[1]EXECUTIVE SUMMARY
[2]Technical Guidance Document for the Vermillion Bottoms and Lower Cannon River Area Floodplains Dakota and Goodhue Counties, Minnesota

A cooperative guidance document for public agencies and non-government organizations

This document is the result of meetings and field tours conducted by representatives of multiple agencies and organizations, including:

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Background

This Executive Summary provides an overview of a larger 47-page document that was approved in January 2005.

This project was an outgrowth of a Minnesota DNR interdisciplinary planning effort (Subsection Forest Resource Management Plan) for southeastern Minnesota that included the Vermillion Bottoms and Lower Cannon River area. During this process, participants agreed that the challenge of managing floodplain habitats to meet diverse goals required a concentrated effort by DNR staff together with other agencies, conservation organizations, scientists, and private landowners. This document is the result of numerous field tours and meetings conducted in 2002 through 2005. The goal of the project was to assemble the best scientific information and management expertise available and to translate this information developing cooperative management guidance for floodplain plant communities in the project area.

Area Covered by this Plan

The plan covers the floodplain areas within the "proposed project boundary" of the Vermillion Bottoms and Lower Cannon River Area in Dakota and Goodhue Counties (Dunevitz 2001). These floodplain areas total about 25,000 acres, which includes about 11,000 acres of forest. There are about 10,000 acres of public lands in the project area. The major landholdings include State Forests, State Wildlife Management Areas, State Scientific and Natural Areas, and US Army Corps of Engineers lands. Other major landholders include Independent School District #256, the Prairie Island Indian Community, and the Red Wing Wildlife League.

Natural Resources Summary

The project area contains one of the largest expanses of floodplain native plant communities in southeast Minnesota. It is one of the top four sites in the state for rare forest birds. It has the highest numbers of two special concern bird species in southeast Minnesota: red-shouldered hawks and cerulean warblers. It also provides important nesting and/or migratory habitat for peregrine falcons, bald eagles, and Acadian flycatchers, and includes a bald eagle winter roost site and two colonial nesting sites for great blue herons and great egrets. A total of 153 bird species have been recorded breeding or migrating through the project area.

Management Issues, Goals and Actions

The planning group identified the following 11 management issues and 18 management goals. They also compiled 27 specific management actions designed to accomplish these goals. The group has already formed committees and begun implementing these goals, and plans to continue an active implementation plan over the next few years.

Issue 1. Even-aged Forest.

Much of the current floodplain forest is between 50 and 70 years old. It is expected that massive canopy die-off will occur 50 to 70 years from now, resulting in open sunny conditions that will encourage invasive exotic strains of reed canary grass to take over and prevent tree regeneration.

Goal 1. Maintain or increase the acreage of forested lands, with multiple age classes, in the project area

Actions

a. Divide the area into management units and manage for floodplain forest regeneration.
b. Restore native plant communities to disturbed areas.
c. Where logging is used to promote forest regeneration, make use of forest products.

Issue 2. Reed Canary Grass Prevents Forest Regeneration

Goal 1. Control reed canary grass

Actions

a. Control reed canary grass using the most effective methods.

Issue 3. Reduced Habitat Diversity From Presettlement Patterns

Goal 1. There should be increased amounts of wet meadow, lowland hardwood forest, and submergent marsh vegetation in the floodplain and the full array of native plant communities on tributary streams and streambanks..

Actions

a. Restore under-represented native plant community types in appropriate sites in the project area. Determine whether a site that could support swamp white oak floodplain forest exists, and if so, pursue a native plant community restoration project.
b. Utilize cost-share restoration programs to restore natural vegetation to stream banks in the vicinity of the project area.

Goal 2. Large portions of Prairie Island should be restored to native oak savanna and prairie where there is landowner interest

Actions

a. Continue to restore dry prairie and dry oak savanna plant communities on Prairie Island where landowners are interested and where feasible. Monitor for wildlife use.

Goal 3. Support watershed and conservation district programs that assist local governments and landowners in stabilizing slopes and protecting upland habitats.

Actions

a. Pursue funding for projects to reduce sedimentation and pollution.

Issue 4. Forest Health

Goal 1. Patches of diverse, healthy floodplain forest with diverse native species-dominated ground layers should be present in several different age classes to ensure that canopied forests will persist into the future.

Actions

a. Control non-native pathogens and non-native invasive plant species where possible.

Issue 5. Degraded Conditions for Forest Interior Birds

Goal 1. The 7,800 ha (approximately 19,000 acres) of forest in the project area should be managed such that breeding populations of cerulean warblers, red-shouldered hawks, and other forest interior birds can survive now and into the future. To meet this goal, there should be at least four closed canopy floodplain forest patches of at least 1,000 ha (2,500 acres), with widths and lengths at least 600 m (1/3 mile) to several kilometers (>1 mile) at all times. The matrix around these patches should be >50% forested, with >25% mature forest and <15% open habitat. Mature forests should have at least 70% canopy cover. The matrix between the mature forest patches will be a patchwork mosaic of different age classes, designed to ensure that this pattern will persist into the future.

Actions

a. Prepare detailed forest regeneration plans for each management unit.
b. Use a cautious approach in using effective timber management techniques to mimic natural tree fall gaps until research results indicate best methods of ensuring forest regeneration and maximizing forest interior habitat.

Goal 2. Healthy populations of birds native to these floodplain forests, especially the 14 species considered to be at risk, should thrive in these forests.

Goal 3. The area should be recognized by programs that support efforts to protect birds of conservation concern.

Actions

a. Identify the area as an Important Bird Area.
b. Support designation of the area as a Minnesota Bird Conservation Area.

Issue 6. Fragmented Ownership

Goal 1. Public land ownership should be consolidated through acquisition of fee title or conservation easements where private landowners are willing sellers, to decrease fragmentation and improve ecologically based forest management.

Actions

a. Pursue purchase of fee title or easements from willing sellers.
b. Develop forest stewardship plans in keeping with this document.
c. Implement Forest Legacy in Goodhue County.

d. Pursue Landowner Incentive Program grants for this area.

Issue 7. Missing Tree Species

Goal 1. There should be cottonwood, silver maple, peachleaf willow, green ash, black ash, American elm, hackberry, black willow, and possibly swamp white oak present in various age classes in appropriate places in floodplain forests.

Actions

a. Regenerate these tree species in appropriate places.

Issue 8. Disturbed Hydrologic Regime

Goal 1. Hydrologic patterns more closely resemble those prior to locks and dams

Actions

a. Use summer drawdowns to recreate a more natural hydrograph.
b. Restore natural hydrology where possible through removal of structures and restoring natural stream meanders on small streams.

Issue 9. Proposed Increased Flow to Vermillion River

Goal 1. Restore floodplain connectivity during low and moderate flow conditions between the Mississippi and Vermillion Rivers.

Actions

a. Modify or replace the existing Truedale spot dike with a low-head, rock ramp structure.
b. Monitor conditions to determine how well the project objectives have been attained.

Issue 10. Special Habitat Needs for Priority Wildlife Species

Goal 1. Wildlife species of conservation concern will be protected through appropriate management.

Actions

a. Implement Best Management Practices to protect habitat for animal species of concern.
b. Common species of wildlife will be considered and kept from becoming rare in the project area.

Issue 11. Need for Research

Goal 1. Secure sufficient funding for research as needed to inform management decisions.

Actions

a. Form a committee to continue to research funding sources and write grant proposals.

Goal 2. Research will be conducted that informs how to best regenerate floodplain forests and maximize forest interior bird habitat.

Actions

a. Develop a floodplain forest regeneration study in the project area that

includes planting seeds and seedlings of floodplain forest trees, control of reed canary grass and other competitors, and long-term monitoring of success.

Goal 3. Work with partners to encourage additional research that will help to answer a number of other research questions (listed in detail in the full plan).

Implementation of Management Actions

Implementation of the many actions identified in this plan will take a concerted effort of all the partners involved in the plan's development, and other partners as well. The group that was involved in preparing this document agreed to:

- Meet on an annual basis to review the list of actions, exchange information on what has been accomplished, and plan the next year's activities. The first meeting will be held in the fall of 2005.

- Form committees to address specific actions on an ongoing basis. Committees already formed include a Research Committee and a Land Acquisition Committee.

- Hold a meeting in conjunction with the Upper Mississippi River Conservation Committee's annual meeting in March 2005 to discuss research needs with additional partners and prepare to write research proposals to various granting agencies.

- Continue to keep partners informed in new initiatives and partnering opportunities via e-mail.