Attachment B <u>Project Summary</u>: Jennie Lake Enhancement, Douglas County

Jennie Lake is a 316-acre shallow lake legally designated by the Minnesota DNR for wildlife management purposes under Minnesota Statute 97A.101 subdivision 2. One of only 45 shallow lakes to receive this formal wildlife lake designation that gives DNR the legal authority to actively manage water levels and restrict surface use, Jennie Lake and surrounding uplands are also managed as a waterfowl refuge by DNR via Game Refuge Order 457 under 97A.085 subdivision 3 & 5 during the fall migration season as a requested by adjacent landowners and local sportsmen clubs. This focus on Jennie Lake stems largely from the history of heavy use of the lake by migrating waterfowl, especially diving and dabbling duck species, and the importance of the lake to both birds and humans hunting in western Douglas County. Since the turn of the century, Jennie Lake has been an important waterfowl migration stepping stone in west-central Minnesota. However, in the early 1980s, both water and habitat quality in the lake became a concern as drainage and intensive agriculture in the Jennie Lake watershed combined with above average annual precipitation increased water levels, nutrient and sediment loads in Jennie Lake. Increased and stabilized water levels have also allowed invasive fish such as fathead minnows to over-winter and multiply within the lake, further disrupting the aquatic ecology of the basin. These factors combined have significantly degraded Jennie Lake's water quality to where the basin is legally listed as "Impaired" due to high nutrients by the Minnesota Pollution Control Agency, and aquatic plants and invertebrates in the lake have subsequently declined in abundance. As a result, the lake provides very poor wetland habitat for waterfowl and other wildlife, and serves mainly as a resting area for field feeding mallards and Canada geese. To remedy this situation and rehabilitate the lake without having the ability to change landscape drainage and natural precipitation patterns that drives the hydrology of Jennie Lake and degrades it's aquatic ecology, DNR and Ducks Unlimited partnered to engineer and install a permanent electric pump on the outlet of the lake to allow DNR to manually lower water levels and induce temporary natural drought conditions. This will winterkill invasive fish, consolidate suspended sediments and nutrients, allow aquatic plants to grow, and will rejuvenate the aquatic ecology of Jennie Lake once reflooded in future years. The Jennie Lake pump project will to cost \$170,000 or more, of which approximately \$70,000 is funded from a 2009 Outdoor Heritage Fund grant to Ducks Unlimited, \$70,000 from a North American Wetlands Conservation Act (NAWCA) grant, \$15,000 from the Minnesota DNR Section of Wildlife (state duck stamp funds), \$10,000 from the Chippewa River Watershed Improvement Project (state funds), and private funding from Ducks Unlimited, Viking Sportsmen, and the Pioneer Heritage Conservation Trust. The project is under construction now (spring 2010), and the pumps should be operational by mid-summer.



Project Summary: Lake Christina Enhancement, Douglas and Grant County

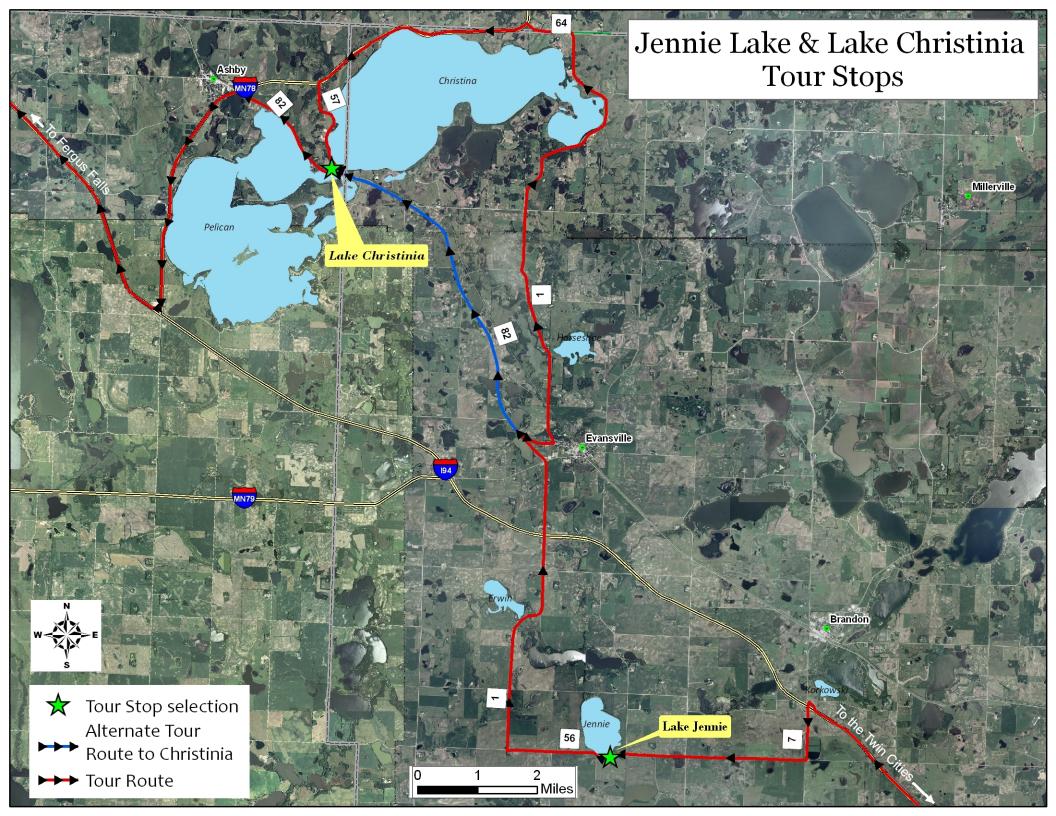
Lake Christina and adjoining Lake Anka comprise 4,076 acres of shallow lake habitat that is legally designated by the Minnesota DNR for wildlife management purposes under Minnesota Statute 97A.101 subdivision 2. These are two of only 45 shallow lakes to receive this formal wildlife lake designation that gives DNR the legal authority to actively manage water levels and restrict surface use, and the eastern two-thirds of Lake Christina is restricted to non-motorized boats to limit bird disturbance. This regulation combined with the lake's large surface area and shallow depths that grow abundant submerged aquatic plants and aquatic invertebrates annually attracts thousands of migrating waterfowl and other birds, including approximately 20% of the world's population of canvasback ducks in some years, according to past DNR aerial surveys. However, due in part to a fixed crest dam on the outlet of downstream Pelican Lake, water levels are now held high in Lake Christina and invasive fish such as carp, buffalo, and fathead minnows now over-winter and over-populate the lake, thereby significantly degrading the lake's water quality, aquatic plants and invertebrates, and overall wetland habitat value for waterfowl. In the past, DNR has applied fish toxicant to Lake Christina with dramatic results (see below), but these treatments are expensive to conduct and results are only temporary since not all fish can be eliminated. To provide a more permanent remedy for this situation without changing water levels on downstream Pelican Lake, DNR partnered with Ducks Unlimited and the Christina-Ina-Anka Lake Association to engineer and install a large electric pump station near the outlet of Lake Christina, which will give the DNR the ability to manually lower water levels and induce temporary natural draw-down conditions that currently no longer occur in the lake due to the downstream dam and increased annual precipitation. These draw-downs will help to winterkill invasive fish, increase sunlight penetration to help aquatic plants grow, and will rejuvenate the aquatic ecology of Lake Christina and Lake Anka in future years. The Lake Christina pump project is estimated to cost over \$1.5 million, of which approximately \$1.4 million will be funded from a 2009 Outdoor Heritage Fund grant to Ducks Unlimited and the remainder by private funds from Ducks Unlimited, the Christina-Ina-Anka Lake Association, and other partners. Archeological investigations are ongoing at the Lake Christina outlet site now, and an easement must be secured by DNR before construction of the project can begin. Implementation of the project is planned for fall of 2010, and the pumps should be operational in 2011.



Lake Christina in 2003, turbid with many invasive fish.



Lake Christina in 2006, clear water and few fish.

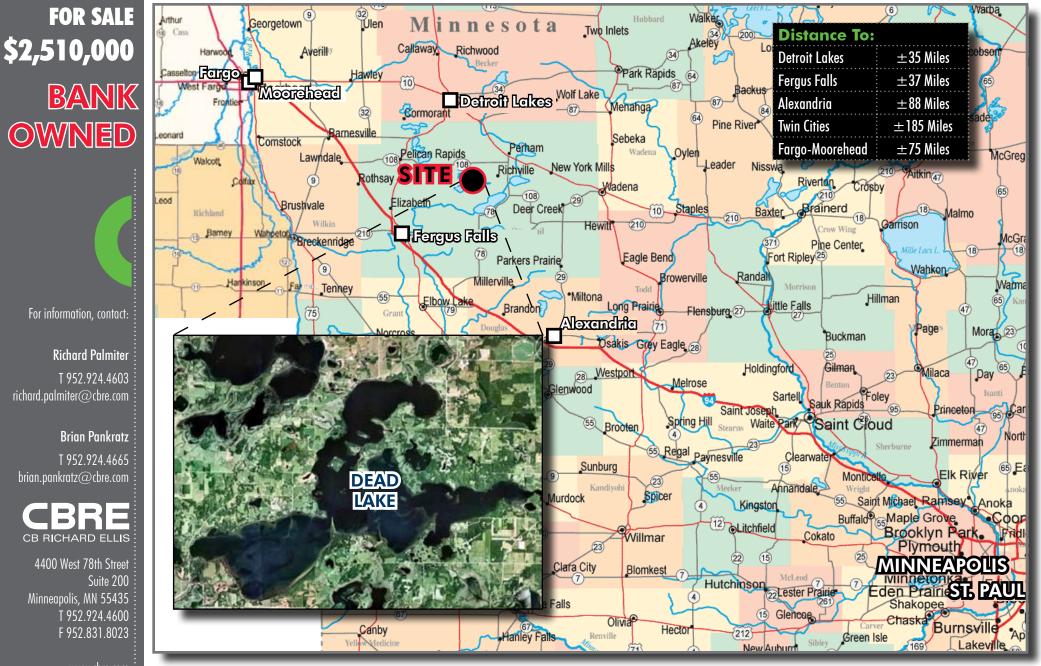


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Site had approval for a 94-unit common interest community, subject to conditions. New approvals may be required and are subject to municipal approval.

Dead Lake is 7,901-acre lake located in Central Otter Tail County. The maximum depth of the lake is 65 feet. Dead Lake has a reputation as one of the best all-around fishing lakes in Otter Tail County, and is also a popular waterfowl hunting lake. A State of Minnesota Wildlife Management Area is located along the northeast shoreline.

Tree species included maple, red and white oak, popple, birch, box elder, dogwood, basswood, white spruce, blue spruce and Norway pine. Wildlife species include white-tailed deer, ruffed grouse and waterfowl.

PID Number	2009 Taxes				
14-000-29-0222-000	\$3,036.80				
14-000-30-0224-000	\$359.84				
14-000-19-0155-000	\$2,132.10				
rt: 14-000-19-0156-000	\$2,204.80				
ter 14-000-20-0160-000	\$7,611.70				
03 14-000-20-0162-000	\$6,746.50				
^{om} 14-000-20-0163-000	\$8,555.18	Martin and a state of the state			
14-000-20-0164-000	\$156.56				
65 Topography	Undulating land with a	combination of woodland, wetland and open meadows			
^{om} Zoning	Natural Environment L	_akeshore Zoning			
Shape	Irregular				
IS Lakeshore frontage	±3.5 miles				
eet Access	Access via 370th Stree	et to Murray Rd. 370th Street consists of a maintained gravel township road			

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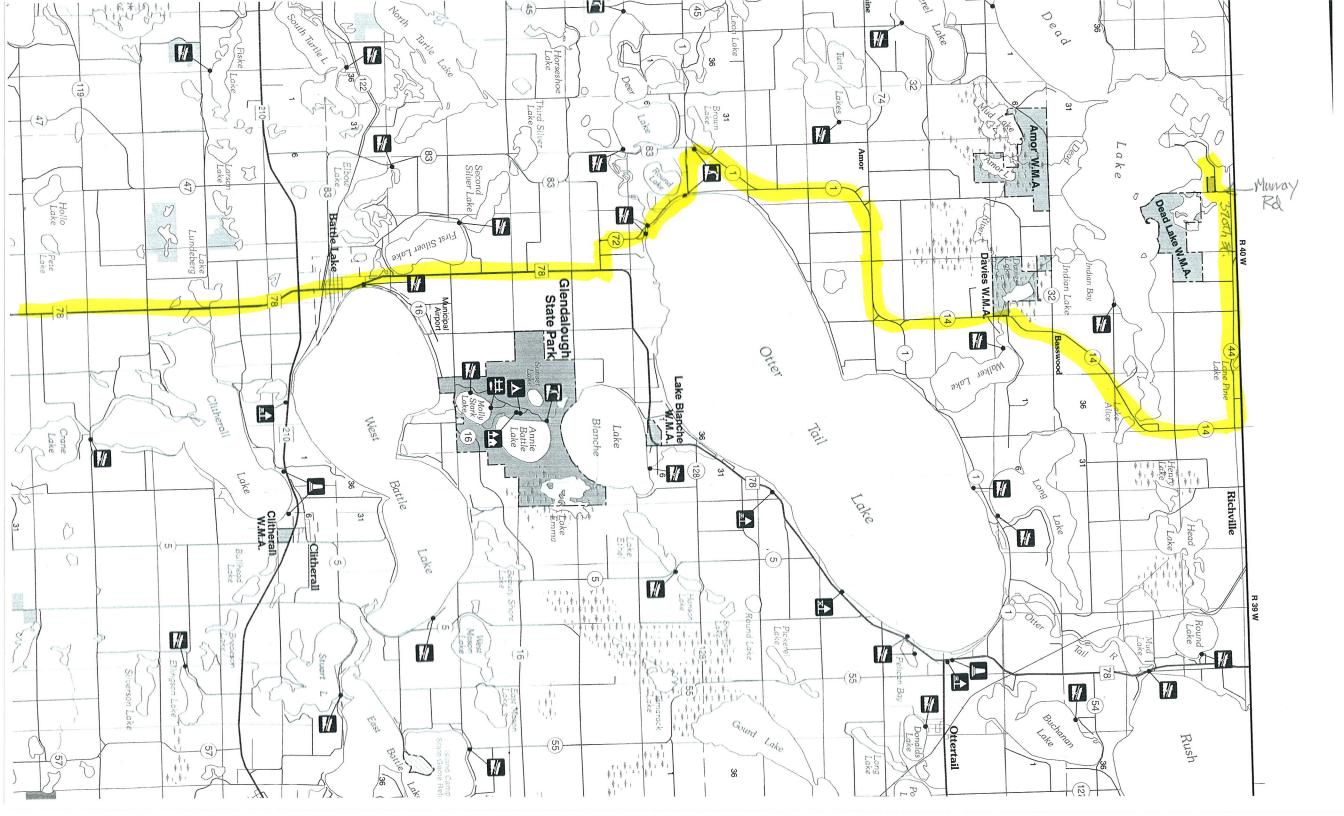


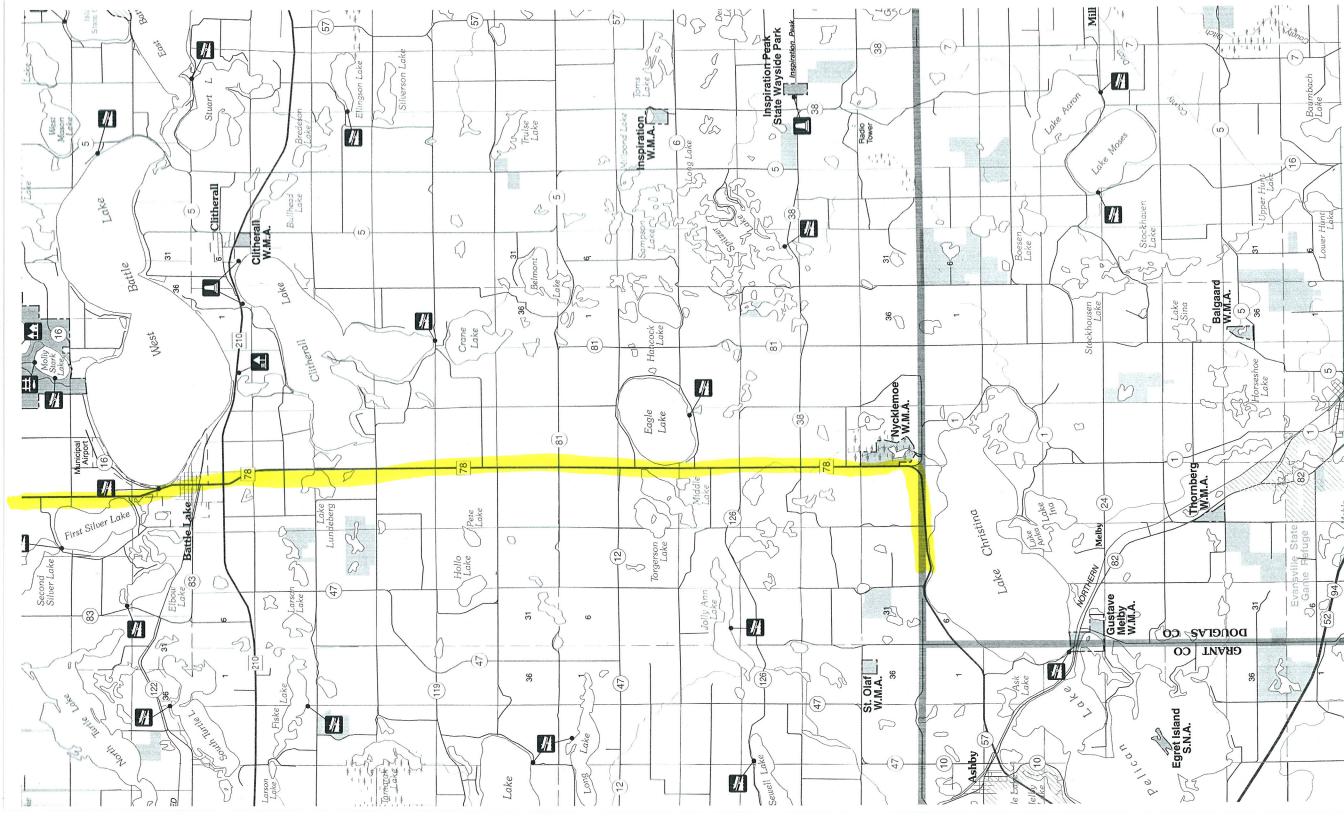
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Attachment D

Possible LSOHC Tour Issues/ Topics

Fergus Falls Area, May 2010

EXPIRING CRP

Acres to expire in Minnesota statewide in next several years (source FSA website)

<u>CRP ENROLLMENT BY YEAR OF CONTRACT EXPIRATION (ACRES AS OF FEBRUARY 2010)</u>							
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	
ALL SIGNUPS	69,344	127,985	293,283	130,543	208,300	101,967	
GENERAL SIGNUP	63,502	112,746	249,858	114,764	189,276	68,255	
CONTINUOUS SIGNUP	5,842	15,240	43,426	15,779	19,024	33,712	

COD ENDOURAENT DU VEAD OF CONTRACT EVDIDATION (ACDEC AC OF FEDDUADU 2010)

Expiring General CRP Issues/Concerns:

- Rolling 'goat hills' are predominately upland whole, fields poorly suited to agriculture and which don't qualify for CCRP practices, (RIM-WRP program is not a good fit for the entire field.
- Fragmentation of upland habitat due to development pressure near surface water resources (lakes). RIM eligibility allows marginal upland to be funded for upland habitat. However, recent RIM funding has been targeted, in a large part, to wetland restorations and riparian areas. LSHOC funds could provide an opportunity to fund marginal ag. land site and return them to upland habitat.

Continuous CRP Issues/Concerns

 Specific Practices with emphasis on riparian habitat include CRP practices CP-21 & CP-22. The original CRP width eligibilities in these practices allowed for up to 350 feet. The current maximums widths for CCRP are 120 feet and 180 feet (without additional technical review). These narrower standards prevent existing contracts which are wider from being entirely reenrolled. Resource concerns and farmer-friendly, straight field edges are common reasons for width selection years ago.

Presenters: Joe Montonye, Grant SWCD Manager & Brad Mergens, West Ottertail SWCD Manager

Expiring contract sites and potential RIM upland sites exist within 30 miles of Fergus Falls.

RED RIVER BASIN FLOOD DAMAGE REDUCTION WORK GROUP AGREEMENT, DECEMBER 1998

This agreement is the product of consensus-based, mediated negotiations by an interagency w/interorganization Work Group. The agreement responds to a mandate from the MN Legislature to resolve gridlock over state permitting of flood damage reduction projects in the Red River Basin. The agreement is intended as the framework for a new, collaborative approach to implementing both flood damage reduction and natural resources protection and enhancement in ways that will benefit all Minnesota citizens. The final agreement indentifies the problems and issues related to flood damage in the Red River Valley as well as identifying broad goals for flood damage reduction and natural resource protection. The Agreement can be found at: ://www.rrwmb.org/html/info.cfm?ID=10#

Noteworthy Projects (examples):

- North Ottawa Flood Control Project. This project was dedicated in 2009. It consists of a 3 square mile impoundment for flood control. It is located in Grant County approximately 45 minutes form Fergus Falls. The project was sponsored and built by the Boix de Sioux Watershed District. Easter weekend this year thousands of snow geese were seen using the site. Presenters Jon Roeschlein, Boix de Sioux Watershed District Administrator
- Whisky Creek Tributaries (Clay County): The subwatershed has experienced significant and damaging flooding, which contributes to erosion and sedimentation, which lead to increased frequency of damaging floods. Floodwater storage of the project is 1.26 inches of runoff; 85 acres of bufferstips, 800 acres of wetland and upland prairie restoration, channel restoration and a short set back levee/ring dike. This could be a site visit (just a half hour from Fergus on I-94 just outside the city of Barnesville) willing to present/help. Presenter : Bruce Albright, Administrator, Buffalo-Red River Watershed District. Also, possibly someone from the DNR regional office.
- Deerhorn Creek Levee Setback Project. This project took 900 acres out of production and provides flood protection and wildlife habitat. It was sponsored by the Buffalo- Red Watershed District. It is located in Wilkin County between Barnesville and Fergus Falls, about 30 minutes from Fergus. Presenter: Bruce Albright, Administrator, Buffalo-Red Watershed District
- Manston Slough Project. This project is located in Wilkin County and is sponsored by the Buffalo Red Watershed District. This project is not yet constructed but when it is will result in a 3,000 acre wetland restoration. This project has numerous state, federal, and local partners including multiple landowners. The LSOHC funded \$350,000 towards this project last year. Presenter: Bruce Albright, Administrator Buffalo Red Watershed District

WILDLIFE HABITAT RESTORATION, IMPROVEMENT, AND ENHANCEMENT COST-SHARE PROJECT

This is a project idea proposed by East and West Otter Tail SWCDs. The goal is to restore and/or enhance wetland, lake shore, and prairie and forest habitats in three ecological regions using practices that are appropriate in each of the ecological regions. In the prairie region the target would be to restore and/or enhance native prairie habitats with an emphasis on nesting cover for both waterfowl and upland game birds. In the Forest Prairie Transitional Region the target is to restore prairie, oak

savannah, and hardwood forest habitats with an emphasis on nesting cover for waterfowl and various upland game birds including Wild Turkey, along with big game species. In the Northern Forest Region the target is restore and/or enhance forest habitats including forest openings and forest reestablishment with an emphasis on forest upland game birds, waterfowl and big game species. Wetland restoration and/or enhancement and lake shore habitat restoration and buffers will be a priority in all three ecosystems where appropriate. Sites would be available to view within 30 miles of Fergus Falls. Presenters: Darren Newville, East Ottertail SWCD Manager & Brad Mergens, West Ottertail SWCD Manager

RIM/WRP LSOHC 2009 Funding

Approximately \$9 million in LSOHC funds were awarded to BWSR last year to use in cooperation with the Federal Wetlands Reserve Program to acquire permanent easements and resore wetlands. Potential project sites are located in the Fergus Falls area but there are no completed sites to view.

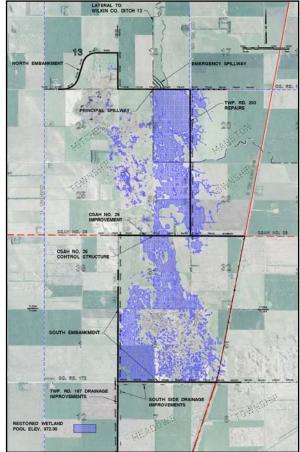
Attachment E Manston Slough Restoration Project

Proposers

Buffalo-Red River Watershed District

Description/Location:

The Manston Slough Restoration is a cooperative undertaking between the BRRWD, the Minnesota DNR, the MN BWSR, the NRCS, and the US Fish and Wildlife Service. A Memorandum of Understanding (MOU) and Operation & Maintenance Plan have been developed in conjunction with these organizations. All of the agencies have signed these agreements and fully support the project. The project area is a portion of the South Branch of Buffalo River watershed and has a drainage area of 27.5 square miles. The project covers approximately 6 sq. miles of land. The majority of this land is currently owned by the State as a Wildlife Management Area or by the USFWS as a Waterfowl Production Area. Project consists of installing an outlet structure and improving a number of roadways with additional clay embankment. The site will provide a total of 5.440 acre-feet of un-gated runoff storage below the emergency spillway elevation. A 1,100+ acre wetland complex will result from this project.



Project Benefits:

Flood Control

40 to 50% reduction in the 10-yr & 100-yr discharges from the project area.

Habitat Restoration Reduced turbidity and major wetland restoration.

Erosion Reduction Reduction in peak discharges along the waterways will result in a reduction in turbidity and suspended solids thereby improving water quality.

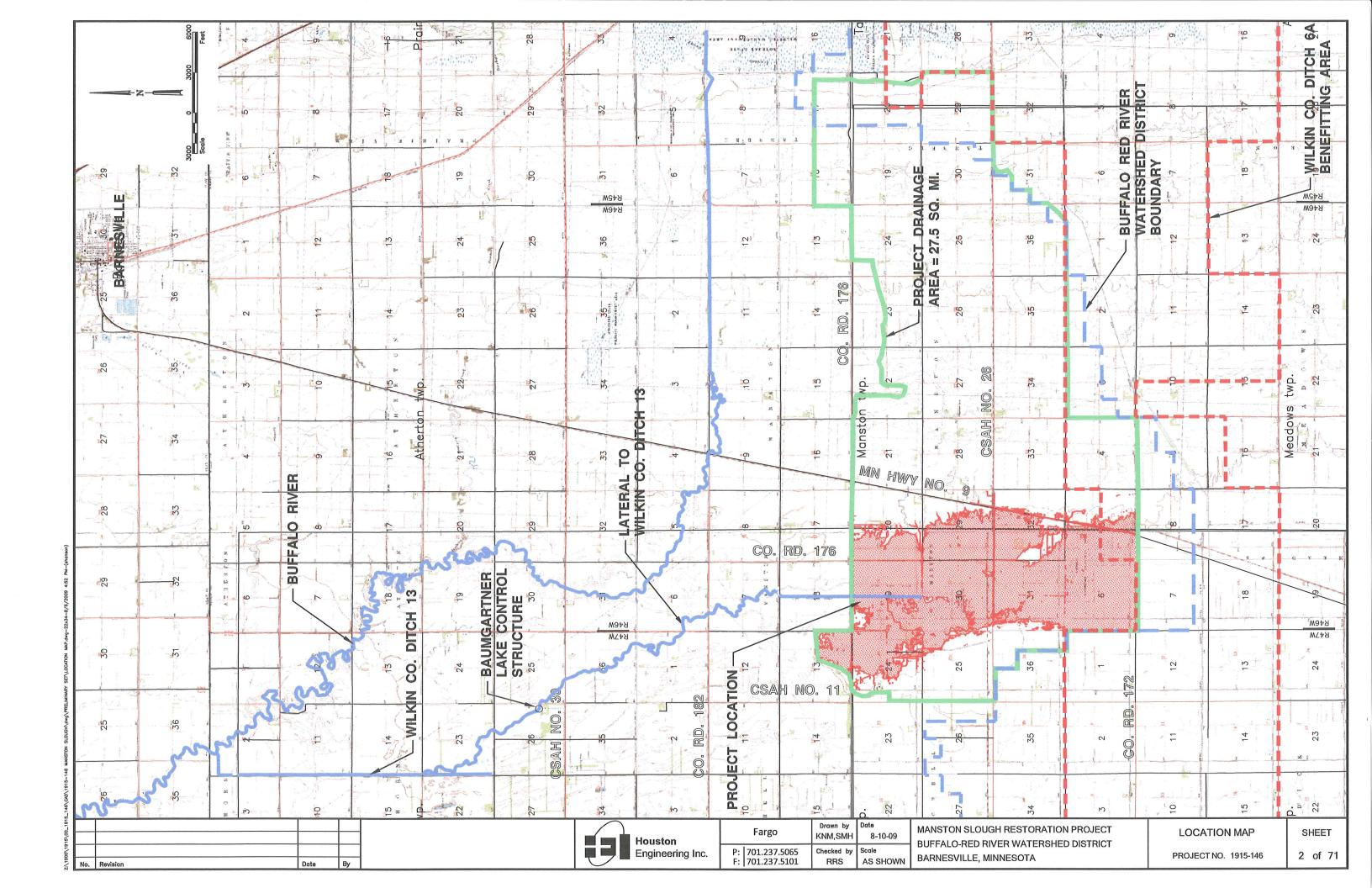
Project Cost: \$4,054,900 State75% (\$3,041,175) / CPL Grant (\$400,000) / Local (\$613,725) State Funding Secured: \$2,033,439 / State Funding Still Needed: \$1,007,736

_				
		Previous Years	FY 2010 (7/1/09-6/30/10)	FY 2011 (7/1/010-6/30/11)
	Approvals	PT/WG/WD	DNR/COE/WCA	
	Funding	State \$200K WD \$200K	State \$200K WD \$100K BWSR \$350K	State \$2M Local \$650K CPL \$400K
	Construction	Project Design	Project Design, Acquisition	Construction

Status: Construction Ready in Summer 2010

Key: PT=Project Team; WG=Flood Damage Reduction Work Group; WD=Watershed District; DNR=Minnesota DNR; O=Other

<u>Partners:</u> State of Minnesota Flood Damage Reduction Program/Conservation Partners Legacy Grant Program/NRCS/USFWS/DNR/BWSR/Landowners



Attachment F

LSOHC NW MN Visit, May 27, 2010

Issues and practices facing Prairie Conservation in Minnesota

Draft itinerary

- 09:00 Bus picks Tom Landwehr up in Rothsay enroute to Manston Marsh
- 11:00 Leave Manston for Bluestem. Enroute, Tom Landwehr will cover the following topics:
 - Very short history of prairies and more recent work to do prairie conservation
 - Collaborative efforts to build prairie/wetland complexes; prairie chicken corridors
 - 25-year Plan process
- 11:45 Arrive Bluestem area, park at Prairie Restorations, Inc., facility
 - Welcome to Bluestem; brief description (Brian Winter)
 - Description of grass nursery operation by PRI staff
 - Role/opportunities for private enterprise in restoration and enhancement projects
 - Use of working land easements for restoration projects
 - Local ecotype seed sourcing
 - Q&A
- 12:05 Drive to TNC "Project 4"
 - Burn crew equipment and process demonstration (Matt M)
 - Discussion of prescribed fire requirements (planning, training, infrastructure, etc.)
 - Prairie chicken recovery collaborative efforts, DNR wildlife manager (Earl or Doug)
 - Q&A
- 12:30 Bus departs for St. Paul



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Bluestem Prairie Scientific and Natural Area

Africa | Asia Pacific | Caribbean | Central America | North America / United States | South America

Bluestem Prairie Preserve is one of few places in the state where visitors can experience the vastness of the native prairie that once covered a great portion of western Minnesota and the Dakotas. Watching the prairie chickens "booming" in early spring is a special highlight, and blinds have been built to accommodate viewing. The opportunity to see migratory birds, and other native fauna and flora also makes a trip to Bluestem Prairie worthwhile.

Location

Northwestern Minnesota, Clay County, near Moorhead

Size 5,821 acres

How to Prepare for Your Visit

You can visit Bluestem Prairie anytime, but reservations are necessary for the prairie chicken blinds; call the Conservancy's Northern Tallgrass Prairie Office at (218) 498-2679. For more information on visiting this and other Minnesota preserves, check out our Preserve Visitation Guidelines.

Directions

From Moorhead, drive east about 14 miles on U.S. Highway 10 to the intersection with MN Highway 9. Turn south and travel for 1.5 miles and then turn east on 17th Avenue South and continue for 1.5 miles and park in the lot on the north side of the road. To reach another parking area on the southeastern edge of the preserve, continue south on Highway 9 to Clay County Highway 12. Turn east and drive for about 3.5 miles. Nearest services are in Moorhead, Glyndon, Hawley and Buffalo River State Park.

Plants

Bluestem Prairie harbors more than 313 plant species. Seven of these are designated by the State of Minnesota as species of special concern, including sedge, sticky false asphodel, small white lady's slipper, northern gentian, plains reed grass, blanket-flower, and oat-grass. The western prairie fringed orchid, a federally threatened species, also grows on the preserve.

Animals

The greater prairie chicken (listed as 'special concern' by the State) uses certain areas on the preserve as "booming" (courtship) grounds and nesting areas. Other birds found here include upland sandpiper, sandhill crane, marbled godwit (another species of special concern), loggerhead shrike (a threatened species), and Henslow's sparrow (an endangered species). Mammals include the plains pocket mouse and the prairie vole, both species of special concern. These rodents may provide prey for another species of special concern, the western hognose snake.



My Nature Page

A male Greater prairie chicken "booming" on the prairie. © The Nature Conservancy



Blog

Download video and audio of the Greater prairie chicken's elaborate courtship displays.

Video

Low Resolution (1.7mb) High Resolution (3.2mb) (All files, Windows Media Video)

Audio MP3 Format (5mb)









begins at home

SAVE MONEY.





Three rare butterflies can be seen at the preserve: the Powesheik skipper and <u>regal fritillary</u>, both species of special concern, and the Dakota skipper, a threatened species. A multi-year research project on invertebrates conducted through North Dakota State University's entomology department has revealed that a rare beetle species, the prairie stinkbug, thrives on a portion of the preserve. This ongoing research project and similar ones are crucial to understanding the prairie's ecological systems and monitoring its needs.

Why the Conservancy Selected This Site

Despite its number of landowners, the preserve has remained in native prairie for the most part. Today, it is recognized as one of the largest and highest quality northern tallgrass prairies in the U.S. When Buffalo River State Park was established, it included only a small portion of native prairie and was used mainly for public recreation along the river. The park boundaries were enlarged significantly in the 1960's when concern grew over rapidly diminishing grassland. Today, the Conservancy is taking many active steps to ensure the protection of this increasingly rare natural treasure.

What the Conservancy Has Done/Is Doing

The Nature Conservancy became actively involved in preserving this native prairie by acquiring more than 1,000 acres south of the Buffalo River in 1975. Since then, the Conservancy has acquired other parcels, enlarging the preserve and enhancing the habitat for native species. While most of the preserve has remained in its natural state, not all of the land escaped cultivation. Furrows are still evident in areas where plowing occurred. At one time, most of the prairie was hayed. Some of the preserve was used for grazing cattle and horses, and this has had an impact on prairie vegetation in specific areas.

The Conservancy manages the preserve through <u>prescribed burning</u>, conducting biological inventories, and controlling non-native species by hand-cutting, mowing and localized spraying. One of the most troublesome exotic plants is leafy spurge. In recent years, the Conservancy has restored more than 677 acres of prairie on the preserve which formerly had been ditched, farmed and used as a gravel pit.

School groups around Moorhead and Fargo use Bluestem Prairie for environmental education, and the preserve continues to be an important site for biological research by area colleges and universities across throughout the Midwest.



Join The Nature Conservancy on

The Nature Conservancy in Minnesota - Bluestem Prairie Scientific and Natural Area

