Legacy Fund Restoration Evaluations, Fiscal Year 2012

Report to the Minnesota Legislature

Senate Environment and Natural Resources Committee
House Environment, Energy and Natural Resources Policy and Finance Committee
House Legacy Funding Division

Lessard-Sams Outdoor Heritage Council
Clean Water Council

Submitted by
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

Date of Report: November 30, 2012

Legislative Charge

The statutory requirements for this report, as amended in M.L 2011, First Special Session, Ch 6, are:

Parks and Trails Fund: ***M.S. 85.53, Subd. 5.*** *Restoration evaluations. The commissioner of natural resources may convene a technical evaluation panel comprised of five members, including one technical representative from the Board of Water and Soil Resources, one technical representative from the Department of Natural Resources, one technical expert from the University of Minnesota or the Minnesota State Colleges and Universities, and two other representatives with expertise related to the project being evaluated. The commissioner may add a technical representative from a unit of federal or local government. The members of the technical evaluation panel may not be associated with the restoration, may vary depending upon the projects being reviewed, and shall avoid any potential conflicts of interest. Each year, the commissioner may assign a coordinator to identify a sample of up to ten habitat restoration projects completed with parks and trails funding. The coordinator shall secure the restoration plans for the projects specified and direct the technical evaluation panel to evaluate the restorations relative to the law, current science, and the stated goals and standards in the restoration plan and, when applicable, to the Board of Water and Soil Resources' native vegetation establishment and enhancement guidelines. The coordinator shall summarize the findings of the panel and provide a report to the chairs of the respective house of representatives and senate policy and finance committees with jurisdiction over natural resources and spending from the parks and trails fund. The report shall determine if the restorations are meeting planned goals, any problems with the implementation of restorations, and, if necessary, recommendations on improving restorations. The report shall be focused on improving future restorations. Up to one-tenth of one percent of forecasted receipts from the parks and trails fund may be used for restoration evaluations under this section.*

Outdoor Heritage Fund: ***M.S. 97A.056, Subd. 10.*** *Restoration evaluations. The commissioner of natural resources and the Board of Water and Soil Resources may convene a technical evaluation panel comprised of five members, including one technical representative from the Board of Water and Soil Resources, one technical representative from the Department of Natural Resources, one technical expert from the University of Minnesota or the Minnesota State Colleges and Universities, and two representatives with expertise in the project being evaluated. The board and the commissioner may add a technical representative from a unit of federal or local government. The members of the technical evaluation panel may not be associated with the restoration, may vary depending upon the projects being reviewed, and shall avoid any potential conflicts of interest. Each year, the board and the commissioner may assign a coordinator to identify a sample of up to ten habitat restoration projects completed with outdoor heritage funding. The coordinator shall secure the restoration plans for the projects specified and direct the technical evaluation panel to evaluate the restorations relative to the law, current science, and the stated goals and standards in the restoration plan and, when applicable, to the Board of Water and Soil Resources' native vegetation establishment and enhancement guidelines. The coordinator shall summarize the findings of the panel and provide a report to the chair of the Lessard-Sams Outdoor Heritage Council and the chairs of the respective house of representatives and senate policy and finance committees with jurisdiction over natural resources and spending from the outdoor heritage fund. The report shall determine if the restorations are meeting planned goals, any problems with the implementation of restorations, and, if necessary, recommendations on improving restorations. The report shall be focused on improving future restorations. Up to one-tenth of one percent of forecasted receipts from the outdoor heritage fund may be used for restoration evaluations under this section.*

Clean Water Fund: ***M.S. 114D.50, Subd. 6.*** *Restoration evaluations. The Board of Water and Soil Resources may convene a technical evaluation panel comprised of five members, including one technical representative from the Board of Water and Soil Resources, one technical representative from the Department of Natural Resources, one technical expert from the University of Minnesota or the Minnesota State Colleges and Universities, and two representatives with expertise related to the project being evaluated. The board may add a technical representative from a unit of federal or local government. The members of the technical evaluation panel may not be associated with the restoration, may vary depending upon the projects being reviewed, and shall avoid any potential conflicts of interest. Each year, the board may assign a coordinator to identify a sample of up to ten habitat restoration projects completed with clean water funding. The coordinator shall secure the restoration plans for the projects specified and direct the technical evaluation panel to evaluate the restorations relative to the law, current science, and the stated goals and standards in the restoration plan and, when applicable, to the Board of Water and Soil Resources' native vegetation establishment and enhancement guidelines. The coordinator shall summarize the findings of the panel and provide a report to the chairs of the respective house of representatives and senate policy and finance committees with jurisdiction over natural resources and spending from the clean water fund. The report shall determine if the restorations are meeting planned goals, any problems with the implementation of restorations, and, if necessary, recommendations on improving restorations. The report shall be focused on improving future restorations. Up to one-tenth of one percent of forecasted receipts from the clean water fund may be used for restoration evaluations under this section.*

Contributors

Restoration Evaluation Panel:
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Table of Contents

Table of Contents (Continued)

Page

Executive Summary

State law (M.L. 2011, First Special Session, Ch. 6) directs restoration evaluations to be conducted on restoration projects completed with funds from the Clean Water Fund (M.S. 114D.50), Outdoor Heritage Fund (M.S. 97A.056), and Parks and Trails Fund (M.S. 85.53). As provided by law, the Minnesota Board of Water and Soil Resources (BWSR) is the responsible agency for Clean Water Fund restoration evaluations; the Minnesota Department of Natural Resources (DNR) is the responsible agency for Parks and Trails Fund restoration evaluations; and DNR and BWSR are jointly responsible for Outdoor Heritage Fund restoration evaluations. DNR and BWSR (hereafter referred to as the Agencies) have elected to combine the administration and reporting for the three statutory requirements in a single Legacy Fund Restoration Evaluation program. Accordingly, one restoration evaluation panel was created and one combined evaluation report will be produced. The Agencies intend to utilize this formalized and elevated process of assessing project performance to improve "on the ground" conservation outcomes across the State. Working collaboratively with project managers to identify gaps and capture lessons learned in restoration implementation, the agencies plan to disseminate this valuable information back to practitioners to reinforce existing conservation efforts.

Each of the three Legacy Funds reported on has a distinct purpose and distinct focus on restoration projects directed by the Fund's purpose. The constitutionally directed purpose of the **Clean Water Fund** is ***to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation***. Accordingly the primary goal of Clean Water Fund restoration projects is to restore water quality. The Constitutionally directed purpose of the **Outdoor Heritage Fund** is to ***restore, protect, and enhance wetlands, prairies, forests, and habitat for fish, game, and wildlife***. Outdoor Heritage Fund restorations are strongly focused on improving specific wildlife habitat conditions. The Constitutionally directed purpose of the **Parks and Trails Fund** is to ***support parks and trails of regional or statewide significance.*** Restoration projects completed through the Parks and Trails Fund are focused on ecological restoration of natural areas towards a specific community condition on State or Regional park lands. For each of the Funds, projects are evaluated relative to the stated goals of the individual project and with an understanding of the purpose of the particular Legacy Fund.

Nine of eighteen restoration project evaluations completed during the summer of 2012 are described in this report. The remaining nine will be presented in the forthcoming Fiscal Year 2013 report. As directed in statute projects are evaluated relative to:

> *the law, current science, and the stated goals and standards in the restoration plan.*

All projects evaluated were determined to have been implemented in compliance with applicable appropriation laws and reporting requirements. Applicable laws for each Fund are addressed in the Project Evaluation section. Observations by field assessors on project effectiveness, trajectory (estimated outcomes based on current conditions) and application of current science are summarized in individual project evaluations and detailed in standard project evaluation forms (Appendix I).
Statute for restoration evaluations also directs the report to:

> *determine if the restorations are meeting planned goals, any problems with the implementation of restorations, and if necessary, make recommendations on improving restorations.*

The restoration evaluation panel found that projects are overall on trajectories that have the potential to meet planned project goals. However, based on review of site assessments, the restoration evaluation panel did identify three needs and provided accordant recommendations for improving future restorations and the restoration evaluation process.

Need	**Recommendation**
1. Improved consistency among the different funds in level of basic planning and implementation documentation. (Legacy restoration projects typically fulfill this need though required and internal documentation. The recommendations are intended to improve restoration outcomes though consistency in documentation of essential components)	▪ All project narratives should include site specific outcome based goals. o All projects evaluated have met the existing reporting requirements for each fund to include measurable outcomes. This recommendation is directed at encouraging project managers to briefly state outcome based goals for discrete implementation sites in relation to overall project outcomes. ▪ Project reporting should include essential information on project implementation for ongoing management. o All projects evaluated have met the existing requirements for each fund to report on project implementation. In some instances this set of information may not provide adequate site specific planning and implementation documentation to serve as guidance for future managers. The set of project site data listed in the Summary of Findings may serve as a guide for the most useful project site data ▪ Project managers should be provided examples of simple well-designed restoration planning and implementation documentation to guide the planning and reporting process
2. Restoration training	▪ Current knowledge of applied restoration practice, including lessons learned from field practice and restoration evaluations, should be disseminated though Statewide restoration training programs
3. Evaluation process improvement	▪ Selected subset of evaluated projects should be reevaluated in future years to track critical aspects of project effectiveness

Introduction

In 2008, Minnesota voters approved a proposed constitutional amendment to conserve our natural and cultural heritage. The Clean Water, Land, and Legacy amendment dedicates an increase in the state sales tax of three-eighths of one percent for 25 years to protect, enhance, and restore our outdoor heritage, surface and ground water resources, parks and trails, and arts and cultural heritage. Passage of the Legacy amendment reinforces the state's continuing efforts to conserve the diversity of lands, waters, and fish and wildlife that provide the foundation for Minnesota's high quality of life and also brings strong expectations for a greater level of transparency and accountability in the use of these public funds.

In the interest of greater transparency and accountability, State law (M.L. 2011, First Special Session, Ch. 6) directs restoration evaluations to be conducted on habitat restoration projects completed with funds from the Clean Water Fund (M.S. 114D.50), Outdoor Heritage Fund (M.S. 97A.056), and Parks and Trails Fund (M.S. 85.53). The law directs BWSR and DNR to convene for each of the three funds a restoration evaluation panel (hereafter referred to as the Panel) containing at least five technical experts who will evaluate a sample of up to 10 restoration projects annually. Statute also allows DNR and BWSR to assign a coordinator for the Panel who is responsible for both selecting the projects to be evaluated by the panel and providing reports to the legislature and governing councils on the findings of the panel, determining whether restorations are meeting planned goals, identifying problems with implementation of restorations and, if necessary, providing recommendations on improving restorations.

Restoration is a long term process that requires ongoing monitoring and investment of material, labor and financial support to achieve targeted goals. Evaluating restoration project implementation and progress towards projected goals over multiple years is integral to ensuring desired outcomes. In fulfilling the statutory requirements for restoration evaluations the Agencies hope to facilitate improved outcomes of Legacy Fund restorations through ongoing outcome based assessments.

Restoration Evaluation Process

Process Development

In preparation for fulfillment of the new restoration evaluation requirements, BWSR and DNR leadership initiated an interagency project during 2011, staffed by a project manager and an interdisciplinary team of technical and professional experts, to cooperatively develop recommendations for the formation and implementation of the program, ensuring the effective coordination between the two responsible agencies and consistency in program development. As a result of this project a report was produced in November of 2011 that now serves as the guidance document for program administration, project selection, project evaluation, and reporting on findings (http://www.lsohc.leg.mn/materials/resource_doc_plan/Rest_Eval_Program_Legacy.pdf). In the winter of 2011-2012 the Agencies created a job description for a full time restoration evaluation program coordinator position to be housed in DNR. After an interagency interview and selection process a coordinator was hired at the end of March 2012. In the spring and summer of 2012 the Panel was identified and seated, eligible projects were selected, project information was gathered, appropriate site assessors were identified and site visits were scheduled for the 2012 summer field season.

Roles and Responsibilities

Evaluation Panel

By the law, the Panel is responsible for:

- Evaluating restorations relative to the law, current science, and the stated goals and standards in the restoration plans; and
- Providing findings on the evaluations, determining whether restorations are meeting planned goals, identifying problems with implementation of restorations and, if necessary, providing recommendations on improving restorations.

Statute requires that the Panel includes:

a. one technical representative from the Board of Water and Soil Resources,
b. one technical representative from the Department of Natural Resources,
c. one technical expert from the University of Minnesota or the Minnesota State Colleges and Universities,
d. two representatives with expertise related to the project being evaluated.
e. *may add a technical representative from a unit of federal or local government*

Members of the Restoration Evaluation Panel are unpaid technical experts who were chosen to fulfill the statutorily required agency representation and provide a balance of needed expertise. To the extent practicable Panel members have specific expertise in prairie/grassland, forest, wetland, or aquatic ecosystems and habitat restoration techniques, so that at least one panel member will have proficiency related to any project being evaluated. The panel may seek advice and assistance from others including Site Assessors with additional expertise to help the panel in its work.
Members were selected from a pool of recommendations submitted by agency staff and other partner organizations. Appointed Panel members are asked to serve terms spanning two fiscal years. As statute permits, a sixth member from a federal agency was chosen to provide additional expertise and perspective to the evaluation process. Panel members serving during Fiscal Years 2012 and 2013 are shown below.

Statutorily required member (as listed above)	Panel member:	Affiliation:
a.	Greg Larson	MN Board of Water and Soil Resources
b.	Chris Weir-Koetter	MN DNR Parks and Trails
c.	Sue Galatowitsch	University of Minnesota
d.	Greg Berg	Stearns Co. Soil and Water Conservation District
d.	Greg Hoch	MN DNR Fish and Wildlife
e.	Mark Oja	USDA Natural Resource Conservation Service MN

Program Coordinator

The program coordinator is responsible for coordinating the work of the Panel for the three Funds. By law, the coordinator is responsible for:

- Identifying a sample of up to ten habitat restoration projects completed with funding from the Parks and Trails Fund, Outdoor Heritage Fund, and Clean Water Fund;
- Securing the restoration plans for the projects selected;
- Summarizing the findings of the Panel; and
- Providing reports to the legislature on panel findings.

As recommended by the interagency team that guided the development of the restoration evaluation process, the Agencies worked cooperatively to hire a single coordinator to ensure consistency in program implementation. A proportionate amount of the three Legacy Funds is used to support the coordinator position and a MOU between the Agencies guides cooperative support for this position. The coordinator position is currently housed in DNR's Ecological and Water Resources Division.

Site Assessors

The site assessors are responsible for conducting the site evaluations and providing the results of the assessments, in collaboration with the Program Coordinator, to the Panel for evaluation. Site assessors are selected based on availability and knowledge of restoration applications in the given project habitat type and project location. Site assessors work closely with the coordinator in assessing project materials, conducting site evaluations, and participate in discussion with the Panel to ensure queries are adequately addressed. Services provided by the site assessors are negotiated through the use of contracts, State Interagency Agreements, or work assignments.

Project Managers

Project managers responsible for implementation are expected to actively participate in the restoration evaluation process. Project managers work with the program coordinator to provide the necessary project background information. Project managers are also expected to attend the site evaluations when possible to not only identify project work sites for the site assessors, but to provide important project context, and answer any questions that may arise.

Project manager affiliations vary between Funds and projects. It is vital to acknowledge the diversity of managing organizations and the scope and focus of their practice when evaluating project implementation. Project managers for the three Legacy Fund restoration projects may include, but are not limited to:

- Clean Water Fund Project Managers
  - Soil and Water Conservation District (SWCD) manager or technician,
  - Watershed District staff,
  - Watershed Management Organization (WMO) staff,
  - County Water Resource or Environmental Services staff
  - City Water Resource staff
- Outdoor Heritage Fund Project Managers
  - State agency staff (DNR, BWSR)
  - Federal agency staff (USFWS)
  - County conservation and land management staff
  - Watershed District staff
  - Non-governmental wildlife organizations

- Parks and Trails Fund Project Managers
  - MN DNR Parks and Trails staff
  - Three Rivers Park District (via Met Council appropriation)

Site Assessment Process: Working with Project Managers to Evaluate Outcomes

DNR, BWSR and the Panel developed a process that provides for the evaluation of project effectiveness while keeping the process as simple as possible. A standardized Site Evaluation Form was developed by the Agencies and the Panel to provide essential project information and answer the key evaluation requirements as directed by law. The effectiveness of this form will be improved in future years based on feedback from the Panel, site assessors and project managers.

The project evaluation process strives to include project managers to the extent possible in conducting site visits and communicating lessons learned from project implementation. The Agencies and the Panel believe that facilitating an inclusive evaluation process with project managers will increase the transfer of knowledge between field practitioners and the Agencies and ultimately improve restoration outcomes. An overview of nine project assessments completed in the summer of 2012 is shown in this report. Participants and survey methods are described for each project.

Program Reporting

State law directs DNR and BWSR to "*summarize the findings of the panel and provide a report*" for each of the three funds. This language does not negate the option to convene the same panel and combine the reporting for each of the three funds into one report. This is the option chosen by the Agencies' program development project team and endorsed by the Panel. The combined administrative and reporting structure will allow for a comprehensive and consistent process, while accommodating for the unique attributes and requirements of each individual Fund.

Eighteen project evaluations were completed during the 2012 summer field season. Nine projects are presented in this Fiscal Year 2012 report. Beginning in Fiscal Year 2013, the Agencies plan to submit the combined Legacy Fund Restoration Evaluation report annually by the end of the Fiscal Year to correspond with the reporting schedule for the Lessard-Sams Outdoor Heritage Council.

Site Assessments 2012

Project Selection

Projects selected for evaluation during the summer 2012 field season were chosen as a representative sample of project/habitat types and geographic distribution. The panel chose to only include projects from fiscal year 2010 and 2011 appropriations to help ensure that selected projects have moved forward with on the ground work and to provide for the most establishment time possible. Projects with the following criteria were considered eligible for selection for the 2012 field season:

- Statement of "restoration", "reconstruction", "re-establishment" or ecological "re-creation" in the project description.
- Manipulation of a substantially degraded site with the goal of returning the site's natural/historic ecological structure and/or function (e.g. Conversion of an agricultural field to native prairie vegetation; break tile or plug ditch to flood historic wetland).
- For Outdoor Heritage Fund: projects listed in the "restore" category

The number of projects selected varied between Funds and was in proportion to each Fund's fiscal year 2012 appropriation to restoration evaluation activities. In Fiscal Year 2012, the proportion of funding was 51.2% Clean Water Fund, 25.6% Outdoor Heritage and 23.2% Parks and Trails. The projects described include four from the Clean Water Fund, three from the Outdoor Heritage Fund and two from the Parks and Trails Fund. Project site locations are shown in Figure 1.

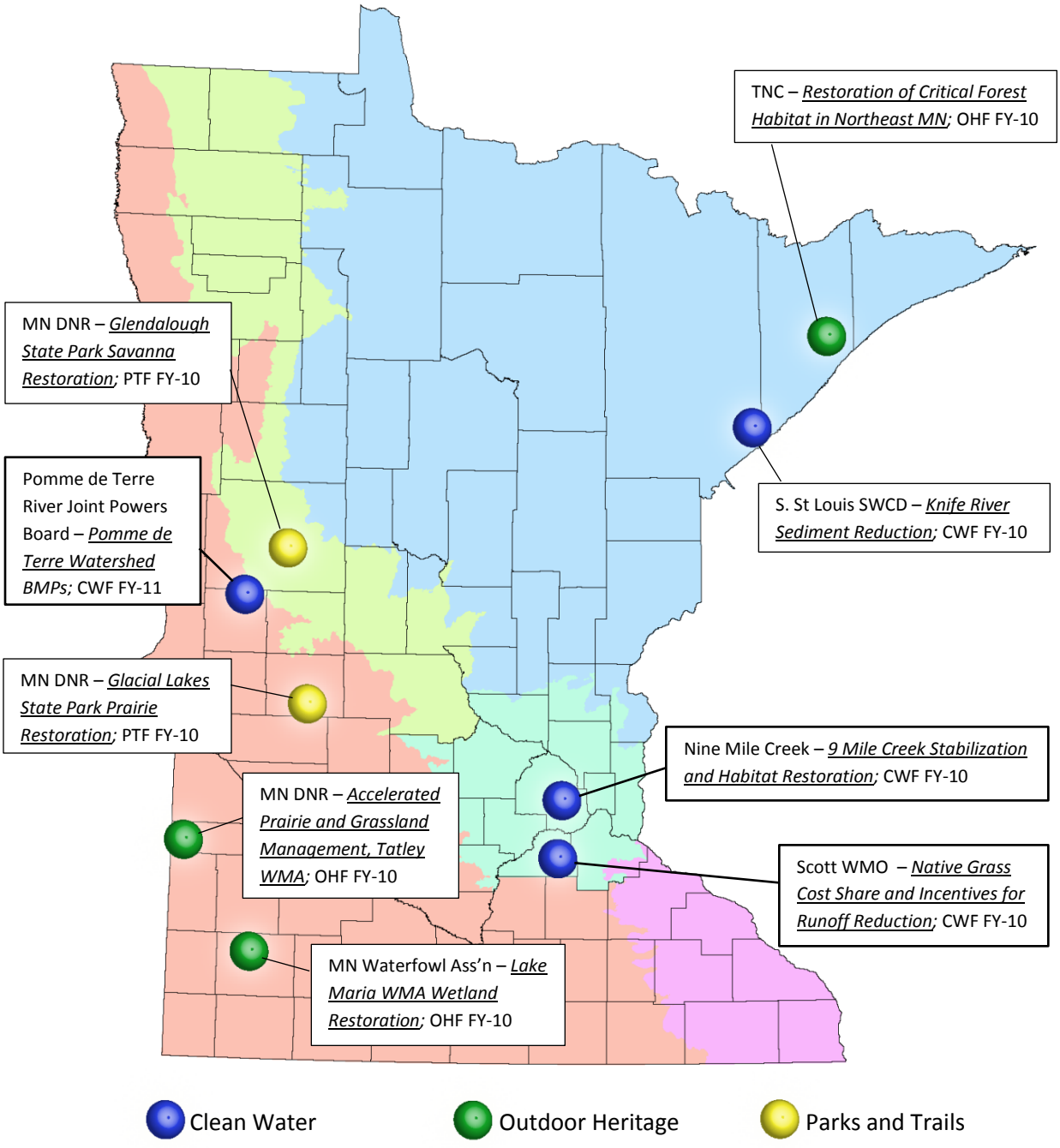


Figure 1. Location of projects featured in FY-2012 report. Background color delineates Outdoor Heritage Fund Planning Sections.

Many projects included several dispersed sites where restoration activities took place. For the purposes of this document, "project" refers to the set of activities that received funding, "site" refers to discrete locations where restoration work has taken place. For projects that included multiple restoration sites, a smaller subsample of sites was evaluated, as it was not logistically feasible to visit all restoration sites for some projects.

Project Evaluation

As directed in statute, projects are evaluated relative to:

> *the law, current science, and the stated goals and standards in the restoration plan*

Laws pertaining to specific funds are addressed in the project evaluation where applicable. Evaluation of current science, stated goals and standards in the restoration plan are described in the site evaluation forms (Appendix I) and summarized in the individual project profiles.
Statute also directs the Panel report to:

> *determine if the restorations are meeting planned goals, any problems with the implementation of restorations , and if necessary, recommendation on improving restorations.*

Trajectory towards planned goals and any problems with implementation are addressed in the Site Evaluation forms and the Panel comments for each project.

Clean Water Fund

The constitutionally directed purpose of the Clean Water Fund is:

> ***to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation***

Consistent with the constitutional purpose, the primary goal of Clean Water Fund restoration projects is to restore water quality. Implementation of these water quality restoration projects is typically directed by a TMDL Study and Implementation Plan that guides the types of projects and locations in the landscape or watershed where restoration activities can support water quality improvement. Restoration sites may engage several habitat types in the landscape including streams, shorelines and various upland land cover types and habitats. In this report, Clean Water restoration projects are evaluated by visual inspection of the structural and/or vegetative components of a selected number of implementation sites within a larger watershed scale water quality project. Assessments are focused on estimated effectiveness, durability and progress towards the stated water quality goals based on conditions at the time of site visit. Observations from these discrete project sites do not represent an evaluation of the overall clean water improvement project. In addition, due to the recentness of the Legacy funds, all of the projects evaluated in this report are in early establishment or still being implemented. Vegetative components may take several years to mature. Assessments from site visits are based on observations of the present and projected conditions of the project site relative to the project goals.

Clean Water Fund Statute 114D.50 Subd. 4. (a) requires:

A project receiving funding from the clean water fund shall include measurable outcomes, as defined in section 3.303, subdivision 10, and a plan for measuring and evaluating the results. A project must be consistent with current science and incorporate state-of-the-art technology.

Clean Water Fund restoration projects featured in this report are funded through the competitive grants programs administered by the Board of Water and Soil Resources. All projects reviewed have complied to date with statutory requirements for presenting measurable outcomes and planning to evaluate results. This information is collected through standard reporting to the Board of Water and Soil Resources.

Discussion of the application of current science and progress towards project goals is addressed for each project site in the Project Evaluation Forms in Appendix I.

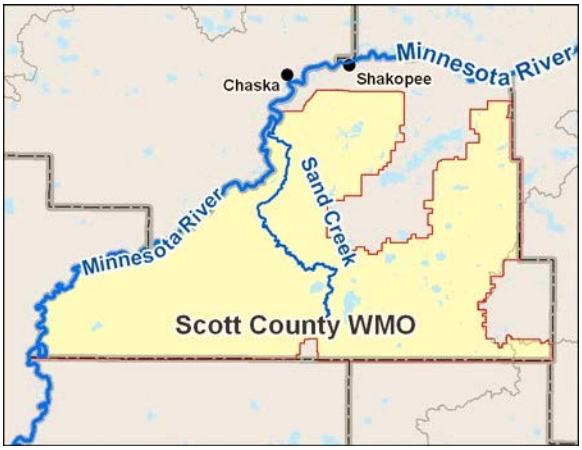
Clean Water Fund, Fiscal Year 2010
Native Grass Cost Share and Incentives for Runoff Reduction

Project Sponsor: Scott Watershed Management Organization
Partners: Scott Soil and Water Conservation District
Grant Period: January 2010 – December 2011
Contact: Paul Nelson, (952) 496-8475, pnelson@co.scott.mn.us

Project Narrative

Sand Creek and some of its tributaries are impaired for fish IBI and turbidity. Studies by the Scott WMO and its partners have linked turbidity to inorganic sediment which in turn has been linked to both field erosion and channel instability. Geomorphic studies by the Scott WMO found that channel stability is related to past hydrologic changes and increases in runoff to which channels are now responding. This project addresses turbidity and sediment by targeting select sub-watersheds for the conversion of row crops to native grasses. This will eliminate field erosion and increase infiltration to moderate stream flows that have accelerated stream bank erosion.

This project promotes the establishment of native grasses as an alternative to row crops to reduce runoff. The project will target a minimum of 75 acres. This practice is particularly popular in the rural residential areas of the county where land owners no longer farm themselves. In addition, a grass product can be harvested and sold to the KODA Electric biomass facility in Scott County. Habitat created will complement the natural area corridors approach included in the County's 2030 Comp Plan.



Board of Water and Soil Resources

Evaluation Summary

This project exceeded expectations of seventy-five acres of cropland converted to native grass with over eighty-four acres converted in partnership with eleven private agricultural landowners. Current best practices were used in site preparation, seeding and maintenance activities. Three of the eleven sites installed were visited in August 2012. Sites observed clearly evidenced fulfillment of the project goals of sediment and runoff reduction through their strategic placement in the landscape, with several sites situated downslope of active row crop fields to intercept agricultural runoff and buffer adjacent woodlands and riparian zones. High interest level, involvement and dedication of participating landowners, as well as commitment of Conservation District staff, point to a high likelihood of achieving successful establishment of native grasses and forbs.

Panel Comments / Recommendations:

- Stated goals were specific, clear and outcome based
- Above average establishment for second year (high percentage of seeded native grass cover)
- Invested, motivated landowners = high expectation of long term success
- For sites with significant existing perennial exotic plant species, ensure thorough site prep

- Projects are situated well in landscape for runoff reduction and nutrient/sediment removal; should consider documenting placement within the catchment / sub-catchment in relation to runoff patterns (e.g. integrate into aerial map overlay)

Three project site evaluation forms are included in Appendix I pgs. 26-34

Clean Water Fund, Fiscal Year 2010
Nine Mile Creek Stabilization and Habitat Restoration

Project Sponsor: Nine Mile Creek Watershed District
Partners: City of Hopkins, Hennepin County
Grant Period: January 2010 – December 2011
Contact: Kevin Bigalke, (952) 835-2078, kbigalke@ninemilecreek.org

Project Narrative:

The Nine Mile Creek watershed is a highly developed, urbanized watershed located in southern Hennepin County. The natural infiltration capacity of soils in the watershed has been diminished by significant coverage with hard surfaces such as streets, parking lots, and buildings. This leads to more rainfall making its way more quickly to Nine Mile Creek.

As a result, Nine Mile Creek has experienced stream bank erosion and in- stream habitat loss due to increases in storm water runoff resulting in the creek to be listed on the State of Minnesota impaired waters list for biotic integrity. This means that the fish and other aquatic organisms expected to be found in a healthy creek are not present to the degree they should be. In addition to the increase in hard surfaces within the watershed, portions of Nine Mile Creek have also been channelized and straightened. This project will realign portions of Nine Mile Creek in its historical channel, restoring its meander pattern and in-stream habitat by utilizing bioengineering techniques.

Board of Water and Soil Resources

Evaluation Summary

The Nine Mile Creek Stabilization and Habitat Restoration project is an exemplar stream re-meander and bioengineering project in a challenging highly urbanized watershed. A suite of innovative natural stream stabilization techniques consistent with current science based practices are being implemented along this stream section adaptive to the limitations of existing infrastructure and right-of-ways. A site visit was conducted in August of 2012 along the one mile of stream channel modified by this project. At the time of the site visit phases of the project were being implemented or were in establishment. Bioengineering practices and in-stream practices are used in combination to achieve erosion and sediment reduction goals. All practices observed were structurally sound, establishing successfully and being monitored and maintained per plan. Given the project site's constraints and urban watershed, the restoration design is successful in creating a channel with improved stability and greater potential aquatic habitat.

Panel Comments / Recommendations:

- Laudable project for beginning to address water quality impairments where possible in a challenging urban conditions
- Project success is subject to highly variable hydrologic conditions resulting from the flashy urban watershed; watershed catchment issues also need to be addressed to achieve the long term restoration goal of addressing the biotic impairment

Project evaluation form is included in Appendix I pgs. 35-37

Clean Water Fund, Fiscal Year 2010
Knife River Sediment Reduction BMP Implementation

Project Sponsor:	South St Louis Soil and Water Conservation District
Partners:	Laurentian RC&D, Knife River Stewardship Committee, Knife River Watershed Landowners, Lake County SWCD, St. Louis County
Grant Period:	January 2010 – December 2011
Contact:	Kate Kubiak, (218) 723-4946, kate.kubiak@southstlouisswcd.org

Project Narrative:

The Knife River is a popular trout fishing river along the North Shore of Lake Superior. In 1998, it was listed as "impaired" by the MPCA for turbidity (being too muddy). In 2010, a Total Maximum Daily Load, or, water clean-up plan was approved. The major recommendations were to address peak flows (fast water running through the stream channel during and after rain storms or snow melt) and eroding clay streambanks contributing sediment to the river. Through this grant, the South St. Louis Soil & Water Conservation District is working with partners to implement strategies that will help restore the water quality of the Knife and get it off the impaired waters list. Over the past year, the district has been meeting with many people to identify locations for projects to reduce peak flows in the river by tree planting, ditch checks, and other stormwater management practices.

Board of Water and Soil Resources

Evaluation Summary

This water quality improvement project applies a multifaceted approach throughout the Knife River Watershed to reduce in-stream sediment. One site installation of this watershed wide project was visited in August 2012. This site stabilized a twenty foot high eroding clay riverbank that was contributing sediment to the Knife River and threatening a private access road and structure. The installation utilized current science in the use of a natural streambank which provides greater flexibility for natural stream channel movement and greater structure for aquatic habitat than “hard armor” rock stabilization techniques. Site installation was completed in the fall of 2011. In June of 2012 the Knife River watershed experienced a 100-500 year flood event. The installed stabilization and integrated woody vegetation withstood flood conditions per plan. This project site clearly contributed to achieving the projects sediment reduction goals and additionally provided improved stream habitat and protected existing structures.

Panel Comments / Recommendations:

- Good use of innovative natural streambank stabilization
- Impressive proof of practice stability to withstand substantial 500 year flooding event in June of 2012, following September 2011 installation
- Regraded slope above bankfull bench was seeded with MN DOT 350 Native General Roadside Mix (forbs and grasses) for slope stabilization; Slope will require establishment of woody root structure to help ensure slope stability given the potential for over bankfull slope erosion.

Project evaluation form is included in Appendix I pgs. 38-39

Clean Water Fund, Fiscal Year 2011
Pomme de Terre River Watershed Best Management Practices

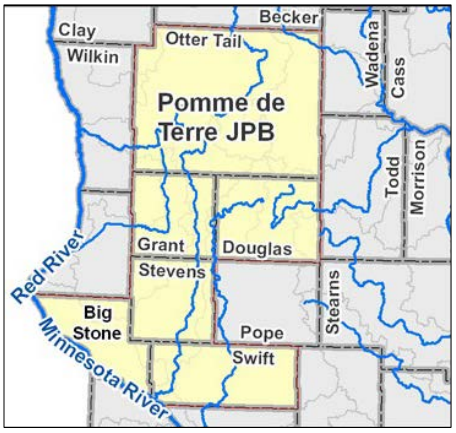
Project Sponsor:	Pomme de Terre River Association Joint Powers Board
Partners:	Bigstone County & SWCD, Swift County & SWCD, Stevens County & SWCD, Grant County & SWCD, Douglas County & SWCD, Otter Tail County and West Otter Tail SWCD
Grant Period:	January 2011 – December 2012
Contact:	Joe Montonye, (218) 685-5395, joe.montonye@mn.nacdnet.net

Project Narrative:

The Pomme de Terre River watershed is located in west central Minnesota and occupies a portion of six counties. For many years surface water quality within the watershed has been a concern to local government, and in 1982 the Counties and SWCDs within the watershed area formed the Pomme de Terre River Association Joint Powers Board to begin addressing this issue. In 2002 the Pomme de Terre River was placed on the Impaired Waters list for turbidity.

The project partners are collaborating to improve surface water quality within the watershed with a grant from the Clean Water Fund. The goal of the project is to promote and assist individual landowners with the installation of practices such as: buffer strips, wetland restoration, rain gardens, shoreland restoration, and water and sediment control basins. Work began on the project in the spring of 2011.

Installing these practices will have a cumulative effect towards reducing the amount of sediment and phosphorus in the water. This project's goal is to reduce sediment into the river by 13,000 tons per year and phosphorus by 13,000 pounds per year.



Board of Water and Soil Resources

Evaluation Summary

This water quality improvement project applies a multifaceted approach throughout the Pomme de Terre River Watershed to reduce sediment and nutrients in surface waters. A variety of buffer strips, wetland restorations, water and sediment control basins and shoreline restorations are being installed under this project. Three discrete private shoreline restoration sites of this watershed scale project were visited in September of 2012. Shoreline restoration projects are somewhat novel in this agricultural landscape and project managers should be commended for taking on varied best management approaches as a part of comprehensive watershed management. These project site applied best practices in site preparation and shoreline stabilization and we're planted in accordance with BWSR Native Vegetation Establishment and Enhancement Guidelines. The conversion of turf grass to perennial native vegetation and improved stabilization of the shoreline supports the project goals of sediment and nutrient reduction in the Pomme de Terre Watershed. Continued investment and maintenance from landowners will support the success of these projects and encourage "by in" from additional shoreland property owners.

Panel Comments / Recommendations:

- Good participation / collaboration of landowners; opportunity for outreach / engagement
- Number of species planted should be moderated by current knowledge of anticipated survivorship and landowner capacity for proper identification

- Continuous adding of mulch to shoreline plantings may serve as a nutrient source through leaching; Moving forward this specification should be modified or removed from water quality planting projects

Three project site evaluation forms are included in Appendix I pgs. 43-45

Outdoor Heritage Fund

The Outdoor Heritage Fund is constitutionally directed to:

> ***restore, protect, and enhance wetlands, prairies, forests, and habitat for fish, game, and wildlife.***

Consistent with the constitutional purpose, the primary goal of Outdoor Heritage Fund restoration projects is to restore specific wildlife habitat types. Implementation of these habitat restoration projects is typically guided by a statewide or national habitat plan that guides the types of projects and locations in the landscape where habitat restoration activities can best support habitat improvement goals. Restoration sites may engage several habitat types including shorelines, streams, wetlands, grasslands and forests. In this report Outdoor Heritage restoration projects are evaluated by visual inspection of the structural and/or vegetative components of a selected number of implementation sites typically within a larger scale habitat project. Assessments are focused on estimated effectiveness, durability and progress towards the stated habitat goals based on conditions at the time of the site visit. Observations from these discrete project sites do not represent an evaluation of the overall habitat project. In addition, due to the recentness of the Legacy funds, all of the projects evaluated in this report are in early establishment or still being implemented. Vegetative components may take several years or even decades to mature. Assessments from site visits are based on observations of the present and projected conditions of the project site relative to the project goals.

Outdoor Heritage Fund restoration projects included in this report were implemented with fiscal year 2010 and 2011 appropriations and are subject to M.L 2009, Chapter 172, Article 1, Section 2. Subd. 10. Project Requirements https://www.revisor.mn.gov/laws/?id=172&doctype=Chapter&year=2009&type=0 and M.L 2010, Chapter 361, Article 1, Section 2. Subd. 9. Project Requirements https://www.revisor.mn.gov/laws/?id=361&doctype=Chapter&year=2010&type=0 These laws direct all projects to plant vegetation and sow seed of ecotypes native to Minnesota to the extent possible and restoration projects to provide an ecological restoration and management plan. Applicable information pertaining to these laws is noted in the individual project evaluations forms in Appendix I. Restoration and management plans for each Outdoor Heritage project are presented in Appendix II.

Discussion of the application of current science and progress towards project goals is addressed for each project site in the Project Evaluation Forms in Appendix I.

Outdoor Heritage Fund, Conservation Partners Grant, Fiscal Year 2010
Restoration of Critical Forest Habitat in Northeast MN

Project Sponsor: The Nature Conservancy
Partners: Manitou Collaborative, Sand Lake – Seven Beavers Collaborative
Grant Period: 2010 – June 2012
Contact: Doug Thompson, (218) 727-6119, dthompson@tnc.org

Project Narrative:

This project will address two of the most practical, widely accepted, and urgent needs related to forest habitat restoration in Northeast Minnesota: conifer restoration and improvement in forest productivity. Restoration of commercially and ecologically important long lived conifer species and reforestation of under stocked stands will be implemented on state and county forestland in Northeast Minnesota. The project will provide continued funding for current forest restoration projects initiated by the Manitou and Sand Lake Seven Beavers Collaboratives and fund new projects planned by these multi landowner land management partnerships

Evaluation Summary

This project applies current science based practices in conifer forest habitat regeneration across a large landscape in Northeast Minnesota. Forest management prescriptions were developed collaboratively between forestry, ecological, and wildlife experts participating in the Manitou and Sand Lake Seven Beavers Collaboratives to implement treatments which resemble the natural succession of northern mixed mesic forests. Site prep and timber harvests adhered closely to best management practices described in the Minnesota Site-level Forest Management Guidelines, and planted/seeded tree species selection are appropriate to each site according to the MN DNR's Tree Suitability Index. Three conifer regeneration sites were visited in August of 2012. All sites displayed adequate stocking, browse protection and positive trajectory towards the overall project goals. Long term commitment by multi-landowner land management collaboratives indicate future success.

Panel Comments / Recommendations:

- Clearly stated quantitative objectives
- Numbers of seedling survival / mortality needs to be monitored to track effectiveness
- Long term monitoring will be necessary to gauge successful trajectory

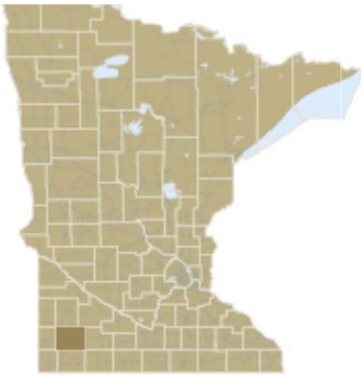
Project evaluation form is included in Appendix I pgs. 46-49
Restoration and management plan is included in Appendix II pgs. 59-60

Outdoor Heritage Fund, Conservation Partners Grant, Fiscal Year 2010
Lake Maria WMA Wetland Restoration

Project Sponsor: MN Waterfowl Association
Partners: MN DNR Fish and Wildlife, Slayton Area
Grant Period: 2010 – June 2012
Contact: Brad Nylin, (952) 767-0320, brad.nylin@mnwaterfowl.com

Project Description

The recently acquired Lake Maria Wildlife Management Area has hydric Type II wetland Soils interspersed throughout the tract and include existing 7 acre basin, restorable wetlands of 25 acres, 8 acres 7 smaller wetlands of 3 acres. This project is a 20-30 acre basin that has a drainage area of approximately 380 acres. This will restore an existing wetland and continue to enhance the Lake Maria WMA as a key component in water quality and clarity to the multitude of lakes and wetlands surrounding it. The benefit will be in restoring a Basin back to it original purpose, both migratory and song bird will benefit as well a multitude of other species.



Evaluation Summary

This project restores permanent wetland conditions to historic hydric soils with the goal of improved migratory bird habitat. Dike construction and hydric soil re-watering is consistent with accepted wetland habitat restoration practices. The project site was visited in August of 2012. Waterfowl were observed utilizing the wetland for forage during the visit. This wetland restoration project provides multiple benefits including added value to surrounding restored prairie and aquatic habitats, water quality enhancement to lakes and wetlands downgradient and protection of a township road from previously disruptive high flows. Project appears to be on a trajectory to meet the habitat goals stated in the project narrative and incorporates well into the existing Lake Maria WMA complex.

Panel Comments / Recommendations:

- Need clearer explanation of long term maintenance and how current science is utilized in planning and implementation: Project description would benefit from short written restoration plan to describe outcome based project goals and implementation timeline. Examples or templates of concise restoration plans should be developed by BWSR and DNR and provided to project sponsors. This would promote consistency of responses and minimize additional workload of project sponsors.
- Vegetation management (especially on berm) should be closely monitored to ensure seeding success and guide invasives control

Project evaluation form is included in Appendix I pgs. 50-51
Restoration and management plan is included in Appendix II pg. 61

Outdoor Heritage Fund, Fiscal Year 2010
2(a) Accelerated Prairie and Grassland Management: Tatley WMA

Project Sponsor: MN DNR, Division of Fish and Wildlife

Grant Period: 2010 – June 2012
Contact: Bill Schuna, Assistant area Wildlife Manager (507) 537-6464, bill.schuna@state.mn.us

FY2010 Appropriation Language

$1,700,000 in fiscal year 2010 is to the commissioner of natural resources to accelerate the restoration and enhancement of native prairie vegetation on public lands, including roadsides. A list of proposed projects, describing the types and locations of restorations and enhancements, must be provided as part of the required accomplishment plan. To the extent possible, prairie restorations conducted with money appropriated in this section must plant vegetation or sow seed only of ecotypes native to Minnesota, and preferably of the local ecotype, using a high diversity of species originating from as close to the restoration site as possible, and protect existing native prairies from genetic contamination.

Evaluation Summary

The Tatley WMA grassland restoration site is just one of tens of prairie grassland habitat restorations completed by Minnesota DNR under this appropriation. The site was assessed by walkthrough survey in September of 2012. Site preparation and seeding occurred during 2011. Site preparation, seeding protocols and maintenance plans are all consistent with accepted best practices for grassland reconstruction. The prairie seeding has developed well and includes a good diversity of plants with minimal invasive/nonnative cover. The Tatley WMA site clearly achieves the project goals of providing improved upland gamebird grassland habitat.

Panel Comments / Recommendations:

- Clear Goals: "provide quality nesting cover for upland birds and waterfowl as well improved upland game bird hunting opportunities"
- Good use of funds to supplement existing grasslands in Agricultural matrix

Project evaluation form is included in Appendix I pgs. 52-53
Restoration and management plan is included in Appendix II pg. 62

Parks and Trails Fund

The Parks and Trails Fund is constitutionally directed to:

> ***support parks and trails of regional or statewide significance.***

The primary goal of Parks and Trails Fund restoration projects is ecological restoration of specific habitat types within natural areas of State and Regional parks. Implementation of these restoration projects is guided by State or Regional Park natural area management plans that guide the types of projects and locations in the landscape where restoration activities can best support specific habitat improvement goals. Restoration sites may engage several habitat types including shorelines, streams, wetlands, grasslands and forests. In this report Parks and Trails restoration projects are evaluated by visual inspection of the structural and/or vegetative components of a selected number of implementation sites. Assessments are focused on estimated effectiveness, durability and progress towards the stated restoration goals based on conditions at the time of the site visit. Observations from these discrete project sites do not represent an evaluation of the overall ecological restoration project. In addition, due to the recentness of the Legacy funds, all of the projects evaluated in this report are in early establishment or still being implemented. Vegetative components may take several years or even decades to mature. Assessments from site visits are based on observations of the present and projected conditions of the project site relative to the project goals.

Parks and Trails Fund Statute 85.53 Subd. 2 requires:

> *A project or program receiving funding from the parks and trails fund must include measurable outcomes, as defined in section 3.303, subdivision 10, and a plan for measuring and evaluating the results. A project or program must be consistent with current science*

Parks and Trails Fund projects featured in this report were funded under the *Landscape Reconstruction on DNR Parks Lands* program. This program complied with statutory requirements for presenting measurable outcomes and planning to evaluate results. This information is available on the web at: http://legacy.leg.mn/projects/landscape-reconstruction-division-parks-and-trails-lands

Project evaluations of Glendalough State Park and Glacial Lakes State Park are presented. Discussion of the application of current science and progress towards project goals is addressed for each project site in the Project Evaluation Forms in Appendix I.

Parks and Trails Fund, Fiscal Year 2010
Landscape Reconstruction on DNR Parks Lands:
Glendalough State Park, Sunset Lake Savanna

Project Sponsor: MN DNR, Parks and Trails

Grant Period: 2010 – June 2012
Contact: Cindy Lueth, MN DNR (218) 308-2655, cindy.a.lueth@state.mn.us

Program Description

This program is to restore acres of state parks and trails land to native plant communities. MS 86A.05 directs PAT to preserve, perpetuate and restore natural features in state parks that were present in the area of the park at the time of European settlement.
Restoration of native plant communities is a multi-year process with prairies requiring about a 5 year period and forested sites about 10 years before they are considered established. In cases like prairies or fire-dependent forests, there is a need to insure periodic prescribed burns are conducted to maintain the restoration. Spot treatment of invasives is also needed to insure the restoration doesn't become degraded.

Evaluation Summary

The Glenadalough State Park Sunset Lake Savanna restoration site is just one of tens of ecological restorations completed through the Parks and Trails Fund appropriation for Landscape Reconstruction on DNR Parks Lands. Goals of this project site are to restore old field and overgrown oak woodland to prairie and oak savanna respectively. A walkthrough site assessment was conducted in September of 2012. Site preparation, seeding and maintenance activities are consistent with current science based practices for ecological restorations in these habitat types. This well implemented restoration site is meeting intended goals of restoring oak savanna and prairie communities through control of invasive nonnative vegetation and reintroduction of native savanna and prairie species characteristic of this geographic area and specific location.

Panel Comments / Recommendations:

- Good documentation of site background / context information
- When possible project components supported by Parks and Trails Fund should be delineated within ongoing projects

Project evaluation form is included in Appendix I pgs. 54-55

Parks and Trails Fund, Fiscal Year 2010
Landscape Reconstruction on DNR Parks Lands:
Glacial Lakes State Park, STS Prairie and Trucker Prairie East restorations

Project Sponsor: MN DNR, Parks and Trails

Grant Period: 2010 – June 2012
Contact: Cindy Lueth, MN DNR (218) 308-2655, cindy.a.lueth@state.mn.us

Program Description

This program is to restore acres of state parks and trails land to native plant communities. MS 86A.05 directs PAT to preserve, perpetuate and restore natural features in state parks that were present in the area of the park at the time of European settlement.
Restoration of native plant communities is a multi-year process with prairies requiring about a 5 year period and forested sites about 10 years before they are considered established. In cases like prairies or fire-dependent forests, there is a need to insure periodic prescribed burns are conducted to maintain the restoration. Spot treatment of invasives is also needed to insure the restoration doesn't become degraded.

Evaluation Summary

The Glacial Lakes State Park prairie restoration sites are just two of the tens of ecological restorations completed through the Parks and Trails Fund appropriation for Landscape Reconstruction on DNR Parks Lands. The two project sites evaluated are STS Prairie and Trucker East Prairie. The project goal for the STS Prairie site is to restore native prairie vegetation on a semi wooded site with patchy native prairie remnants. The STS site has received woody invasives removal and seeding of local ecotype prairie seed. The goal Trucker East Prairie is to enrich existing grassland. This is being achieved through treatment of invasive, nonnative cool season grasses with herbicide and conduct supplemtal native prairie species overseeding. Project documentation included thorough background context information. A walkthrough site assessment was conducted in September of 2012. Site preparation, seeding and maintenance activities are consistent with current science based practices for ecological restorations in these habitat types. These well implemented prairie restoration sites meet stated goals for the funded project phases.

Panel Comments / Recommendations

- Good documentation of site background / context information
- When possible project components supported by Parks and Trails Fund should be delineated in ongoing projects

Project evaluation form is included in Appendix I pgs. 56-57

Summary of Findings

Statute for restoration evaluations directs the Panel to, if necessary, make:

recommendations on improving restorations.

The emphasis of the report is also directed in statute.

The report shall be focused on improving future restorations.

Panel Recommendations – Improving Future Restorations

Overall, the Panel found that projects are on trajectories that have the potential to meet planned project goals. However, the Panel is making recommendations directed at supporting essential components of effective restoration implementation and improving the restoration evaluation process. Through the evaluation process the Panel identified the following three needs that should be addressed to improve future restorations.

Need: Consistent documentation of essential planning and implementation data

The Panel believes that consistent documentation is a prerequisite to evaluating project success and effectively communicating lessons learned from restoration projects. While many Legacy Fund restoration projects included thorough documentation, the Panel noted gaps in achieving a consistent level of documentation across all funds. The Panel recommends that the following data should be presented in a simple format that will allow funding organizations and future managers to understand the essential project dynamics:

- Project goals or objectives: The project should have clearly defined outcome based goals and objectives, against which project success can be measured
- Project location and setting: A description of the project location should include, at a minimum, the county, township, range, and section where the project is located. A detailed site map with defined project boundaries or similar information (e.g., legal description, aerial photos) should also be included.
- Existing site conditions: Documentation of the existing site conditions is critical to both the development of a restoration plan and assessment of the effectiveness of restoration actions. Documentation of existing site conditions may include some or all of the following:
    - Description of site characteristics (topography, soils, hydrology, land cover, wildlife, special elements)
    - Quantitative baseline data, if available (such as plant species present and abundance, stream channel profile, water quality data)
    - Description of surrounding landscape conditions and land use
- Restoration work plan: The project should have a description of actions and an implementation schedule.
- Long-term management plan: If available, a description of the long-term management plan, including strategies for monitoring and maintenance of the restoration site, should be included.

A template and example project data for this information is anticipated to be included in the Fiscal Year 2013 Restoration Evaluation report. This template is envisioned to help rectify the inconsistencies currently identified by the Panel.

Need: Statewide restoration training

The Panel believes that a critical component of improving future restoration outcomes is compiling and disseminating current science based restoration practices to the community of practitioners throughout the State. Collecting and disseminating exemplar challenges and successes from the field will be an integral part of building this training.

Venues such as the Ecological Restoration Training Cooperative established in 2011 by DNR, BWSR, MN Department of Transportation and the University of Minnesota may help to provide a framework for such training components (http://cce.umn.edu/Restoring-Minnesota/index.html). Trainings such as the annual BWSR Academy may also provide opportunities for training in restoration techniques as well as provide information to project managers about the restoration evaluation process (http://www.bwsr.state.mn.us/academy/).

Need: Evaluation process improvement

The Panel also identified the need for strategic improvements in the restoration evaluation process to more effectively accomplish statutory goals and contribute to improvement of restoration outcomes. One identified process improvement is to select a subset of evaluated projects for follow up site evaluations in future years to track critical aspects of project effectiveness.

Restoration is a long term process that requires ongoing monitoring and investment of material, labor and financial support to achieve targeted goals. Following restoration project implementation and trajectory over multiple years is integral to ensuring desired outcomes. Projects selected for follow up assessments will be determined by the Panel based on challenging circumstances of the project or other unique temporal attributes of the implementation that make a single site visit inadequate for evaluation. The number of projects selected for follow up site visits would be determined by annual capacity of the restoration evaluation program.

Appendix I: Project Site Evaluation

Clean Water Fund - Scott WMO Native Grass: Whipps site pg. 1

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Native Grass Cost Share and Incentives For Runoff Reduction (Whipps Property)
Date of Review: 9 August 2012

Project Location: County Scott Township/Range/Section: Township 114 N Range 23 W Section 32

Project Manager / Affiliated organization, Contact: Paul Nelson/Natural Resources Program Manager/Scott WMO

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☒ Wetland ☐ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration Convert 15.9 acres of cropland to native grasses ; reduce runoff. Create habitat.

Quantifiable objectives of the restoration: Establish permanent vegetative cover which will result in reductions in sediment and phosphorus runoff (expect reduction in 14.31 tons sediment/yr, 14.31 lbs total phosphorus/yr, and 4.7 acre feet /yr of runoff. (10 year practice)

What plans / record of project decisions / prescription worksheets are available? Where are they located?
File stored at SWCD office with conservation plan, seeding plan, operations and management plan, and communications record.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Carol Strojny, Dan Shaw,Greg Larson, BWSR; Wade Johnson, MN DNR - Project managers: Ryan Holzer - Property owners: Mr. Whipps

5. Site description (by reviewer): Multiple fields, total of 15.9 acres (10 acres converted from row crop and 5.9 acres converted from hay); seeded in 2011. Adjacent to ravine areas of Sand Creek watershed. Rural landscape of woodland, annual crop, pasture,and residential areas.
   Soils: Loamy soils
   Topography: Gently rolling; property adjacent to ravines and waterways

Hydrology: Over 90% of area reviewed was upland; county average precipitation (reported) for May and June wetter than normal, July was dry.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Dominant species varied by field parcel. For fields converted from row cropping, observed adequate native cover (60-75% native grasses, mostly cool season; 5-15% native forbs) and spacing (native stems every 2-3 ft). Non-native and weed cover (estimated 10%) included ragweed, prickly lettuce,dandelions,clovers, and alfalfa. Invasive plant cover was low overall (<2% bull thistle, Canada thistle, perennial sow thistle, wild parsnip - single stem observed). Where seed was installed into fields that were previously hayed, a lower percent cover of natives was observed (5-15%). High cover of annual weeds, clovers, and pasture grasses (including reed canarygrass, quackgrass, and brome) were observed in these fields. Implementation and management are still in progress.
Surrounding conditions (adjacent land use / veg.): Residential, agriculture (annual crop, pasture), woodland, waterways.

6. Survey methods used (include deliverable format, # of pgs.): Visual assessment by meandered transects through fields.

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Plan includes techniqes to establish clean seed bed and to establish a diverse, permanent cover of grasses and forbs.

8. List indicators of project outcomes at this project stage: Percent cover and spacing of native species; success of control of weedy and invasive vegetation; vegetative cover.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain. Vegetation establishment is sufficien to to adequately meet goals of sediment and phosphorus reductions.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☒ No ☐
If yes, explain. Continue efforts to establish native perennial cover in the fields that were previously hayed.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain. SWCD staff are working closely with the landowner to ensure proper management of the project.

13. Are follow-up assessments needed? Yes ☒ No ☐ Explain. The vegetative community typically shifts towards a higher dominance of native warm season grasses towards the 3rd or 4th growing season. We reviewed parcels in their 1st full growing season (seeded in 2011). Therefore a follow-up assessment during a later phase in establishment would be beneficial to determine success.

14. Additional comments on the restoration project. There was no evidence of soil erosion, and the majority of areas are progressing as planned (as expected for the first few growing seasons). Landowner should continue monitoring the site for wild parsnip, removing plants as they are found.

PROJECT EVALUATION

The project will:
a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☐
c. Meet proposed outcomes ☒

Confidence of outcome determination
1. Low ☐
2. Medium ☒
3. High ☐

2

Clean Water Fund - Scott WMO Native Grass: Whipps site page 3

d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Provide an explanation of the reason(s) for the determination. A medium confidence level is selected because the project is overall on target for success. Because the project is in the early stages of establishment, predicting which way establishment will proceed is difficult. The high interest levels, involvement and dedication of landowners as well as commitment by the district staff improve the liklihood of achieving successful establishment.

Because perennial cover is becoming well established on this site, the project should meet proposed outcomes for runoff reductions as calculated by the district.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Carol Strojny

3

Clean Water Fund - Scott WMO Native Grass: Sitcha site page 1

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Native Grass Cost Share and Incentives For Runoff Reduction (Sitcha Property)
Date of Review: 9 August 2012

Project Location: County Scott Township/Range/Section: Township 113N Range 22W Section 31

Project Manager / Affiliated organization, Contact: Paul Nelson/Natural Resources Program Manager/Scott Co.

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☒ Wetland ☐ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration Convert 2 acres of cropland to native grasses ; reduce runoff. Create habitat.

Quantifiable objectives of the restoration: Establish permanent vegetative cover which will result in reductions in sediment and phosphorus runoff (expect reduction of 7.4 tons sediment/yr, 7.4 lbs total phosphorus/yr, and 0.93 acre feet /yr of runoff. (10 year practice)

What plans / record of project decisions / prescription worksheets are available? Where are they located?
File stored at SWCD office with conservation plan, seeding plan, operations and management plan, and communications record.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☒ No ☐
If yes, why and how? Some additional species planted from what was originally planned.

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Carol Strojny, Dan Shaw,Greg Larson, BWSR; Wade Johnson, MN DNR - Project managers: Ryan Holzer - Property owners: Sticha, not present.

5. Site description (by reviewer): Single 2 acre field, formerly in soybeans, ajacent to a woodland, steep slope leading to ditched wetland adjacent to waterway. Row crop field upslope. Seeded in 2010 and 2011.
   Soils: Loamy soils
   Topography: Gently rolling; property adjacent to ravines and waterways
   Hydrology: 100% of area reviewed was upland; county average precipitation (reported) for May and June wetter than normal, July was dry.

1

Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Observed adequate native spacing (native stems every 2-3 ft). Cool season native grasses (wild ryes) had about about 30% cover. Planted forb cover was about 15% (common plants: purple coneflower, black-eyed susan, coneflower, coryopsis, goldenrods, asters). Agricultural weeds had 40-60% cover(ragweeds, horseweed, white clover, dandelion, fleabane, burdock, foxtail - the latter with 15% cover). Invasive plant cover was low overall (<1% Canada thistle).
Surrounding conditions (adjacent land use / veg.): Residential, agriculture (annual crop, pasture), woodland, waterways.

6. Survey methods used (include deliverable format, # of pgs.): Visual assessment by meandered transects through fields.

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Plan includes techniqes to establish clean seed bed and to establish permanent cover of native grasses and forbs.

8. List indicators of project outcomes at this project stage: Percent cover and spacing of native species; success of control of weedy and invasive vegetation; vegetative cover.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain. Native species were establishing at a sufficient density (every 2-3 feet) to accomplish goals of sediment and phosphorus reductions.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☒ No ☐
If yes, explain. Some species in seed mix are not meeting native vegetative guidance regarding source material (e.g. non-native seed sourced from California and Oregon).

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain.

13. Are follow-up assessments needed? Yes ☒ No ☐ Explain. The vegetative community typically shifts towards a higher dominance of native warm season grasses towards the 3rd or 4th growing season. This site was seeded in 2010 and 2011. Therefore a follow-up assessment during a later phase in establishment would be beneficial to determine success.

14. Additional comments on the restoration project. There was no evidence of soil erosion, and the majority of areas are progressing as planned (as expected for the first few growing seasons).

PROJECT EVALUATION

The project will:
- a. Likely not meet proposed outcomes ☐
- b. Minimally meet proposed outcomes ☐
- c. Meet proposed outcomes ☒
- d. Likely exceed proposed outcomes ☐
- e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
- 1. Low ☐
- 2. Medium ☒
- 3. High ☐

2

Clean Water Fund - Scott WMO Native Grass: Sitcha site page 3

Provide an explanation of the reason(s) for the determination. A medium confidence level is selected because the project is overall on target for success. Because the project is in the early stages of establishment, predicting which way establishment will proceed is difficult. The high interest levels, involvement and dedication of landowners as well as commitment by the district staff improve the liklihood of achieving successful establishment. Because perennial cover is becoming well established on this site, the project should meet proposed outcomes for runoff reductions as calculated by the district.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Carol Strojny

3

Clean Water Fund - Scott WMO Native Grass: Erickson site page 1

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Native Grass Cost Share and Incentives For Runoff Reduction, Erickson
Date of Review: 9 August 2012

Project Location: County Scott Township/Range/Section: Township 113N Range 22W Section 36

Project Manager / Affiliated organization, Contact: Paul Nelson/Natural Resources Program Manager/Scott WMO

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☒ Wetland ☐ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration Convert 6.9 acres of cropland to native grasses ; reduce runoff. Create habitat.

Quantifiable objectives of the restoration Establish permanent vegetative cover which will result in reductions in sediment and phosphorus runoff (expect reduction in 29.67 tons sediment/yr, 29.67 lbs total phosphorus/yr, and 3.22 acre feet /yr of runoff. (10 year practice)

What plans / record of project decisions / prescription worksheets are available? Where are they located?
File stored at SWCD office with conservation plan, seeding plan, operations and management plan, and communications record.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: BWSR: Carol Strojny, Dan Shaw, Greg Larson; MN DNR: Wade Johnson - Project managers: Ryan Holzer - Property owners: Erickson, not present

5. Site description (by reviewer): Two fields, formerly in row-crops, ajacent to a woodland and row crop field. Woodland buffers ravines and waterway. Seeded in 2011.
   Soils: Loamy soils
   Topography: Gently rolling; property adjacent to ravines and waterways
   Hydrology: Over 95% of area reviewed was upland; county average precipitation (reported) for May and June wetter than normal, July was dry.

1

Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Approximately 60-70% cover in native vegetation (native cool season grasses 40%, native forbs 15%, warm season grasses 5-10% cover). Observed adequate native spacing (native stems every 2-3 ft). Non-aggressive agricultural weeds had about 30% cover (ragweeds, horseweed, curly dock, wooly cupgrass, alfalfa, fleabane). Invasive plant cover was low overall (<1% bull thistle and hoary allysum). A small low spot in the field had reed canarygrass cover. Implementation and management are still in progress.
Surrounding conditions (adjacent land use / veg.): Residential, agriculture (annual crop, pasture), woodland, waterways.

6. Survey methods used (include deliverable format, # of pgs.): Visual assessment by meandered transects through fields.

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Plan includes techniqes to establish clean seed bed and to establish a diverse, permanent cover of grasses and forbs.

8. List indicators of project outcomes at this project stage: Percent cover and spacing of native species; success of control of weedy and invasive vegetation; vegetative cover.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain. Native vegetation is establishing at a density (every 2-3 feet) to adequately meet goals of sediment and phosphorus reductions.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain.

13. Are follow-up assessments needed? Yes ☒ No ☐ Explain. The vegetative community typically shifts towards a higher dominance of native warm season grasses towards the 3rd or 4th growing season. This site was seeded in 2011. Therefore a follow-up assessment during a later phase in establishment would be beneficial to determine success.

14. Additional comments on the restoration project. There was no evidence of soil erosion, and the site is progressing as planned (as expected for the first few growing seasons).

PROJECT EVALUATION

The project will:
- a. Likely not meet proposed outcomes ☐
- b. Minimally meet proposed outcomes ☐
- c. Meet proposed outcomes ☒
- d. Likely exceed proposed outcomes ☐
- e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
- 1. Low ☐
- 2. Medium ☐
- 3. High ☒

Provide an explanation of the reason(s) for the determination. A high confidence level is selected because the project is on target for success. During our assessment, we observed 9 of the 11 forbs planted and all six of the

Clean Water Fund - Scott WMO Native Grass: Erickson site page 3

native grasses seeded. The high interest levels, involvement and dedication of landowners as well as commitment by the district staff improve the liklihood of achieving successful establishment.

Because perennial cover is already well-established on this site, the project should meet proposed outcomes for runoff reductions as calculated by the district.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Carol Strojny

3

Clean Water Fund - Nine Mile Creek

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Nine Mile Creek Date of Review: 8-15-12

Project Location: County: Hennepin Township/Range/Section: 117/22/25

Project Manager / Affiliated organization, Contact: Kevin Bigalke

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 11

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☐ Forest ☐ Aquatic ☒

1. Goal(s) of the restoration: Address channel instability and sedimentation to address aquatic life impairment.

Quantifiable objectives of the restoration: Bedload and turbidity measurements to monitor reductions in sediment, invertebrate and fish IBI scores to track improvements in biotic community.

What plans / record of project decisions / prescription worksheets are available? Where are they located? Engineering plans for project construction, Clean Water Fund project description provided by Nine Mile Creek Watershed District and Barr Engineering (project designer).

2. Is habitat restoration a primary or secondary objective of the project? Primary ☒ Secondary ☐

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

5. Site description (by reviewer): Urban setting. Road right-of-way along a significant reach of project area, with city park or open space in all other areas. Road and bike/walking path created constraints on project footprint. Lower portion of project flows through type2 wetland (degraded by dominant reed canary and hybrid cattail). Pre-project stream channel was almost straight (likely due to past channelization) and was actively eroding into road right-of-way. Channel had previously been diverted to flow through a pond near the downstream end of the project. This lead to rapid filling of the pond with sediment, reducing its effectiveness at treating stormwater runoff from contributing areas.

Soils: Houghton, a poorly drained muck that is high in organic content.
Topography: Low-gradient area, espeicially in downstream reach of the project.

Hydrology: Stream flow is flashy due to prevalenceof impervious surfaces in watershed, and lack of rate and volume controls for stormwater runoff. Riparian vegetation in upstream reach through park land will experience periodic inundation, interspersed with mesic conditions during dry periods. Soils in downstream reach in type 2 wetland will be consistently saturated, with periodic inudation.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Riparian area in upstream area is a mixture of reed canary grass, giant ragweed, and willow. Planted vegetation is in early phase of establishment, so it is not expected that those species will be evident. Willow and dogwood stakes are sprouting in places, but survival appears to be 50% or less. Weed control maintenance was being performed during our site visit. Downstream new channel reach flows through reed canary/hybrid cattail meadow.
Surrounding conditions (adjacent land use / veg.): Upstream reach is parkland with mowed turf grass. Downstream reach is reed canary/hybrid cattail meadow.

6. Survey methods used (include deliverable format, # of pgs.): Project plans were reviewed prior to site visit. Site visit included a walk of the project reach, visual assessment of project stability (banks, channel bed), and observation of riparian vegetation community.

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Channel design utilized HEC-RAS and XP-SWIM modeling of flows. New channel was designed to accommodate bankful discharge, with higher flows dispersed across the flood plain. No explicit modeling of sediment transport. At a minumum, channel design should consider the competency of the channel to transport sediment to reduce the potential for channel agradation or degradation. The site may have limited sediment inputs due to urban infractructure, which could affect project success. Stabilizing banks to reduce erosion in a sediment-starved system may lead to channel degradation. This risk is reduced by the presence of grade control structures (cross-vanes) that will prevent or limit downcutting.

8. List indicators of project outcomes at this project stage: Due to the early establishement/imcomplete status of the project, no quanitative measures of project success on achieveing ultimate goals for sediment reduction and aquatic life improvements. Channel cross sections and profile of project areas currently receiving flow appear to be functioning as design, increasing channel stability and improving habitat. Vegetation establishment is ongoing and success is yet to be determined. Weed control maintenance is being done to aid in establishment of plantings.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain. Project design is appropriate to accommodate the flow and sediment that must be transported through the project reach based on modeling. Construction phasing to allow for vegetation eastablishement in new channel reaches, and toe protection in areas where flow was maintained throughout the project, will increase initial stability of the chanel. The more appropriate channel dimensions, pattern, and profile created, as well as improved riparian vegetation, should increase channel stability, and improve habitat for aquatic life.

There are some limitations of the project that may prevent full achievement of project goals. Aquatic life impairments are likely not caused solely by local habitat degradation. Instead, watershed-scale impacts from untreated stormwater runoff from an urbanized area created a flashy hydrograph that is not desirable for sensitive aquatic biota. In addition, urban runoff can have elevated levels of pollutants that impair aquatic life. This project will not address those stressors on the aquatic community. Instead, continued work will be needed to improve stormwater management in the watershed through retrofits and redevelopment opportunities that will reduce runoff volumes and pollutant levels, and control the rate of stormwater runoff.

Establishment of permanent native vegetation will be challenging at this location. There is an established seed bank of invasive plants, and abundant source populations of those species upstream. Only through continued maintenance of invasives will the riparian community likley sustain predominantly native species. It is possible that more resilient species such as willow sp. and dogwood sp. will be able to be self sustaining.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒

2

If yes, explain. As mentioned above, I do not feel that changes are needed to the channel modifications that comprise this project. However, to meet improvements in the aquatic life of Nine Mile Creek, continued work will be needed to address watershed impacts on stream flow and pollutant levels. This work will be difficult given the fully-developed status of the watershed.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain. Long-term management of riparian vegetation for shrub species such as willow and dogwood will likely have the best chance of long term success in meeting goals for improved bank stability. Control of invasive species such as reed canary grass will be needed annually until a shift away from a grassland habitat type occurs.

13. Are follow-up assessments needed? Yes ☒ No ☐ If yes, explain. New channel sections have not been connected to flow at the time of the assessment. Permanent vegetation has not become established in any of the project reaches. Evaluation in 3 years time should allow for a better assessment of project success, especially if turbidity and bedload measurements are taken or if biological monitoring information is available.

14. Additional comments on the restoration project. This is a challenging location to do a project that can show measurable improvements in biotic community, given the legacy of urban land use in the watershed.

PROJECT EVALUATION

The project will:

a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☒
c. Meet proposed outcomes ☐
d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination

1. Low ☐
2. Medium ☒
3. High ☐

Provide an explanation of the reason(s) for the determination: Given the constraints of the project location, the design is adequate to create a channel with improved stability and aquatic habitat. The lack of sediment transport assessment leaves greater uncertainty about outcomes, but grade control will limit any potential channel degradation. Reductions in sediment input are likely. However, improvements in the biotic community are uncertain. Because physical habitat is only one aspect that shapes biotic community, improvements may be limited by other factors such as water quality or hydrology that are being affected by watershed land use. Continued work will be necessary to increase treatment of stormwater, and to reduce the rate and volume of stormwater runoff. Invasive species may limit the ability for native riparian plants to become established.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Brian Nerbonne, Stream Habitat Consultant, DNR Fisheries

Clean Water Fund – Knife River Stabilization

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Knife River Stabilization Project Date of Review: 8/24/2012

Project Location: County Lake Township/Range/Section

Project Manager / Affiliated organization, Contact: Kate Kubiak, South St. Louis Cunty SWCD

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☐ Forest ☐ Aquatic ☒

1. Goal(s) of the restoration Address eroding banks at the site / stop contribution of sediment to river

Quantifiable objectives of the restoration reduction / elimination of in bank erosion at the site

What plans / record of project decisions / prescription worksheets are available? Where are they located?
Review process included a plan-view from the design package

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☐ Post-establishment phase ☒

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how? the finished product seem to concur with the plan-view design provided

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Kelly McQuiston (MN DNR-Fish), Jason Butcher (Superior National Forest), Wade Johnson (MN DNR-EWR) - Project managers: Kate Kubiak - Property owners: none

5. Site description (by reviewer): Jason Butcher-
   Soils: mixed till with clay
   Topography: Alluvial valley
   Hydrology: North Shore stream, snowmelt dominated, slitghtly above base flow conditions at time of site vist; after a 500yr flood event in mid-summer '12
   Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Floodplain species- alder/ash/spurce in riparain areas; Aspen/birch/balsam/spruce in uplands; high, outside bank was vegetated with grasses with very little woody vegetation.
   Surrounding conditions (adjacent land use / veg.): high, outside bank was vegetated with grasses with very little woody vegetation; inside bank alder dominated.

1

6. Survey methods used (include deliverable format, # of pgs.): Visual observation

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Use of a bankful bench at toe of the high bank; stabalized with alder clumps rood wads and plantings.

8. List indicators of project outcomes at this project stage: Project was under extreme flood conditions shortly after competion and remains intact. some erosion from nearby upstream and downstream banks has occurred in untreated areas; it is possible that this may have been minimized by extending the project and tieing it into natural floodplain upstream and downstream; however it is also possible that the large flood event had a substantial effect on adjacent untreated areas.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☐ No ☒
If no, explain.

13. Are follow-up assessments needed? Yes ☐ No ☒ Explain.

14. Additional comments on the restoration project.

PROJECT EVALUATION

The project will:

a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☐
c. Meet proposed outcomes ☒
d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination

1. Low ☐
2. Medium ☐
3. High ☒

Provide an explanation of the reason(s) for the determination. This project appears to have been built according to design and appears intact after a mojor flood event. Using natural material and design will allow the stream to adjust overtime while maintaining the integrity of the bank.

Site Assessment Lead(s) Conducting Site Review (Signature Required):

Jason T. Butcher, Superior National Forest

2

Clean Water Fund – Pomme de Terre Watershed: Tangen page 1

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Tangen/Stalker Lake(installed 2012) Date of Review: 09/13/12

Project Location: County Ottertail Township/Range/Section

Project Manager / Affiliated organization, Contact: Brad Mergens, West Ottertail SWCD

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 11

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☐ Forest ☐ Aquatic ☒

1. Goal(s) of the restoration This shoreland buffer is part of a watershed-wide effort to improve water quality in the Pomme De Terre watershed. The primary aim of the buffer is to correct and protect the near shore area from eroding.

Quantifiable objectives of the restoration The watershed efforts aim to reduce sediment into the Pomme De Terre River by 13,000 tons per year and phosphorus by 13,000 tons per year.

What plans / record of project decisions / prescription worksheets are available? Where are they located? Complete plans, records and so forth are available at the West Ottertail SWCD Office in Fergus Falls.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Greg Larson MN BWSR and Wade Johnson MN DNR - Project managers: Brad Mergens - Property owners: N/A

5. Site description (by reviewer): GLarson
Soils: Non-hydric loamy calcareous glacial till
Topography: Steep, with 12-18% slope on lands which abut the project site
Hydrology: Stalker Lake is adjacent; the buffer is predominantly rain fed; water level in the lake is uncontrolled.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): A high quality multi-specie mixed grass/forb native buffer planting was established. However, drought and sunlight on a few planting zones have compromised establishment and allowed establishment of invasive species (esp Crabgrass and Foxtail)

1

Surrounding conditions (adjacent land use / veg.): A mowed bluegrass lawn is adjacent to the site. The lawn appears to be rain-fed with minimal chemical weed control.

6. Survey methods used (include deliverable format, # of pgs.): Meander survey

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Site preparation for invasives control included 2 x herbicide applications in the upland areas. Plant species are native forbs and perennials suited to the site conditions with number of species within the recommended range of BWSR Native Vegetation Establishment and Enhancement Guidelines.

8. List indicators of project outcomes at this project stage: Growth stage and minimal invasives on most planting zones, and evidence of proper maintenance--despite the drought.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain. Property owner will need to be diligent to control aggressive invasives

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain. Replanting and/or invasive specie control may be needed on a few zones (e.g. Oriental Bittersweet along the shoreline) and biolog survival from ice-jacking is yet to be determined.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☐ No ☐
If no, explain. N/A

13. Are follow-up assessments needed? Yes ☒ No ☐ Explain. Replanting and/or invasive specie control may be needed and biologs should be checked next spring to determine if they survived the lake ice.

14. Additional comments on the restoration project. Post-project conditions are better than pre-project conditions. Mr. Mergens (W Ottertail SWCD) addressed the challenges of maintaining projects upon change of land ownership. Apparently the BWSR-provided financial agreement between the SWCD and landowner is deficient in this regard. The SWCD and Ottertail County Planning and Zoning have an agreement that facilitates the installation of shoreland best management practices in shoreland areas.

PROJECT EVALUATION

The project will:
- a. Likely not meet proposed outcomes ☐
- b. Minimally meet proposed outcomes ☐
- c. Meet proposed outcomes ☒
- d. Likely exceed proposed outcomes ☐
- e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
- 1. Low ☐
- 2. Medium ☒
- 3. High ☐

Provide an explanation of the reason(s) for the determination. Long-term ownership appears more likely to provide maintenance. The location of the buffer is less compromised by the dock and launching of watercraft. Below bank protection needs have been identified and it is likely that if biologs fail, the landowner and SWCD will take necessary steps to replace them.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Greg Larson

2

Clean Water Fund – Pomme de Terre Watershed: Lillemon page 1

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Lillemon/Eagle Lake(installed 2012) Date of Review: 09/13/12

Project Location: County Ottertail Township/Range/Section

Project Manager / Affiliated organization, Contact: Brad Mergens, West Ottertail SWCD

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 11

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☐ Forest ☐ Aquatic ☒

1. Goal(s) of the restoration This shoreland buffer is part of a watershed-wide effort to improve water quality in the Pomme De Terre watershed. The primary aim of the buffer is to correct and protect the near shore area from erosion.

Quantifiable objectives of the restoration The watershed efforts aim to reduce sediment into the Pomme De Terre River by 13,000 tons per year and phosphorus by 13,000 tons per year.

What plans / record of project decisions / prescription worksheets are available? Where are they located? Complete plans, records and so forth are available at the West Ottertail SWCD Office in Fergus Falls.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Greg Larson and Wade Johnson - Project managers: Brad Mergens - Property owners: N/A

5. Site description (by reviewer): GLarson
Soils: Non-hydric loamy calcareous glacial till
Topography: Flat, with 0-2 % slope on lands which abut the project site
Hydrology: Eagle Lake is adjacent; the buffer is predominantly rain fed; water level in the lake is uncontrolled.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): A high quality multi-specie grass/forb native buffer planting with minimal invasive species.
Surrounding conditions (adjacent land use / veg.): A mowed bluegrass lawn is adjacent to the site. The lawn appears to be rain-fed with minimal chemical weed control.

1

6. Survey methods used (include deliverable format, # of pgs.): Meander survey

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Site preparation for invasives control included 2 x herbicide applications in the upland areas. Plant species are perennial native forbs and grasses suited to the site conditions. Plant species and number of species planted follow the recommended guidlines of BWSR Native Vegetation Establishment and Enhancement Guidelines.

8. List indicators of project outcomes at this project stage: Growth stage and minimal invasives, and evidence of proper maintenance to this date--despite the drought.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain. However, biolog survival from ice-jacking is yet to be determined.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☐ No ☐
If no, explain. N/A

13. Are follow-up assessments needed? Yes ☒ No ☐ Explain. Nothing out- of -the ordinary is needed, but it should be noted if the biologs survive ice-jacking.

14. Additional comments on the restoration project. Post-project conditions are better than pre-project conditions. Mr. Mergens addressed the challenges of maintaining projects upon change of land ownership. Apparently th BWSR-provided financial agreement between the SWCD and landowner is deficient in this regard. The SWCD and Ottertail County Planning and Zoning have an agreement that facilitates the installation of shoreland best management practices in shoreland areas.

PROJECT EVALUATION

The project will:
- a. Likely not meet proposed outcomes ☐
- b. Minimally meet proposed outcomes ☐
- c. Meet proposed outcomes ☒
- d. Likely exceed proposed outcomes ☐
- e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
- 1. Low ☐
- 2. Medium ☒
- 3. High ☐

Provide an explanation of the reason(s) for the determination. Long-term ownership appears more likely to provide maintenance. The location of the buffer is less compromised by the dock and launching of watercraft. Below bank protection needs have been identified and it is likely that if biologs fail, the landowner and SWCD will take necessary steps to replace them.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Greg Larson

Clean Water Fund – Pomme de Terre Watershed: Pomme de Terre Lake page 1

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Pomme De Terre (completed 2011) Date of Review: 09/13/12

Project Location: County Grant Township/Range/Section NE1/4 NE1/4 T130N-R42W S36

Project Manager / Affiliated organization, Contact: Joe Montoyne, Grant SWCD

Fund: OHF ☐ CWF ☒ PTF ☐ Project Start Date (Fiscal Year): 20 11

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☐ Forest ☐ Aquatic ☒

1. Goal(s) of the restoration This shoreland buffer is part of a watershed-wide effort to improve water quality in the Pomme De Terre watershed. The primary aim of the buffer is to correct and protect the near shore area from eroding.
Quantifiable objectives of the restoration The watershed efforts aim to reduce sediment into the Pomme De Terre River by 13,000 tons per year and phosphorus by 13,000 tons per year.

What plans / record of project decisions / prescription worksheets are available? Where are they located?
Complete plans, records are available at the Grant SWCD Office in Elbow Lake.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☐ Secondary ☒

3. What is the status of the project? Treatment / establishment phase ☐ Post-establishment phase ☒

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☒ No ☐
If yes, how? New landowner has (negatively) modified the plan by removing a section of vegetation near the dock to facilitate the launching of watercraft. Potential erosion from wave action has been increased.

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Greg Larson MN BWSR and Wade Johnson MN DNR - Project managers: Joe Montoyne - Property owners:

5. Site description (by reviewer): GLarson
Soils: Non-hydric sandy outwash
Topography: Flat, with 0-2 % slope on lands which abut the project site
Hydrology: Pomme De Terre Lake is adjacent; the buffer is predominantly rain fed; water level in the lake is controlled, but fluctuations nevertheless occur.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): A (garden-like) high quality multi-specie grass/forb native buffer planting with minimal invasive species. Planting stock for forbs were established, large plants.

1

Surrounding conditions (adjacent land use / veg.): A mowed bluegrass lawn is adjacent to the site. The lawn appears to be rain-fed with minimal chemical weed control. Landscape edging separates the buffer from the lawn.

6. Survey methods used (include deliverable format, # of pgs.): Meander survey

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Site preparation for invasives control included herbicide applications in the upland areas. Plant species are perennial native forbs and grasses suited to the site conditions. Plant species and number of species planted follow the recommended guidlines of BWSR Native Vegetation Establishment and Enhancement Guidelines.

8. List indicators of project outcomes at this project stage: Growth stage and maturity of vegetation and evidence of landowner alteration of buffer.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☐ No ☒ Explain. Contrary to the advice of the SWCD, the new owner apparently is not interested in maintaining the buffer to acceptable standards.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☒ No ☐
If yes, explain. The "strip" between the two plantings should be addressed, especially the bank on the lakeshore should be replaced and the landscape edging should be removed. The buffer currently looks more like a garden than a native buffer.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☒ No ☐
If yes, explain. This project was not intended as habitat, and has been further comprised by landowner woody vegatiation removal actions.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☐ No ☒
If no, explain. As mentioned, the new landowner may not maintain the project.

13. Are follow-up assessments needed? Yes ☒ No ☐ Explain. Outreach should continue with the new landowner and it should be noted if below bank protection efforts will withstand fluctuating lake levels and ice-jacking.

14. Additional comments on the restoration project. Post-project conditions are apparently better than pre-project conditions. Mr. Montoyne addressed the challenges of maintaining projects upon change of land ownership. Apparently the BWSR-provided financial agreement between the SWCD and landowner is deficient in this regard.

PROJECT EVALUATION

The project will:

a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☒
c. Meet proposed outcomes ☐
d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination

1. Low ☐
2. Medium ☒
3. High ☐

Provide an explanation of the reason(s) for the determination. Future maintenance issues by the current landowner cloud the long term efficacy.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Greg Larson

2

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Restoration of Critical Forest Habitat in Northeast MN Date of Review: 8/24/2012

Project Location: County Lake / St. Louis / Cook Township/Range/Section Various

Project Manager / Affiliated organization, Contact: Doug Thompson, The Nature Conservancy

Fund: OHF ☒ CWF ☐ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☐ Forest ☒ Aquatic ☐

1. Goal(s) of the restoration This project is aimed at improving upland forest habitat and increasing productivity and diversity of forest products through restoration of commercially and ecologically important long lived conifer species and reforestation of under-stocked stands on state and county forestlands in northeast Minnesota.

Quantifiable objectives of the restoration Increased diversity of tree species composition and stand stocking levels silviculturally appropriate to each site. Specifically an increased presence of viable long lived conifer species free of browse pressure and likely to recruit into the overstory.

What plans / record of project decisions / prescription worksheets are available? Where are they located?
The project is guided by the goals in the MN Forest Resources Council's Northeast and North Central Landscape Plans, DNR Subsection Forest Resource Management Plans, and County forest management plans. Individual site prescription worksheets are available from the local land managers.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☒ Secondary ☐

3. What is the status of the project? Treatment / establishment phase ☐ Post-establishment phase ☒

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Jeff Busse, Wade Johnson - Project managers: Chris Dunham - Property owners:

5. Site description (by reviewer): This project is a result of multi-agency collaborative planning in the Manitou and Sand Lake Seven Beavers Landscapes, and occurs on (9) different sites across northeast Minnesota. Project sites are primarily upland northern mesic mixed forest communities (MHn45 and FDn43) at various successional growth stages and condition. Site assessments were conducted on 3 project areas representative of the overall restoration efforts.

1

Project area work timeline:

Caribou Falls Wayside Site:
2008 - planted 2000 white spruce, 1000 white pine, 1000 white cedar
2009 - build 100 single tree exclosures around white pine and white cedar
2010 - brush saw release around crop trees, remove fences- grub and grass mat seedlings
2010 - build 100 single tree exclosures around white pine and white cedar
2012 - budcap

DNR land adjacent to Wolf Ridge:
2008 - planted by DNR Forestry unknown quantity mix of white spruce, white pine, white cedar
2008 - tree tubes installed on 7 acres of white pine and white cedar
2010 - build 350 single tree exclosures around white pine and white cedar
2011 - budcap un-tubed trees and straightened tubes
2012 - budcap trees grown out of tubes

Hut Two Rd Finland:
2008 - planted 500 white spruce, 1000 white pine, 500 white cedar
2009 - sprayed with plantskydd deer repellent
2010 - budcapped
2010 - brush saw released
2011 - budcapped
2012 - budcapped

Soils: In general sites are situated on a scoured bedrock terrain with a shallow non-calcareous sandy-loam, loamy, or fine-sandy drift often gravelly and occassionally stony.
Topography: Moderately rolling landscape, with occassional steep rugged terrain
Hydrology: Droughty well drained upland forest community matrix intersperced with surface seeps and low vernal pool and streams throughout.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): In general project sites consist of marginal forest stands of early-successional species (birch/aspen/balsam) in a transitional growth stage marked by significant mortality of low vigor, over-mature canopy trees. The dominant trees in many of these site are declining due to a variety of factors including: age, ice storm, snow-loading, and wind damage. These sites are mostly poorly stocked (15 to 60 sq ft BA), with heavy grass/shurb growth preventing adequate levels of natural regeneration of desirable tree species.

Some of the project sites (Manitou Patch, Big Lake Patch, Caribou Falls Wayside, Little Marais WMA, and Hut Two Rd Finland sites) have been managed in the recent past, harvesting portions of the overstory using either a shelterwood or seed-tree with reserves treatment approach.
Surrounding conditions (adjacent land use / veg.): Project sites are generally surrounded by large intact tracts of forestland, including: Clair Nelson Memorial Forest (Lake County), Finland State Forest (DNR Forestry), Crosby-Manitou State Park (DNR Parks), Superior National Forest , The Upper Manitou preserve (The Nature Conservancy), and numerous private holdings.

6. Survey methods used (include deliverable format, # of pgs.): Ocular assessment of sites to assess the health/condition of crop trees, browse protection devices, and competing vegetation.

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Forest management prescriptions were developed collaboratively between forestry, ecological, and wildlife experts participating in the Manitou and Sand Lake Seven Beavers Collaboratives using an Ecological Classification System to design treatments which resemble the natural succession of northern mixed mesic forests. Site prep and timber harvests adhered closely to best management practices described in the Minnesota Site-level Forest Management Guidelines, and planted/seeded tree species selection are appropriate to

each site according to the MN DNR's Tree Suitability Index developed by the Ecological Classification Program. All sites were checked against the State Natural Heritage Database for any rare/threatened features prior to any work being done, and those sites listed as heritage features present were further ground surveyed to ensure project work did not threaten the integrity of those species.

8. List indicators of project outcomes at this project stage: Establishment of an adequate stocking of desirable long lived conifer species, reasonably free of browse pressure and competition for growing space. Sites have been established on a trajectory to be mature forests with diverse overstory species composition within 50 years.

Caribou Falls Wayside - excellent survival with fenced white pine, good survival with fenced cedar but less than pine, excellent survival with unfenced white spruce. 2012 budcap sweep revealed very poor survival of white pine and cedar outside of fences.

DNR land adjacent to Wolf Ridge - excellent white pine survival in tubes and in fences, good survival of cedar but less than pine.

Hut Two Rd Finland - excellent survival of white pine, cedar poor survival (should have used tree tubes), can get away with budcapping here as deer density much less than down on shore.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain. Project design is appropriate to restoring a significant long term conifer component back into these systems that will provide improved wildlife habitat, water quality, and forest productivity. Ongoing regular maintance of browse protection tubes/fencing will be necessary for at least several more years until trees are above deer/moose browse lines and free-to-grow from competition. Some pruning/thinning stand improvement activities may also be necessary to ensure the best recruitment into the overstory, and will require periodic monitoring of site conditions to determine optimal treatment schedule.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain.

13. Are follow-up assessments needed? Yes ☐ No ☒ Explain. Conifer restoration on these sites has been very successful. The seedling trees are well established, and on track to providing the future habitat benefits this project set out to accomplish.

14. Additional comments on the restoration project.

PROJECT EVALUATION

The project will:

a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☐
c. Meet proposed outcomes ☒
d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination

1. Low ☐
2. Medium ☐
3. High ☒

3

Provide an explanation of the reason(s) for the determination. A high level of confidence comes from the well established commitment of the multi-landowner land management collaboratives working to restore, maintain and enhance the broader landscapes of these project sites. The Manitou Landscape and Sand Lake Seven Beavers Collaboratives' support of these projects provides extra oversight and continuity that will help ensure continued monitoring and maintenance of these sites in the future, significantly improving the likelyhood of the project's success.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Jeff Busse

4

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Lake Maria WMA Wetland Restoration Date of Review: 8/9/12

Project Location: County Murray Township/Range/Section 108/41W/7

Project Manager / Affiliated organization, Contact: Brad Nylin, MWA; Wendy Kruger DNR FAW Slayton

Fund: OHF ☒ CWF ☐ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☐ Wetland ☒ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration Restore a historic wetland area from row crop production to a wetland basin to improve migratory bird habitat.

Quantifiable objectives of the restoration Rewater a 20-30 acre wetland basin

What plans / record of project decisions / prescription worksheets are available? Where are they located?
Area Wildlife Office, Slayton

2. Is habitat restoration a primary or secondary objective of the project? Primary ☒ Secondary ☐

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Greg Larson, BWSR; Wade Johnson, DNR - Project managers: Brad Nylin, MWA; John Beech, Assistant Slayton Area Wildlife Manager - Property owners: DNR Area Wildlife staff

5. Site description (by reviewer):
   Soils: Loamy glacial till
   Topography: Gently rolling 6-12 % slopes dominate immediate landscape
   Hydrology: Hydric soils with a near-surface water table dominate lower-lying landscape positions. Before they were drained, wetlands in the immediate area were primarily wet meadows in swales grading to shallow marshes in lower-lying areas. The major input to the water budget of the restored wetland is overland flow, with seasonal contributions from tile lines that have been daylighted upgradient of the restored wetland.
   Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): A prairie restoration on the majority of the immediate landscape, all with minimal invasives.

1

Surrounding conditions (adjacent land use / veg.): Restored native prairie on DNR holdings

6. Survey methods used (include deliverable format, # of pgs.): Meander survey

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Berm constuction and hydric soil re-watering is consistant with accepted wetland habitat restoration practices

8. List indicators of project outcomes at this project stage: Earth work and water control infrastructure has been completed. Vegetative components have been implemented and appear to be on track for successful establishment. Dry weather has set-back vegetative establishment.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain. Long term maintenance is the responsiblility of the MN DNR Slayton Wildlife Office. Water control structures will be montored to ensure function

13. Are follow-up assessments needed? Yes ☐ No ☒ Explain.

14. Additional comments on the restoration project. This project is a great example of a multiple function-added restoration--as opposed to a restoration with a more limited functional gain. The wetland restoration complements an existing high quality prairie restoration, and adds both terrestrial and aquatic habitat value to the immediate area. Water quality enhancement is provided to lakes and wetlands downgradient. In addition, a township road is protected from previously disruptive high flows.

PROJECT EVALUATION

The project will:
a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☐
c. Meet proposed outcomes ☒
d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
1. Low ☐
2. Medium ☐
3. High ☒

Provide an explanation of the reason(s) for the determination. Comparing the provided documentation with observations from a site visit, the project appears to be on a trajectory to meet the objectives stated in the project narrative 1. This project fits the landscape of and incorporates existing habitat types, hence maximizing benefits for dollars spent; 2.The project site prior to construction had minimal invasives, thus minimizing long-term vegetative maintainence; 3. The wetland restoration was modest and restored the wetland to a pre-drained hydrologic regime. This will also maximize success of the restoration and minimize long-term maintenance.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Greg Larson

2

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Tatley WMA Prairie Restoration Date of Review: 9.5.12

Project Location: County Yellow Medicine Township/Range/Section T114N; R46W; NE 31, NW 32

Project Manager / Affiliated organization, Contact: Bill Schuna, MN DNR Division of WIldlife

Fund: OHF ☒ CWF ☐ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☒ Wetland ☐ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration Restore 70 acres of prairie to former crop ground areas at Tatley WMA

Quantifiable objectives of the restoration Establishment of 70 acres of native grasses and forbs to increase available habitat for game and nongame birds.

What plans / record of project decisions / prescription worksheets are available? Where are they located?
File records of initial site preparation, seed schedule, seeding and grow-in maintenance are kept by wildlife staff

2. Is habitat restoration a primary or secondary objective of the project? Primary ☒ Secondary ☐

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Wade Johnson, MN DNR; Paul Bockenstedt, Stantec - Project managers: Bill Schuna, AAWM; Jesse Roberts, F&W - Property owners:

5. Site description (by reviewer): Tatley WMA occurs on gently rolling landsape on the Prairie Coteau. Prairie restoration areas (total of 8) occur on former crop areas

Soils: range from clay loam to sandy loam, with the USDA NRCS Soil Survey indicating that some soils are eroded
Topography: Gently rolling uplands
Hydrology: UModerate to well-drained.
Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Current vegetation is primarily composed of prairie grasses and forbs. Relatively small amounts of invasive, nonnative weeds are present including Canada thistle, plumeless thistle, absinthe sage, leafy spurge and others (estimated at <1% total cover). Tree seedlings are infrequent, originating as a result of seed rain from nearby windbreaks

Surrounding conditions (adjacent land use / veg.): Surrounding land is primarily WMA and consists of a mix of crops (and food plots), other prairie restoration areas, seasonal/emergent wetlands, tree plantings and homestead windbreaks.

6. Survey methods used (include deliverable format, # of pgs.): Meander survey

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Site preparation, seeding protocols and maintenance plans are all consistent with accepted best practices for grassland reconstuction.

8. List indicators of project outcomes at this project stage: Acres of prairie grasses and forbs established (average/total percent cover; low total cover by invasive, nonnative plants

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain.

13. Are follow-up assessments needed? Yes ☐ No ☒ Explain. Prairie restoration areas appear to be developing well. With customary ongoing management (spot spray, spot mow, prescribed burning and similar) these prairie planting areas should develop as expected, or better.

14. Additional comments on the restoration project. Some small areas may require supplemental seeding due to poor initial development on droughty/eroded soils. Overall, this prairie restoration has developed very well.

PROJECT EVALUATION

The project will:
- a. Likely not meet proposed outcomes ☐
- b. Minimally meet proposed outcomes ☐
- c. Meet proposed outcomes ☐
- d. Likely exceed proposed outcomes ☒
- e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
- 1. Low ☐
- 2. Medium ☐
- 3. High ☒

Provide an explanation of the reason(s) for the determination. The prairie seeding has developed well and includes a good diveresity of plants with minimal invasive, nonnative plant cover and only small areas with modest development. With customary maintenance conducted by MN DNR (i.e. spot spray, spot mow, prescribed burning and similar).

Site Assessment Lead(s) Conducting Site Review (Signature Required): Paul Bockenstedt, Stantec

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name:
Old Field to Prairie/Savanna Restoration Glendalough State Park Date of Review: 9.5.12

Project Location: County Otter Tail Township/Range/Section T133N, R40W, S1/2, SE 1/4 Sec. 14

Project Manager / Affiliated organization, Contact: Cindy Luethe, MN DNR PAT Regional Resource Specialist

Fund: OHF ☒ CWF ☐ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☒ Wetland ☐ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration restore old field and overgrown oak woodland to prairie and oak savanna, respectively

Quantifiable objectives of the restoration Approximately 11 acres of oak savanna and prairie restored to native prairie and savanna plant species

What plans / record of project decisions / prescription worksheets are available? Where are they located?
Cindy Lueth, MN DNR Regional Resource Specialist has records of dates, tools, and techniques.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☒ Secondary ☐

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☐ No ☐
If yes, how? Not applicable

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Wade Johnson, MN DNR; Paul Bockenstedt, Stantec; - Project managers: Cindy Luethe, MN DNR PAT Regional Resource Specialist by phone - Property owners: Louie Peterson, MN DNR

5. Site description (by reviewer): Paul Bockenstedt, Stantec
   Soils: sandy loam to sand-gravel
   Topography: gently rolling with a few slopes that exceed 3:1.
   Hydrology: well-drained upland soils
   Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): Premanagement vegetation consisted of scattered to patch canopy of open-grown bur oaks with moderate density subcanopy and brush layer and herbaceous layer primarily composed of nonnative, cool season pasture grasses. Current

composition is scattered to patchy canopy of open-grown bur oaks with open understory (brush and trees cleared). Herbaceous vegetation consists of a mix of native grasses and native forbs with very small amounts of weedy species including Canada thistle, plumeless thistle, butter-n-eggs and absinthe sage.
Surrounding conditions (adjacent land use / veg.): Surrounding land is State Park with the dominant cover being restored prairie, several depressional wetlands, additional oak woodland, and several lakes within one half mile.

6. Survey methods used (include deliverable format, # of pgs.): Meander survey

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Site preparation, seeding and grow-in maintenance activities are customary and methods used as standard practice in ecological restoration

8. List indicators of project outcomes at this project stage: percent cover of native herbaceous plants (grasses and forbs), percent cover of non-oak trees and shrubs, level of invasive nonnative plants.

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain.

13. Are follow-up assessments needed? Yes ☐ No ☒ Explain. Project appears to be on a trajectory to meet or exceed desired outcomes by the end of the funding period.

14. Additional comments on the restoration project. The project is meeting the intended goals and objectives of restoring oak savanna through control of invasive, nonnative vegetation and reintroduction of native savanna and prairie species characteristic for this geographic area and specific location. Testing bulk harvest native seed at an accredited seed lab can help determine an appropriate seeding rate.

PROJECT EVALUATION

The project will:
- a. Likely not meet proposed outcomes ☐
- b. Minimally meet proposed outcomes ☐
- c. Meet proposed outcomes ☐
- d. Likely exceed proposed outcomes ☒
- e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination
- 1. Low ☐
- 2. Medium ☐
- 3. High ☒

Provide an explanation of the reason(s) for the determination. Invasive woody control was clearly successful, site preparation (prescribed burn/spray) and seeding have resulted in a significant increase in desirable native plant cover in the project area.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Paul Bockenstedt

Parks and Trails Fund – MN DNR, Glacial Lakes State Park Prairie Restorations

RESTORATION EVALUATION PROGRAM for LEGACY PROJECTS
Minnesota Board of Water and Soil Resources
Minnesota Department of Natural Resources

PROJECT EVALUATION FORM

PROJECT BACKGROUND

Project Name: Glacial Lakes State Park Prairie Restorations (STS & Trucker East Units) Date of Review: 9/5/12

Project Location: County Pope Township/Range/Section T124N; R39W; NE S 23, NW S 30

Project Manager / Affiliated organization, Contact: Cindy Lueth, MN DNR Parks & Trails

Fund: OHF ☒ CWF ☐ PTF ☐ Project Start Date (Fiscal Year): 20 10

Predominant Habitat Type: Prairie/Savanna/Grassland ☒ Wetland ☐ Forest ☐ Aquatic ☐

1. Goal(s) of the restoration STS Prairie - Restore prairie through woody invasives removal and seeding of local ecotype prairie seed. Trucker East Prairie - enrich existing grassland through treatment of invasive, nonnative cool season grasses with herbicide and conduct supplemtal native prairie species overseeding

Quantifiable objectives of the restoration Improved quality of 88 acres of prairie habitat - Trucker East (74 acres) and STS (14 acres).

What plans / record of project decisions / prescription worksheets are available? Where are they located?
DNR PAT Regional Resource Specialist has compiled a written summary of project background, methods, and outcomes.

2. Is habitat restoration a primary or secondary objective of the project? Primary ☒ Secondary ☐

3. What is the status of the project? Treatment / establishment phase ☒ Post-establishment phase ☐

4. Has the plan or project implementation been modified from the original plan? Yes ☐ No ☒
If yes, why and how?

Have alterations in plan or implementation changed the proposed outcomes? Yes ☒ No ☒
If yes, how?

PROJECT ASSESSMENT

Site Assessment Attendees - Reviewers: Wade Johnson, MN DNR; Paul Bockenstedt, Stantec - Project managers: Cindy Lueth, MN DNR PAT Regional Resource Specialist (by phone) - Property owners: Louie Peterson, MN DNR PAT Technician

5. Site description (by reviewer): Paul Bockenstedt, Stantec
   Soils: silt loam to gravelly-sandy loam
   Topography: moderate to steeply rolling
   Hydrology: well-drained to excessively well drained
   Vegetation (structure, dominant species % cover, invasive species (MN DNR) % cover, other): STS Prairie - Trucker East Prairie - dominated by herbaceous plants inlcuding native grasses and forbs. Common native

grasses include big bluestem, little bluestem, Indian grass, switchgrass, and several others in remnant areas. Frequently observed forbs include maximillian sunflower, bergamot, yellow coneflower, .
Surrounding conditions (adjacent land use / veg.): Adjacent areas are primarily State Park and managed for prairie/savanna/oak woodland. The east side of Trucker East Prairie borders private land that is in permanent grassland. The south side of Trucker East Prairie borders a USFWS Waterfowl Production Area that has had recent extensive restoration (tree clearing, prescribed burn) work done on it.

6. Survey methods used (include deliverable format, # of pgs.): meander survey for both STS Prairie and Trucker East Prairie areas

7. Is the plan based on current science (best management practices, standards, and guidelines)?
Yes ☒ No ☐ Describe for yes or no. Site preparation, seeding and grow-in maintenance activities are customary and methods used as standard practice in ecological restoration

8. List indicators of project outcomes at this project stage: acres of trees removed, reduction in % cover of nonnative, cool season grasses, acres of native prairie seeding

9. Does the project plan / implementation of the project plan reasonably allow for achieving proposed project outcome(s)? Yes ☒ No ☐ Explain.

10. Are corrections or modifications needed to meet proposed outcomes? Yes ☐ No ☒
If yes, explain.

11. Has anything been done or planned that would detract from existing or potential habitat? Yes ☐ No ☒
If yes, explain.

12. Are proposed future steps, including long-term management, practical and reasonable? Yes ☒ No ☐
If no, explain.

13. Are follow-up assessments needed? Yes ☐ No ☒ Explain. It is unlikely that additional assessments would be beneficial. Project objectives have been substantially achieved and PAT staff will continue maintenance work that will build on efforts made during the initial restoration phase of this project.

14. Additional comments on the restoration project.

PROJECT EVALUATION

The project will:

a. Likely not meet proposed outcomes ☐
b. Minimally meet proposed outcomes ☐
c. Meet proposed outcomes ☒
d. Likely exceed proposed outcomes ☐
e. Greatly exceed proposed outcomes ☐

Confidence of outcome determination

1. Low ☐
2. Medium ☒
3. High ☐

Provide an explanation of the reason(s) for the determination. Restoration methods and integration of activities were appropriate for the site. Weather (drought in 2012) appears to have delayed development at STS Prairie. Despite this, as customary grow-in maintenance continues and with periods of normal precipitation, the site should progress in development. Trucker East prairie appears to have effectively increased native plant cover through treatment of nonnative cool season grasses and overseeding.

Site Assessment Lead(s) Conducting Site Review (Signature Required): Paul Bockenstedt (Stantec Inc)

Appendix II: Outdoor Heritage Fund Restoration and Management Plans

As required by M.L 2009, Chapter 172, Article 1, Section 2. Subd. 10. (3)

CPL Grant Program Ecological Restoration and Management Plan

RESTORATION PROJECTS ONLY

Contract #:	**B40857**
Organization Name:	**The Nature Conservancy**
Name of Project:	**Restoration of Critcal Forest Habitat in Northeast MN**
FY of Grant Awarded:	**FY2010**
Contact Name:	**Doug Thompson**
Contact Phone:	**218-727-6119**

Please choose the correct response to the below statements as it relates to your above project.

1) To the extent possible, only vegetation or seed of ecotypes native to Minnesota, and preferably of the local ecotype, using a high diversity of species originating from as close to the restoration site as possible have been or will be used in this project, protecting existing native prairies from genetic contamination.
☒ Yes ☐ No, explain

2) MCC was given consideration to and timely written contact was made with the Minnesota Conservation Corps for consideration of possible use of their services to contract for restoration and enhancement services.
☒ Yes ☐ No, explain

3) This project is on land permanently protected by conservation easement or public ownership.
☒ Yes ☐ No, explain

4) Is this project consistent with the highest quality conservation and ecological goals for this site?
☒ Yes ☐ No, explain

5) Is the best available science being used to achieve the best restoration?
☒ Yes ☐ No, explain

6) Has consideration been given to soil, geology, topography and other relevant factors that would provide the best chance of long term success of this restoration?
☒ Yes ☐ No, explain

Restoration Implementation Timetable:

Activity	Timeline	Describe specific work activities
Establish Vegetation	May 2010	planting of tree seedlings
Maintenance	Oct 2010	browse protection placed on seedlings
Maintenance	Oct 2010	release of seedlings from competing vegetation
Establish Vegetation	May 2011	planting of tree seedlings
Maintenance	Oct 2011	browse protection placed on seedlings
Maintenance	Oct 2011	release of seedlings from competing vegetation
Establish Vegetation	May 2012	planting of tree seedlings+ maintenance (release and browse protection) Oct 2012

CPL Grant Program Ecological Restoration and Management Plan

RESTORATION PROJECTS ONLY

Identify Long Term Maintenance and Management Needs, Source(s) of Funding:

Need	Timeframe	Financial source
additional release from competing veg	2015-2017	To be determined--funds to be raised in the future from private and/or public sources
additional browse protection	2013-2022	To be determined--funds to be raised in the future from private and/or public sources
monitoring	2011-2022	To be determined--funds to be raised in the future from private and/or public sources

☒ I certify that the information provided above is accurate and that I am authorized by the above organization to submit this report. If this information should change at any time during the grant period, I will notify CPL grant staff immediately.
Name: Doug Thompson
Title: NE MN Program Director, The Nature Conservancy

Please submit this form within 30 days of work beginning on the above project or with the first request for payment. You may email this form or print and mail to CPL grant staff.
LSCPLGrants.DNR @state.mn.us or
CPL Grant Program Staff
500 Lafayette Road
Box #20
St. Paul MN, 55155-4020

CPL Grant Program Ecological Restoration and Management Plan

ENHANCEMENT PROJECTS ONLY

Contract #:	**B41911**
Organization Name:	**Minnesota Waterfowl Association, Inc.**
Name of Project:	**Minnesota Waterfowl Association/MWA Lake Maria WMA Restoration**
FY of Grant Awarded:	**FY2010**
Contact Name:	**Bradley Nylin**
Contact Phone:	**(952) 767-0320**

Please choose the correct response to the below statements as it relates to your above project.

1) To the extent possible, only vegetation or seed of ecotypes native to Minnesota, and preferably of the local ecotype, using a high diversity of species originating from as close to the restoration site as possible have been or will be used in this project, protecting existing native prairies from genetic contamination.
☒ Yes ☐ No, explain

2) MCC was given consideration to and timely written contact was made with the Minnesota Conservation Corps for consideration of possible use of their services to contract for restoration and enhancement services.
☒ Yes ☐ No, explain

3) This project is on land permanently protected by conservation easement or public ownership.
☒ Yes ☐ No, explain

☒ I certify that the information provided above is accurate and that I am authorized by the above organization to submit this report. If this information should change at any time during the grant period, I will notify CPL grant staff immediately.
Name: Bradley Nylin
Title: Executive Director

Please submit this form within 30 days of work beginning on the above project or with the first request for payment. You may email this form or print and mail to CPL grant staff.
LSCPLGrants.DNR @state.mn.us or
CPL Grant Program Staff
500 Lafayette Road
Box #20
St. Paul MN, 55155-4020

Outdoor Heritage Fund – DNR Accelerated Prairie Grassland Management, Tatley WMA

FY10 OHF Appropriation Ecological and Restoration Plan for Tatley WMA

Grantee Name **Minnesota Department of Natural Resources** Date **5/12/10**

County **Yellow Medicine** Township **114N** Range **46W Parts of Sections 31 &32** Seller **None**

Acreage **70**

Please complete the following and submit this form to Michelle.Grosz@state.mn.us. **If your organization is transferring the land to the DNR, instead submit your Initial Development Plan, being certain you have used the updated form that contains the following information.** For all restorations and for where land is not being transferred to the DNR, use the form below.

Designed to meet L-SOHC Project and Acquisition Requirements in 2009 ML CH 172		
To the extent possible, only vegetation or seed or ecotypes native to Minnesota, and preferably of the local ecotype, using a high diversity of species originating from as close to the restoration site as possible were used in this project, protecting existing native prairies from genetic contamination.		
Yes X	No Please Explain	N/A

For all new lands acquired, this document will meet the requirements for an **Ecological Restoration and Management Plan** by identifying: 1, 2, 3, 4 and 5 below:

1) To the degree practicable, this plan is consistent with the highest quality conservation and ecological goals for the site: YES__X___, NO_____.

2) Consideration was given to soil, geology, topography, and other relevant factors that would provide the best chance for long-term success of the restoration projects: YES__X___, NO_____.

3) The plan shall include the proposed timetable for implementing the restoration, including, but not limited to, site preparation, establishment of diverse plant species, maintenance, and additional enhancement to establish the restoration.

1

Implementation Timetable		
Activity	Timeline (month/year)	Describe specific work activities
Spray Roundup	6/2011 or sooner	Spray roundup to reduce broadleaf competition
Purchase Grass/Forbs	1/2011	Purchase grasses and forbs
Drill Grass/Forbs	6/2011 or sooner	Plant grasses and forbs

4) The plan shall identify long-term maintenance and management needs of the restoration and how the maintenance, management, and enhancement will be financed; including (for new acquisitions) identification of sufficient funding for implementation.

Long-term Needs				
Need	Timeframe (yrs to yrs)		Funding needed	Funding source
Noxious weed control	2	5	$4,000.00	
Burning	3		$3,000.00	

5) The plan uses the best available science to achieve the best restoration: YES___X__, NO_____.

If No please indicate reason	

Attach maps, species lists and additional pages as needed. Include any other comments here too. **LSOHC funds will not be used for alfalfa/green break/food plot establishment or maintenance.**	

This is a restoration on DNR land: Approved: Area Mgr **Bill Schuna AAWM** Asst. Reg. Mgr. **Paul Hansen, ARM, 5-24-10**

WL Dev. Consultant_____

This is a restoration or land acquisition that does not involve DNR Land Approved_____

NGO signature must be from individual with land restoration skills and background. Title _____

2