



Wildlife Resources

This Fact Sheet provides a brief overview of a specific topic important to the Master Water Control Manual Review and Update Study process. Information contained in this Fact Sheet is summarized from technical reports and the preliminary Revised Draft Environmental Impact Statement.



Summary

The Missouri River basin supports an abundance of wildlife, including species that are federally listed as threatened or endangered under the Endangered Species Act. Of the listed species, the endangered least tern and the threatened piping plover are of most concern, because they depend on the river for nesting habitat, which is directly affected by water level changes. Total average annual tern and plover habitat ranges from 227.9 acres under the CWCP to 344.7 acres (M66) for the eight representative alternatives. This is a difference of 116.8 acres. This difference is largely due to an increase in acreages in the reach downstream from Garrison Dam resulting from the inclusion of the intrasystem regulation modification. Alternative M66 results in a positive impact of 51 percent compared to the CWCP. All other alternatives result in positive impacts ranging from 20 to 40 percent compared to the CWCP.



Existing Conditions

The Missouri River is a dynamic system that creates and maintains important forest, grassland, and wetland habitat for a wide diversity of wildlife including at least 60 species of mammals, 301 species of birds, and 52 species of reptiles and amphibians. Of these, 6 bird and 2 bat species occurring in the river valley are federally listed as threatened or endangered. The diversity and abundance of wildlife reflect the mix of habitat classes in the Missouri River basin: riverine; lakes and ponds; emergent, scrub-shrub, and forested wetlands; riparian forests; grasslands; and croplands. The combination of open water, wetlands, and riparian vegetation is particularly important for the large number of waterfowl that stop along the Missouri River during spring and fall migration.

The Missouri River basin provides breeding habitat for the endangered interior least tern and the threatened bald eagle and

piping plover. It also provides migration and wintering habitat for the endangered peregrine falcon and whooping crane. The river valley potentially provides habitat for the endangered Eskimo curlew, gray bat, and Indiana bat. Of these threatened and endangered species, of particular importance are the endangered least tern and the threatened piping plover, because they depend on the river for nesting habitat, which is directly affected by water level changes. These birds typically nest in colonies on river sandbars, sandy shorelines of lakes, or in sandpits along the river. Important nesting reaches are below Fort Peck, Garrison, Fort Randall, and Gavins Point dams.

Multiple characteristics of the river influence the type and distribution of vegetation on the floodplain. Continual changes in vegetation type and distribution result in ongoing habitat changes, and corresponding changes in wildlife use. Erosion and sediment transport and deposition play an important role in the creation and breakdown of sandbar habitat, scouring or elimination of vegetated lands, and creation of suitable conditions for plant germination and growth. Additionally, lake storage levels determine the water depths in wetlands located along the six mainstem lakes.

The ongoing reduction of wetland and riparian habitat that results from erosion and degradation of the river channel, lack of cottonwood forest regeneration, and agricultural conversion, reduce the productivity and diversity of wildlife in the Missouri River basin. Degradation of the river channel lowers water levels and alters moisture conditions in adjacent wetlands and riparian communities. Shoreline erosion reduces riparian habitat, including cottonwood forests. Regeneration of cottonwood forests has been adversely affected by reduced overbank flooding that creates suitable conditions for germination and survival of cottonwood seedlings. The lack of high flows in the



river restricts creation of sandbars and wide expanses of unvegetated shorelines needed by wildlife for nesting and foraging.

The endangered interior least tern and threatened piping plover are two species that nest on exposed sandbars. For development of nesting habitat, periodic high flows are required to remove encroaching vegetation. However, during and following the nesting season, stable or declining flows are needed to avoid nest flooding and stranding of immature birds. Impacts to island and sandbar acreages provide insight into the effects of the alternatives on these two wildlife species.

Comparison of the Alternatives

Because the interior least tern and piping plover are directly affected by Missouri River flows, effects on these species were individually modeled in terms of number of acres of available habitat for the 100-year study period. Two factors were considered when reviewing the impacts to tern and plover habitat:

1) the reach downstream from Garrison Dam has at least half of the total habitat, and 2) the reach downstream from Gavins Point Dam has provided the greatest number of fledged birds in recent years even though it has about 80 percent less habitat than the reach downstream from Garrison Dam.

The figure presents the average annual tern and plover habitat for the eight representative alternatives. Total average annual tern and plover habitat ranges from 227.9 acres (CWCP) to 344.7 acres (M66). This is a difference of 116.8 acres. This difference is largely due to an increase in acreages in the reach downstream from Garrison Dam resulting from the intrasystem regulation modification. Increasing levels of conservation during droughts is beneficial. Providing additional spring/summer releases to further benefit fish and wildlife slightly reduces the habitat amount from that provided by C31. All alternatives result in positive impacts of at least 20 percent compared to the CWCP. Alternative M66 results in a 51 percent impact.

Total average annual tern and plover habitat

