

RIPARIAN AND WETLAND WILDLIFE HABITAT

Introduction

Riparian habitats occur along lakes, rivers, streams, springs, and seeps where the vegetation and microclimate are influenced by year-round or seasonal water and associated high water tables. Plant and animal species in these areas are more productive and diverse than on nearby uplands, making these areas very important to many wildlife species.

Timber harvest and salvage, insect epidemics, and fire can have great impacts on wildlife species using riparian habitats. These generally involve changes in the amount and types of vegetative cover and in the quantity and quality of water. When these habitats are disturbed, protection from weather extremes can be lost, as can hiding cover, which is especially important around such riparian features as elk wallows. Some changes in seral/structural stage distribution within riparian zones can benefit wildlife by promoting diversity of habitats over the long term. Other effects on riparian habitats can include changes in plant species composition, water temperature, shading, surface humidity, streamside erosion, water quality, and predator-prey interactions (Exhibit Rr-2).

Many wildlife species visit riparian areas daily to drink, forage, bathe, and relieve thermal stress. Within the Flathead National Forest, 36 bird, four mammal, three reptile, and two amphibian species are recognized as dependent upon riparian marsh habitat; 23 bird, seven mammal, and four amphibian species are recognized as dependent upon forested riparian areas (LRMP, Planning record 219.12[g], 1980). These include threatened and sensitive species (bald eagle, harlequin duck, common loon, western toad, northern leopard frog, Westslope cutthroat trout, and bull trout), and some Neotropical migrants that are "Birds of Conservation Concern" (Exhibit Rn-1).

Deciduous riparian habitats cover less than one percent of the western United States yet are the primary breeding grounds of over 60 percent of the passerine bird species (Tewksbury, et al., 1998). Snags located near water have a high degree of use for nesting by species like wood ducks, goldeneyes, and tree swallows. Many species depend on riparian areas as travel corridors, and continuous forested cover within the zone can be critical for use of an area by a species such as the fisher. Other wildlife depend on water quality factors, such as the harlequin duck, which must have clear, clean water for its aquatic food source.

Effects on wildlife using riparian habitats tie to Issue 5, "Water quantity and fine sediment deposition," as discussed in Chapter 1. There are also ties to Issue 1, "Wildlife Security;" Issue 2, "Effects on existing old growth habitat and on late-seral/structural stage forests;" Issue 3, "Landscape dynamics—Connectivity;" and Issue 4, "Landscape dynamics-- Seral/structural stage patch size and shapes." For more information about effects analysis methods, conclusions, and cumulative effects, see the "Water Resources," "Vegetation," and "Fisheries" sections of this chapter.

Differences Between the DEIS and FEIS

This Riparian and Wetland Wildlife Habitat section of the FEIS differs from the same section in the DEIS in that analysis for the new Alternative F was included. Minor changes within individual sentences were made to improve clarity.

Information Sources

Effects specific to wet meadows typically dominated by sedges and willows are described in the "Boreal Toad, Northern Bog Lemming, and Northern Leopard Frog" subsection of the "Sensitive, Threatened, and Endangered Wildlife Species" section of this chapter. Wildlife population viability concerns at the Flathead National Forest and larger scales are assessed in Exhibit Rg-1.

Analysis Area

The analysis area for riparian and wetland wildlife habitat is the Logan Creek watershed down to the confluence with Good Creek, but excluding the Griffin and Sheppard drainages. This area is the same as the Logan Geographic Unit used for Ecosystem Analysis at the Watershed Scale. At approximately 61,266 acres (96 square miles), it is large enough to include the home range of numerous wildlife species using riparian habitats and is representative of effects of fires, natural tree mortality, timber harvest, firewood cutting, and other factors across the landscape. It is sufficiently large to evaluate the ability of the habitat to support populations of wildlife and plant species using riparian habitats, but small enough to not obscure effects of the alternatives. All of the actions proposed in the alternatives are contained within this area.

The vegetative condition and wildlife use within a zone in and around riparian features is discussed in this section. Physical conditions of the streams, wet meadows, ponds, seeps, and springs are further described in the "Water Resources" portion of this chapter. See Exhibit Rr-3 for a map of potential habitat for riparian wildlife species. A larger-scale assessment was also conducted to address cumulative effects and wildlife population viability concerns (Exhibit Rg-1).

Affected Environment

Riparian wildlife habitats in the Logan Creek area appear to be functioning well, with numerous and well-distributed ponds, seeps, and streams providing a diversity of habitats (Exhibit Rr-3). There are nearly 7000 acres of Riparian Habitat Conservation Areas (RHCAs, see Fisheries section), as defined by Riparian Landtypes (Flathead National Forest 1995a) and buffering from streams. Open water areas total about 1200 acres and include Tally Lake and 43 other lakes that are all two acres or smaller. Star Meadow has the largest marshy area, at 683 acres, followed by an 83-acre area in upper Logan and a 47-acre area in the Taylor Creek drainage, with 43 smaller marshlands averaging four acres. Many of these are ponds or pools

behind beaver dams. About 2050 acres of these are willow and sedge communities with fine silty soils. Another 2570 acres are also relatively flat, but dominated by Englemann spruce, subalpine fir, or black cottonwood. About 370 acres are associated with seeps, springs, or wet depressions. The others vary from 5 to 39 percent slopes and are nearly all dominated by subalpine fir.

Forested riparian cover is nearly continuous across much of the analysis area. Riparian wildlife habitat extends beyond riparian landtypes, to a distance that varies by species (Semlitsch 1998). Nearly 85 percent of the Logan Creek area is within one-quarter mile of a stream, pond, or other riparian feature, a zone that is generally regarded as “key use” habitat for white-tailed deer (Exhibit Rr-5). For more information, see the "Water Resources" section of this chapter.

Wildlife species reported to be using riparian habitats in the analysis area include gray wolf, mountain lion, mink, marten, river otter, lynx, moose, white-tailed deer, mule deer, elk, black bear, beaver, coyote, muskrat, pine squirrel, bald eagle, osprey, red-tailed hawk, common loon, Canada goose, American coot, eared grebe, American wigeon, Barrow's goldeneye, blue-winged teal, common merganser, hooded merganser, bufflehead, ring-necked duck, mallard, common raven, American crow, great blue heron, barred owl, ruffed grouse, northern flicker, American robin, flying squirrel, northern waterthrush, tree swallow, golden-crowned kinglet, black-capped chickadee, long-toed salamander, boreal toad, western chorus frog, and spotted frog.

For more information about riparian wildlife habitat conditions across the Flathead National Forest, see the Final Environmental Impact Statement for the Flathead's LRMP Amendment 21 (USDA Forest Service 1999a) and Exhibit Rg-1.

Environmental Consequences _____

Direct and Indirect Effects

Alternative A – No Action

No timber salvage, harvest, or rehabilitation actions are proposed with this alternative. This would leave riparian habitat across the analysis area to continue with relatively natural processes, as described for old growth habitat and for water resources. Areas with heavy tree mortality and blowdown would provide structural diversity, downfall trees, and a few long-standing snags of species and sizes valuable to wildlife. Downed logs, shading from snags and lack of seed sources may delay the recovery of new trees in stands with high levels of dead trees for an additional 10 to 20 years (See the "Vegetation" section of this chapter). In dense lodgepole pine in and along some riparian zones, tree growth would be very slow, despite some natural thinning. In these stands, there would be very little chance for recruitment of large trees. The probability of fire would increase in such areas as dead trees fall and new understory growth contributes fine fuels.

Alternatives B, C, D, E, and F

With the exception of Unit 138A, no vegetation manipulation or road construction would occur within Riparian Habitat Conservation Areas (see Glossary) or riparian landtypes (Exhibit F-4 and Rr-4).

In-channel erosion would most likely increase with the implementation of Alternative B because it includes the most ground-disturbing activities. Increased channel erosion is more likely to occur without the road reclamation proposed by the action alternatives, especially the reclamation plan proposed in Alternative E. The sediment generated by in-channel erosion, undersized culverts, and existing road locations would be deposited in the broad flood plain and willow complex in Star Meadow.

All snags and downed logs would be left in riparian and wetland areas, maintaining important habitat components. Most large windfirm live trees and snags would remain standing in all of the harvest and burning units. Removal of smaller-diameter wood, tree planting, and pre-commercial thinning would accelerate regeneration of green canopy cover. Connectivity along riparian habitat corridors would not be severed under any action alternative, but it would be narrowed to less than 300 feet wide in a few places (Exhibits Rg-9 and Q-17).

In all action alternatives, shrubs would be planted in some harvest units near riparian areas if funding is available. This would enhance big game forage, feeding and nesting sites for songbirds, and hiding cover values for a wide variety of wildlife species. The other actions in these alternatives, including watershed and fisheries enhancement measures, are not expected to have negative impacts on riparian habitat areas or the species using them. See the “Fisheries,” “Water Resources,” “Old Growth Habitat and Old Growth Associated Wildlife Species,” and “Snags and Downed Woody Material Wildlife Habitat” sections for more information.

Cumulative Effects

Many cumulative effects relevant to riparian wildlife habitat were discussed above for old growth habitat, including past fires, timber harvest, road construction, and access for firewood cutting and furbearer trapping. No vegetation management activities are planned on national forest lands in the analysis area in addition to those proposed in the action alternatives. A reasonably foreseeable action would be measures to control tansy ragwort and other weed species, which would not be expected to have negative effects on riparian habitats or their species. Past, ongoing, and planned timber harvest and further cumulative effects relevant to riparian habitats are discussed in sections on "Water Resources," "Old Growth Habitat and Old Growth Associated Wildlife Species," and "Snags and Downed Woody Material Wildlife Habitat" in this chapter. The affected environment described above has been shaped by past and present cumulative effects to these habitats. These effects would be cumulative to those discussed above for each alternative.

REGULATORY FRAMEWORK AND CONSISTENCY

The National Forest Management Act (NFMA) requires that Forest Plans "preserve and enhance the diversity of plant and animal communities." For information about INFISH requirements, Montana's House Bill 731 (the streamside management zone act), and federal legislation, see the "Water Resources" section of this chapter. A goal in LRMP Amendment 21 is to "ensure that Forest Service actions do not contribute to the loss of viability of native species."

All alternatives are consistent with the biodiversity mandate of the NFMA for wildlife species using riparian habitats (Exhibit Rg-1). For more information of this consistency, please refer to the "Water Resources" section of this chapter.