name	Geographic Coordinates Format: [Deg.]° [Min.]' [Sec.]" [Hemis.]		Estimated Cost	County	Ecological Significance	Activity Description	# of Acres	# of Shoreline Miles	Type of Landowner	Proposed Fee Title or Easement Holder (if applicable)
		Latitude	Longitude								
1	Blue Devil SNA addition	44° 47' 32.4"	95° 32' 36.7"	\$ 800,000	Yellow Medicine	MBS-mapped prairie/outcrop with rare features	fee title acquisition	200		private	DNR-SNA
2	Cedar Mountain SNA addition	44° 30' 22"	94° 54' 16"	\$ 800,000	Redwood	MBS-mapped prairie/outcrop with rare features	fee title acquisition	200		private	DNR-SNA
3	Chanarambie Creek	43° 54' 22.4"	96° 1' 51.9"	\$ 480,000	Murray	dry hill prairie & prairie meadow	fee title acquisition	120		private	DNR-SNA
4	Des Moines River SNA addition	43° 44' 38.5"	95° 4' 8.7"	\$ 200,000	Jackson	buffer to SNA to aide in mgmt. of native prairie	fee title acquisition	50		private	DNR-SNA
5	Dexter Prairie	43° 45' 13.4"	92° 43' 9.5"	\$ 140,000	Mower	wet to wet-mesic tallgrass prairie of outstanding biodiversity	fee title acquisition	20		private	DNR-SNA
6	Dinner Creek SNA addition	47° 4' 21.5"	95° 12' 7.5"	\$ 356,700	Becker	white cedar swamp, aspen-birch-basswood forest, Jack pine woodland, red-white pine woodland	fee title acquisition	242	0.5	private	DNR-SNA
7	Drake Woods	43° 33'54.0"	94° 6' 23.51"	\$ 2,000,000	Faribault	best intact MBS mapped hardwood forest in south central MN	fee title acquisition	300	1.5	private	DNR-SNA
8	Englund Ecotone SNA addition	45° 41' 19.3"	94° 8' 53.2"	\$ 2,148,000	Benton	oak forest, oak savanna, sedge meadow	fee title acquisition	358		private	DNR-SNA
9	Felton Prairie SNA addition	46° 52' 1.6"	94° 8' 53.2"	\$ 1,000,000	Clay	wet-mesic or dry prairie	fee title acquisition	200		private	DNR-SNA
10	Franconia Bluffs SNA addition	45° 22' 4.9"	92° 41' 53.6"	\$ 480,000	Chisago	forested bluff along St. Croix River	fee title acquisition	80		private	DNR-SNA
11	Gully Fen SNA addition	47° 46' 58.7"	95° 38' 0.6"	\$ 754,800	Polk	fen - wetland-Forest	fee title acquisition	1200		private	DNR-SNA
12	Hastings Sand Coulee SNA addition	44° 41' 41.9"	92° 49' 22.5"	\$ 250,000	Dakota	prairie	fee title acquisition	16		private	DNR-SNA
13	Little Mantrap Lake	47° 6' 56.8"	95° 10' 25.4"	\$ 720,000	Becker	mixed mesic hardwood forest/peatland communities	fee title acquisition	230	0.5	private	DNR-SNA
14	Mille Lacs Moraine SNA addition	46° 16' 58.3"	93° 51' 10.9"	\$ 713,000	Crow Wing	MBS-mapped forest communities & habitat for rare birds	fee title acquisition	265	0.5	private	DNR-SNA
15	Morton Rock Outcrops SNA addition	44° 32' 59.4"	94° 59' 33.8"	\$ 20,000	Renville	southern bedrock outcrops	fee title acquisition	4		private	DNR-SNA
16	Myhr Creek Ridge SNA addition	47° 50' 17.8"	90° 0' 29.1"	\$ 160,000	Cook	black spruce jack pine woodland	fee title acquisition	80		private	DNR-SNA
17	Middle Fork Zumbro River Forest	44° 9' 8.4"	92° 48' 6.3"	\$ 1,000,000	Dodge	sugar maple - basswood-(butternut hickory) forest	fee title acquisition	300	4	private	DNR-SNA
18	Roscoe Prairie SNA addition	44° 7' 14.0"	94° 40' 37"	\$ 240,000	Stearns	wet prairie with rare butterfly habitat	fee title acquisition	40		private	DNR-SNA
19	Rose Dell Prairie	45° 25' 12.7"	96° 21' 15.5"	\$ 400,000	Pipestone	MBS-mapped prairie with rare features	fee title acquisition	80		private	DNR-SNA
20	Sandpiper Prairie SNA addition	47° 14' 32.2"	96° 24' 16.3"	\$ 100,000	Norman	wet-mesic prairie	fee title acquisition	100		private	DNR-SNA
21	Seminary Fen SNA addition	44° 55' 15.4"	93° 18' 27.8"	\$ 120,000	Carver	calcareous fen	fee title acquisition	20		private	DNR-SNA
22	Spring Hill Fen	45° 33' 16.2"	94° 49' 29.6"	\$ 600,000	Stearns	calcareous fen	fee title acquisition	150		private	DNR-SNA
23	Avon Hills Forest SNA	45° 38' 7.0"	94° 30' 6.7"	\$ 46,500	Stearns	sand gravel prairie (towards succession to oak savanna/forest)	restore prairie	15		public	DNR-SNA
24	Blanket Flower Prairie SNA	46° 41' 7.7"	96° 12' 18.1"	\$ 36,000	Clay	dry gravel prairie	restore prairie	36		public	DNR-SNA
25	Cannon River Turtle Preserve SNA	44° 34' 22.1"	92° 40' 42.1"	\$ 23,000	Chisago	bedrock bluff prairie	restore prairie	7		public	DNR-SNA
26	Franconia Bluffs SNA	45° 22' 4.9"	92° 41' 53.6"	\$ 46,500	Chisago	St Croix River bluff	restore prairie	20		public	DNR-SNA
27	Icelandite Coastal Fen SNA (proposed)	47° 47' 46.6"	90° 7' 1.8"	\$ 4,000	Cook	gravel-cobble beach & shrub rich fen	restore shoreline vegetation	1		public	DNR-SNA
28	Iona's Beach SNA	47° 10' 3.7"	91° 25' 19.7"	\$ 4,000	Lake	lake superior rocky shore plant community, beach composed of pink rhyolite or felsite	restore shoreline vegetation	1		public	DNR-SNA
29	Little Too Much Lake SNA	47° 37' 35.4"	93° 46' 27.4"	\$ 4,000	Itasca	aspen-birch red maple forest	restore forest	2		public	DNR-SNA
30	Mound Springs Prairie SNA	44° 46' 27.4"	96° 26' 12.4"	\$ 15,000	Yellow Medicine	dry hill & mesic prairie	restore prairie	10		public	DNR-SNA
31	Sandpiper Prairie	47° 14' 32.2"	96° 24' 16.3"	\$ 40,000	Norman	wet-mesic prairie	restore prairie	40		public	DNR-SNA
32	Seminary Fen SNA	44° 48' 39.0"	93° 33' 11.5"	\$ 23,000	Carver	wet prairie	restore prairie	7		public	DNR-SNA

NOTES:

ML17 Environment and Natural Resources Trust Fund Proposal

SNA Acquisition, Restoration, Citizen Science & Engagement



SNA Acquisition, Restoration, Citizen Science & Engagement Project Manager Qualifications: Margaret (Peggy) Booth

WORK EXPERIENCE

MN DEPARTMENT OF NATURAL RESOURCES:

Ecological & Water Resources, Scientific & Natural Area (SNA) Program Supervisor (May 2006-present)

Manager and supervisor of SNA program – responsible for oversight of acquisition and management of system of about 160 state SNAs, the Natural Area Registry, and the Division's prairie work (including Native Prairie Bank Conservation Easements, and Prairie Tax Exemption); managing these program's annual operating and capital budgets totaling up to about \$12 million. LCCMR project manager of several SNA appropriations.

Regional Operations, Community Assistance Manager (Sept 2002-May 2006)

Including LCMR program manager of the Metro Conservation (Wildlife) Corridors partnership – Phase I & Phase II.

Forestry Division, Metro Region Forestry Manager (July 1997-Sept 2002)

Forestry Division, State Urban & Community Forestry Program Coordinator (April 1995-June 1997) Including LCMR program manager for Minnesota ReLeaf.

Forestry Division, Consultant (Oct 1992-April 1995)

Including providing technical assistance for LCMR-supported Minnesota ReLeaf Program and author of *Energy Conservation through Community Forestry*, and d) *Energy Conserving Landscapes: the Minnesota Homeowner's Guide*.

UNIVERSITY OF MINNESOTA, Department of Landscape Architecture:

Administrator/Director of Center for Community Studies (1983-1992)

Lecturer/Teaching Specialist (1982-92)

Research: Planting for Energy Conservation (1989-1992)

Including LCMR Project Manager for the University's \$199,450 research project (part of the \$1.25 million Minnesota ReLeaf program) entitled *Tree and Shrub Planting for Energy Conservation in Minnesota Communities*. Assisted DNR on *Minnesota ReLeaf Implementation Plan*, the Minnesota ReLeaf Implementation Plan Work Group, and *Carbon Dioxide Budgets in Minnesota and Recommendations for Reducing Emissions with Trees*. Author of *Planting for Energy Conservation in the North*.

CITY OF MINNEAPOLIS, Planning Department:

City Planner II – Urban Design (1975-1980)

EDUCATION

MASTER OF LANDSCAPE ARCHITECTURE, University of Minnesota Graduate School

BACHELOR OF LANDSCAPE ARCHITECTURE, University of Minnesota

Organization Description

MN Department of Natural Resources - Division of Ecological and Water Resources

SCIENTIFIC & NATURAL AREA (SNA) PROGRAM

Charged under MS 86A.05 to protect and perpetuate in an undisturbed natural state those natural features that possess exceptional scientific or education value. The program acquires, manages and facilitates public use of SNAs; oversees the Natural Area Registry; and provides native prairie stewardship assistance, including Native Prairie Bank conservation easements (MS 84.96 & 84.961).

