

# Planning Update

## Comprehensive Conservation Plan Bowdoin National Wildlife Refuge Complex

Issue 2, June 2011



This planning update describes the progress the U.S. Fish and Wildlife Service (Service) has made in development of a comprehensive conservation plan for the Bowdoin National Wildlife Refuge Complex, Montana:

- Summarizes the different alternatives the Service considered for achieving the draft vision and goals for the refuge complex.
- Provides information about how to comment on the draft plan.

### The Refuge Complex

The Bowdoin Refuge Complex covers 84,724 acres in five national wildlife refuges—Black Coulee, Bowdoin, Creedman Coulee, Hewitt, and Lake Thibadeau—and Bowdoin Wetland Management District.

Located in the mixed-grass prairie of north-central Montana, the refuge complex lies within an area known as the Prairie Pothole Region. The refuge complex oversees management of 14 units and numerous easements located in Blaine, Phillips, and Valley Counties and in the eastern half of Hill County. The refuge complex welcomes an estimated 25,000 visitors annually.

### Comprehensive Conservation Plan

In 1997, Congress passed the National Wildlife Refuge System Improvement Act. This legislation provided clear guidance for the management of the Refuge System. To implement this guidance, the act

also requires that, by 2012, the Service will have developed a comprehensive conservation plan for each unit in the Refuge System.

Consequently, the Service has been preparing a comprehensive conservation plan and associated environmental assessment for the Bowdoin National Wildlife Refuge Complex. The plan will guide management for all refuge programs and be updated every 15 years.

### Draft Vision Statement

*Under seemingly limitless skies, Bowdoin National Wildlife Refuge Complex provides vast expanses of gently rolling native mixed-grass prairie, dotted with an array of diverse wetlands.*

*Recognized as one of the most important migratory bird refuges in the State of Montana, these habitats are managed to ensure that grassland- and wetland-dependent waterfowl, shorebirds, songbirds, and native wildlife species thrive.*

*Visitors recognize these unique and wondrous qualities and experience a sense of solitude and a connection to the land that fosters a desire to conserve this and other remnants of the northern Great Plains.*

### Draft Goals

The Service developed the following draft goals to describe the management focus needed to achieve the draft vision.

**Upland Habitat.** Protect, enhance, and restore grassland habitat for breeding and migratory birds and other wildlife while maintaining the biological diversity and integrity of native prairie grasslands.

**Wetland Habitat.** Provide, protect, and manage wetland habitat for breeding and migratory birds and other wildlife that maintains the biological diversity and integrity of prairie pothole wetlands.

**Visitor Services.** Provide visitors of all abilities with wildlife-dependent recreation, interpretation, and environmental education opportunities that foster an appreciation and understanding of the unique wildlife, plant communities, and cultural resources of the Montana Prairie Pothole Region.

**Partnerships.** Maintain and expand partnerships that preserve, restore, and enhance healthy and productive prairie-wetland complexes on Bowdoin National Wildlife Refuge and within Bowdoin Wetland Management District.

**Operations.** Prioritize for wildlife first and emphasize the protection of trust resources in the use of staff, funding, partnerships, and volunteer programs.

**Salinity and Blowing Salts.** Develop a water management system on

Bowdoin National Wildlife Refuge that would protect the environment, mitigate current and future blowing salt concerns for neighboring properties, while providing quality water and wildlife habitat for migratory birds and other wetland dependent wildlife.

## Alternatives

The Service completed three separate analyses for the draft plan:

1. Overall management of the Bowdoin National Wildlife Refuge Complex.
2. Retention of Lake Thibadeau Refuge in the National Wildlife Refuge System.
3. Management of the salinity and blowing salts situation at Bowdoin Refuge.

For each analysis, we have selected one of the evaluated alternatives as the proposed action. After public review and comment, these draft proposed actions will be presented to the Regional Director of the Service's Mountain–Prairie Region, who will make the final determination to accept them or request further analysis. The following sections summarize the three analyses. More detailed descriptions and consequences are in the environmental assessment and the draft plan.

### 1. Overall Refuge Complex Management

*Alternative A (Current Management–No Action).* This alternative represents the current management of the refuge complex—a baseline against which to compare the other alternatives. Programs would follow

the same direction, emphasis, and intensity as they do at present and with the same budget and staff levels. Current habitat and wildlife practices benefiting migratory species and other wildlife would not be changed or expanded. The staff would perform limited, issue-driven research and monitor only long-term vegetation change. The Service would continue to manage the Black Coulee, Creedman Coulee, Hewitt Lake, and Lake Thibadeau Refuges as unstaffed satellite refuges.

*Alternative B (Proposed Action).* The Service would conserve natural resources by restoring, protecting, and enhancing native mixed-grass prairie and by maintaining quality wetland habitat for target migratory and resident birds. Efforts to control and eradicate invasive and nonnative plants that are causing habitat losses and fragmentation of grasslands would be increased. Research would be conducted to control crested wheatgrass and to restore treated areas. Staff would manage enhanced wetlands to mimic natural conditions for wetland-dependent migratory birds during spring and fall migrations and during the breeding and nesting season.

Visitor services programs would be enhanced, providing more opportunities for staff- and volunteer-led programs to provide a greater understanding of the purposes of the refuge complex, importance of conserving migratory birds and the unique mixed-grass prairie and wetlands, and an awareness of the mission of the Service and the Refuge System. A sanctuary would be created for waterfowl on the east half of Bowdoin Refuge during the hunting season, closing this to all foot traffic. A wildlife observation site would be added along the auto tour route. The Service would work with the State to investigate the potential for offering a safe, compatible, and quality big game hunt at Bowdoin Refuge.

The success of these expanded efforts and programs would depend on more staff, research, and monitoring, including more operations money, infrastructure, and new and expanded partnerships.

*Alternative C.* In addition to including most of the elements in

alternative B, the Service would increase the water management infrastructure—such as water delivery systems, dikes, and levees to manipulate individual wetlands—to create a more diverse and productive wetland complex. Biological staff would monitor the level of sedimentation occurring in natural wetlands and plan for its removal to restore the biological integrity of these wetlands.

Through partnerships, the Service would increase the acres of invasive species treated annually, with an emphasis on preventing further encroachment of crested wheatgrass and Russian olive trees into native grassland. The refuge complex would become a conservation-learning center for the area. Public access would be improved to Creedman Coulee Refuge.

### 2. Lake Thibadeau National Wildlife Refuge

*Alternative A (Current Management–No Action).* The Service owns less than 1 percent of the lands within the 3,868-acre approved acquisition boundary of Lake Thibadeau Refuge. The remaining area is private land encumbered by refuge and flowage easements. The easements, which were acquired more than 70 years ago as part of a New Deal program initiated by President Franklin D. Roosevelt, granted the Service the right to manage the impoundments and the uses that occur on that water and to control hunting and trapping. These easements do not prohibit development, grazing, or agricultural uses on the uplands, which today are heavily farmed and grazed. Due to upstream development in the watershed, the impoundments do not receive adequate water supplies and are often dry enough to be farmed. The Service would retain the refuge and flowage easements; however, no quality habitat or public use opportunities would be provided and no additional land management rights would be acquired.

*Alternative B (Proposed Action).* The lack or loss of habitat is the basis for the Service's proposal to evaluate divesting this refuge. Using the Service's (Mountain–Prairie Region) divestiture model, the planning team evaluated the habitat quality



Mark Wilson / USFWS

*Piping plover is a shorebird that nests on open shorelines at the refuge complex.*

and ability of Lake Thibadeau Refuge to meet its purposes and support the goals of the Refuge System. As a result of this analysis, the Service is recommending divestiture as the proposed action: the Service would revoke the easements and voluntarily

relinquish the water rights to the State. Divesting the refuge would release the few resources expended on this area, which would then be used on other lands in the refuge complex that have greater wildlife value and need.



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Salts blow off Dry Lake at Bowdoin Refuge.

### 3. Salinity and Blowing Salts

The salinity and blowing salts situation at Lake Bowdoin, found in Bowdoin Refuge, is a direct result of the “salt balance,” which is the relationship between the salt entering the refuge compared to the salt leaving the refuge. For more than 100 years, the amount of salt entering the refuge has been, and continues to be, far more than the amount of salt leaving. This has caused an unnatural increase in salinity. Periodic droughts, floods along Beaver Creek, and water management decisions by refuge managers have all contributed to keeping the salinity concentrations in Lake Bowdoin and the surrounding wetlands from becoming exceedingly high; nevertheless, it continues to increase. Increasing salinity has the potential to shift Lake Bowdoin from one that supports a diverse plant and animal community that thrives in a brackish-type system to one that thrives in a saline-type system. Such a shift could negatively affect the ability of the lake and surrounding wetlands to fully support and meet the life cycle needs of migratory birds, including waterfowl.

To address this long-standing issue, the Service assembled a team from various Federal and State agencies—hydrologists, biologists, engineers, managers, planners, and contaminant specialist—to develop and evaluate five alternatives:

- *Salinity alternative 1*—current management (no action)
- *Salinity alternative 2*—evaporation ponds and removal of salt residue
- *Salinity alternative 3*—flushing by Beaver Creek
- *Salinity alternative 4*—underground injection and flushing by Beaver Creek (proposed action)
- *Salinity alternative 5*—pumping to Milk River

After almost 3 years of analysis, including an interim public meeting, the Service is proposing alternative 4 as the best option for meeting the salinity objective for Lake Bowdoin. This decision was based on a number of factors including the effectiveness of treatment, environmental and socioeconomic consequences, and cost. The Service expects this proposed treatment would be highly effective in meeting the salinity goal of maintaining a more naturally brackish system. The following summarizes the proposed action; the environmental assessment describes all five alternatives.

*Alternative 4—Underground Injection Well and Flushing by Beaver Creek (Proposed Action).* An underground injection well would force saline water deep into the ground below the lowermost geologic formation containing an underground source of

drinking water. The pump would be used continuously until the Service’s objective of maintaining a brackish water system was met, estimated at 7,000 milligrams per liter of total dissolved solids (salts). Once this objective was achieved and applicable water quality standards were met, the Service would determine the best way to re-create a flow-through system into Beaver Creek to maximize the effects of natural flooding and to maintain this brackish system by restoring the lake’s salt balance. If natural flooding did not occur or more water from the Milk River was not granted to intermittently allow water to flow through the lake, the injection well could be used periodically to maintain salinity at an acceptable level. This would improve wildlife habitat for wetland species and reduce the potential for negative effects to refuge visitors and neighboring landowners.

### Next Steps

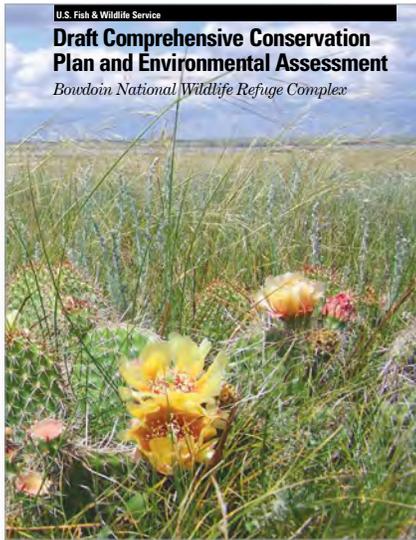
- There is a 30-day public review of the draft comprehensive conservation plan and environmental assessment, which includes a public meeting.
- The Service will revise the draft plan as needed based on the public comments, and the Regional Director will select a preferred alternative for each of the three analyses, which will guide development of the final plan.
- A “notice of availability” published in the Federal Register will let the public know that the Service has completed and approved the final comprehensive conservation plan. The Service will make the final plan available on the planning Web site and with hard copies on request.
- The Service begins implementation of the approved, final plan.

### Contact Information

To learn more about the Bowdoin National Wildlife Refuge Complex, please visit our website <[www.fws.gov/bowdoin](http://www.fws.gov/bowdoin)> You may reach refuge staff by telephone at 406/654 2863 or by email [bowdoin@fws.gov](mailto:bowdoin@fws.gov).

## Draft Plan Available for Public Review

The Service has completed a draft plan and environmental assessment for public review. The plan is based on a draft vision statement, which is supported by six goals including a separate goal to address the salinity and blowing salts situation on Bowdoin National Wildlife Refuge.



### How to Request a Draft Plan

You may view the draft plan and environmental assessment online:

[www.fws.gov/mountain-prairie/planning/ccp/mt/bwd/bwd.html](http://www.fws.gov/mountain-prairie/planning/ccp/mt/bwd/bwd.html)

Or you may request a hard copy of the draft comprehensive conservation plan and environmental assessment from the Bowdoin National Wildlife Refuge Complex.

Telephone: 406/654 2863

Email: [bowdoin@fws.gov](mailto:bowdoin@fws.gov)

### How to Provide Comments

The Service invites you to share your comments about the environmental assessment and proposed actions and the draft plan.

To be considered, all written comments must be emailed or postmarked by July 25, 2011.

You can use the comment form under “Public involvement” on the project Web page. In addition, we will accept emails, faxes, and letters.

- *Comment form:* [www.fws.gov/mountain-prairie/planning/ccp/mt/bwd/bwd.html#Public](http://www.fws.gov/mountain-prairie/planning/ccp/mt/bwd/bwd.html#Public)

- *Email:* [bowdoin@fws.gov](mailto:bowdoin@fws.gov)

- *Fax:* 406/644 2661  
“Attn: Laura King, Team Leader”

- *Postal mail:*  
Laura King, Planning Team Leader  
U.S. Fish and Wildlife Service  
58355 Bison Range Road  
Moiese, Montana 59824

### Public Meetings

You may also wish to participate in our public meeting. There will be a short presentation on the draft plan, and then we will record any comments you would like to provide.

June 28, 2011  
6:30 p.m. to 8:30 p.m.  
Great Northern Hotel  
2 South First Street East  
Malta, Montana

For directions, please call 406/654 2863.

*Front photograph: Long-billed curlew (left) and marbled godwit (right) in upland habitat.*  
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RETURN SERVICE REQUESTED