Montana Fish, Wildlife & Parks, Region 1

Wildlife Division Quarterly Newsletter

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Montana Fish, Wildlife & Parks

Region 1

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The Status of Region 1 Elk and Deer Populations for 2017

By Neil Anderson
Region 1 Wildlife Program Manager

The snow and cold from this past winter are but a distant memory for most of us. But, as winter was unfolding and snow began to pile up, for many it brought back memories of the winters of 1996 and 1997 and the impact those winters had on deer populations. Prior to the winter of 1996, white-tailed deer populations were the highest recorded since the early 1980s. Competition on winter range and for prime fawning areas, and increased harvest, had just started to bring populations down towards a more sustainable level when the 1996 winter hit. The winter of 1997 was nearly as severe. Following the aftermath of those winters and what was likely unsustainable deer numbers, deer populations plummeted. Whitetail populations rebounded and by 2016 were starting to approach those high levels observed in the early 1990s. More liberal seasons were being enacted to slow population growth. As snow levels this last winter increased, the stage was set for a similar situation to what was observed in the mid-1990s (Figure 1).

So, how did deer and elk populations fair this winter? FWP biologists conduct surveys for elk, mule deer, and white-tailed deer in certain areas of Region 1 as an indicator for the rest of the region. These surveys give us information on recruitment rates, or the number of last year's young that survived the winter, and overall population trends. Deep snow conditions this winter raised a lot of concern over how deer and elk populations would fair, particularly survival of deer fawns and elk calves.

Figure 1. A white-tailed doe in Region 1 struggles to push through snow this winter near West Glacier.

White-tailed Deer

Surveys for white-tailed deer are completed by driving specific transects, counting deer observed, and classifying them as either adults or fawns. Surveys are conducted in the spring when grass starts to green up. To compare among years, the data is standardized and reported as the number of fawns per 100 adults. What biologists observed in terms of fawn recruitment this spring was variable depending

on the area (Figure 2). Fawn survival was lowest in the North Fork of the Flathead where winter snow depths and cold temperatures were severe. Hunting districts in the Thompson Falls and Eureka areas also experienced reduced fawn survival when compared to other areas within the region. Fawn survival in the Libby and Kalispell areas was relatively good, even with deep snow conditions this winter. Recruitment was impacted, but fortunately the level of mortality that occurred in the 1990s was not observed this year.

Why didn't we see even greater losses of fawns, and why was survival so variable across the region? Deer came into the winter in good condition following a wet summer and fall where there was ample forage available. What also helped deer survive the winter was the relatively late onset of winter conditions. In most areas of the region, measurable snow didn't start to accumulate until December, shortening the time period when deep snow was on the ground. The combination of a late start to winter and good fat reserves helped get deer through this winter. Despite the deep snow, many deer were able to find refuge under tree canopy cover, which served as an intercept for some of the snow, lessening the impact. Although we did experience cold weather, temperatures were not extreme enough over a long period of time to completely sap energy reserves, but deer were still stressed. During stressful nutritional times, like the one deer experienced this winter, fawn production the following spring could be impacted as well, extending the influence of a bad winter on deer populations. It is unknown if that may have happened this year, or to what extent, but fawns are being observed this summer. Ultimately, the number of fawns recruited into the population after winter has ended will dictate the population trajectory. We won't know what that looks like until the 2018 spring surveys.

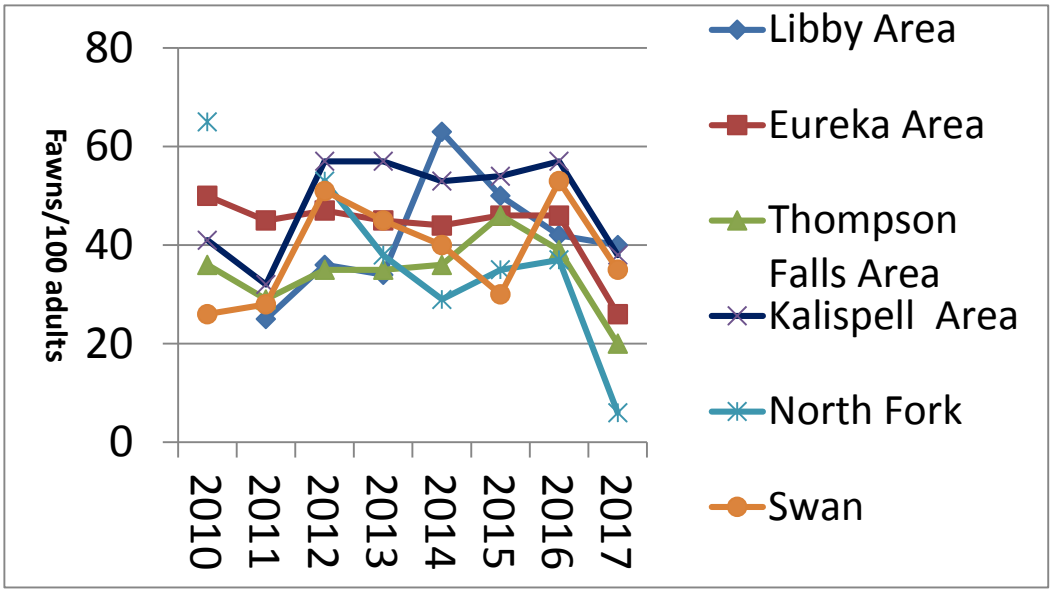


Figure 2. White-tailed deer fawn recruitment in R1 since 2010.

White-tailed deer buck harvest mirrors population trends and has increased along with the increase in deer population that has occurred since 2010 (Figure 3). In 2016, an estimated 9,312 whitetail bucks were harvested in Region 1. This harvest was the highest it has been since the early 1990s. In 2016, limited antlerless whitetail harvest opportunity was available on a general deer license and antlerless permits were increased. This was an effort to slow population growth, reduce some of the harvest pressure on bucks, and decrease the potential for an extreme die-off like the one that occurred during the winters of 1996 and 1997.

Even though fawn survival this spring was lower than previous years, adult survival was high. Provided we don't experience additional extreme weather this winter, whitetail populations can absorb the downturn in recruitment without much impact to numbers. Populations may not increase this year, but we still have a lot of deer. In areas where fawn survival was the lowest, biologists took a conservative approach and reduced the number of antlerless B tags issued for the 2017 season (Table 1). If recruitment rates return to previous levels, deer populations will continue to grow. Currently, hunters can harvest an antlerless whitetail during the first and last weeks of the general season. The last week of antlerless harvest is restricted to private property only and does not include corporate timber lands. Deer numbers remain high enough to continue providing this opportunity and offer some level of reduced pressure on bucks. Deer numbers in the North Fork of the Flathead were impacted the greatest by the winter weather. If hunters are interested in harvesting an antlerless whitetail, they may want to go to other areas of Region 1.

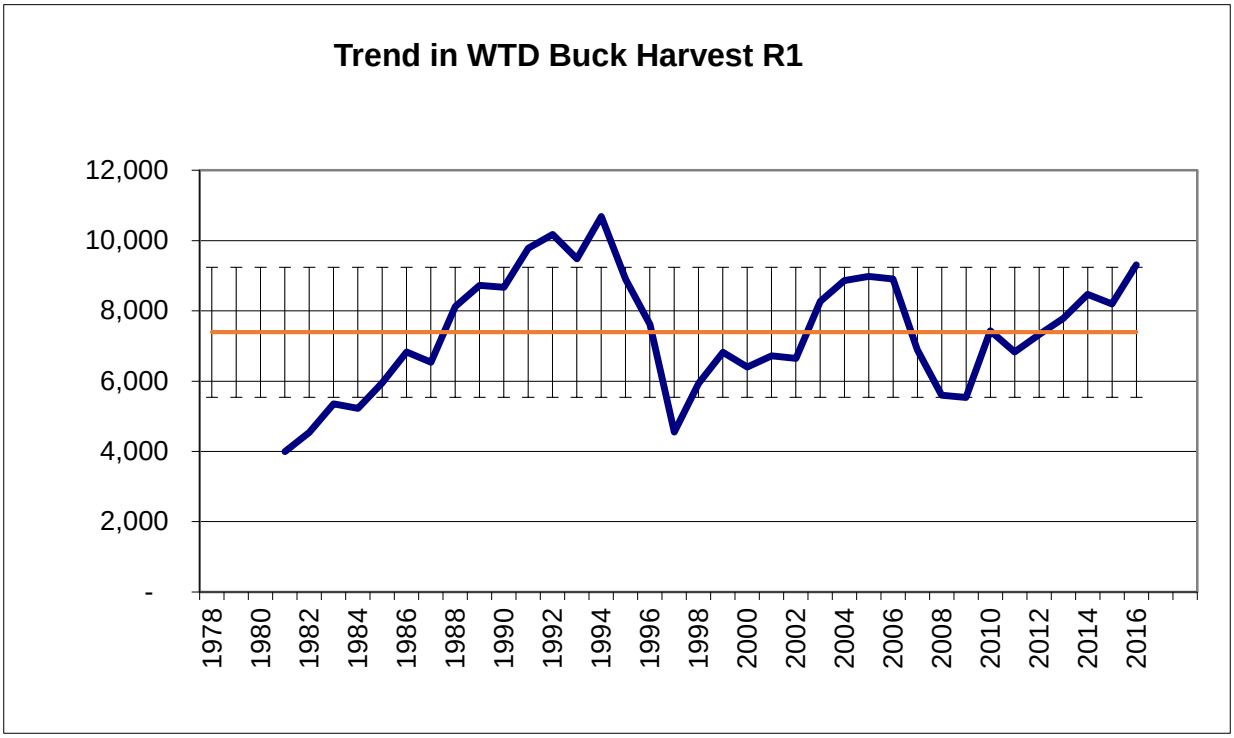


Figure 3. Whitetail buck harvest in Region 1 since 1981.

Table 1. Changes to 2017 antlerless license numbers in areas where fawn losses were the highest.

Species	Hunting District	License or Permit Number	Previous Number Offered	Change for 2017 Season
White-tailed Deer	101	101-00	150	50
White-tailed Deer	102	102-00	150	50
White-tailed Deer	109	109-00	150	50
White-tailed Deer	110	110-00	100	25
White-tailed Deer	121	121-00	400	200
White-tailed Deer	122	122-00	300	200
White-tailed Deer	124	124-00	200	100

Mule Deer

Mule deer numbers in some areas of Region 1 continue to be a concern. Surveys for mule deer are primarily conducted by helicopter and are limited to areas where deer are observable. One area suitable for aerial surveys is the Fisher River area (HD 103) east of Libby. This area contains some of our best winter range for mule deer and is open enough to observe deer through the air. When possible, the survey in this area is conducted up to three times during the spring to give biologists more confidence in count accuracy. Mule deer populations in the Fisher River area appear to be stable and at about long-term average (Figure 4). Tonya Chilton-Radandt, the Libby area biologist, counted 29 fawns per 100 adults during the spring green-up surveys, which won't likely result in an increase in population, but should help to maintain populations at current levels. As with whitetails, mule deer buck harvest mirrors population status and is used in most areas of Region 1 to monitor population trends. From 2004 through 2016, mule deer harvest averaged 1,367 bucks per year. Mule deer buck harvest in 2016 was 1,426 (Figure 5).

A mule deer research project will begin this winter to evaluate mule deer habitat use, home range, survival, and recruitment in two study areas within Region 1. We will be capturing adult female mule deer in the Fisher River area (HD 103) and the Whitefish Range (HD 109) this winter, placing GPS collars on them. The project was initially slated to start last winter, but snow conditions were not conducive for capturing deer. Two graduate students from the University of Montana will be conducting the study. Information gained from this project will help improve our understanding of the seasonal habitat needs of mule deer wintering in two differing habitats and allow FWP biologist to work with land management agencies to improve conditions for mule deer. Mule deer winter in more open areas in the Fisher River and under timbered canopy cover in the Whitefish Range.

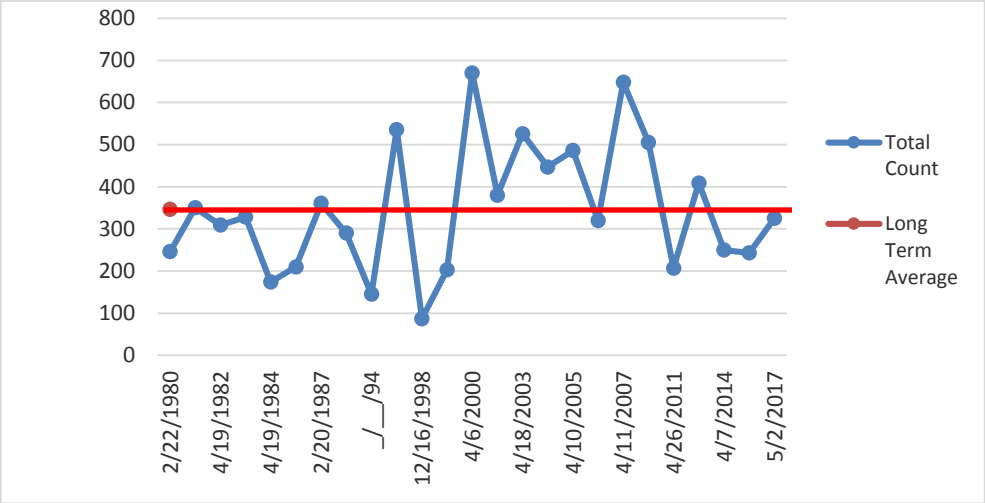


Figure 4. Number of mule deer observed during annual flights in the Fisher River area (HD 103). In years where replicate flights were completed, only the flight with the highest count was used, as it represents the number of deer known to be present at that time. The long-term average is the average of these counts since 1980.

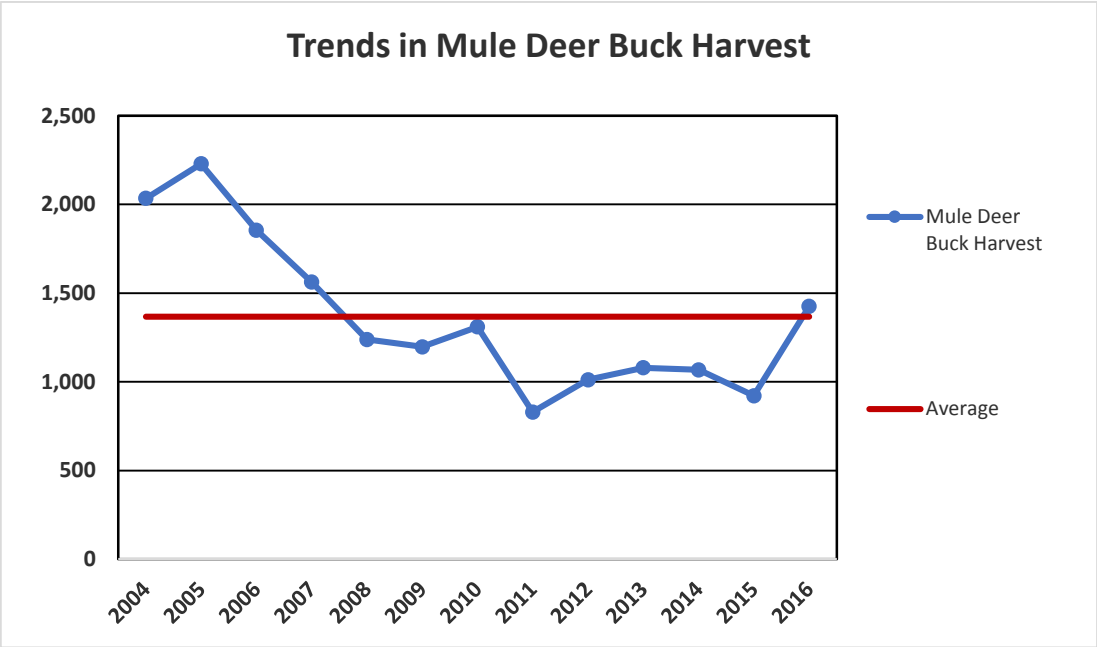


Figure 5. Mule deer harvest trends for Region 1 compared to the 13-year average from 2004-2016.

Elk

Helicopter surveys for elk are routinely conducted in four areas of the region, with multiple flights necessary in some of the areas. Surveys occur in the spring as hillsides and valleys start to green up. During the flight, we count all elk observed and classify individual elk as a bull, cow, or calf. From this information, we can track trends in overall numbers and the ratio of bulls and calves. The data is standardized and reported as the number of bulls per 100 cows and the number of calves per 100 cows. Weather, timing, and other factors can influence our ability to see elk and to classify what we do see. Biologists also rate the flights so we have an idea of how much confidence to have in the numbers.

The animals we see from the air are not a total count of all elk in the area, but a subset of what is present. Survey conditions this spring were generally good, but varied by area. Information on our spring 2017 flights, elk observed, and survey quality is presented in Table 2. Calf survival was lower across the region in 2017 than in previous years and likely influenced by weather conditions. In several districts, the number of antlerless permits were reduced for the 2017 season to account for lower recruitment rates (Table 3). The bull-to-cow ratios, where we were able to obtain them, were similar to what was observed in the last few years.

Table 2. Results from helicopter surveys conducted in Region 1 in the spring of 2017.

Hunting District	Number Flights	Number Elk Observed	Calves: 100 Cows	Bulls: 100 Cows	Comments
103	2	204	13	Not enough data; not calculated	Active logging in area may have displaced bull groups. Bull count is not considered to be accurate, and a bull:cow ratio could not be obtained.
121	6	1,586	13	11	Flights were a bit early. Green-up on hillsides just starting. Bull and total counts likely lower due to lack of green vegetation on hills.
123	2	384	6	13	Flights were a bit early. Green-up on hillsides just starting. Bull and total counts likely lower due to lack of green vegetation on hills.
140 & 150	2	306	9	11	Conditions generally good. Some difficulty with flight safety and visibility.

Table 3. Reductions in antlerless elk permits for the 2017 hunting season.

Species	Hunting District	License or Permit Number	Previous Number Offered	Change for 2017 Season
Elk	101	101-00	20	10
Elk	101	101-02	20	5
Elk	101/109	199-00	50	40
Elk	109	109-00	20	5
Elk	121	121-00	300	250

The long-term average for brow-tined bull (BTB) harvest in Region 1 from 1969 through 2016 is 792. Prior to 1996, the season was open for any antlered bull elk, including spikes. Harvest of BTBs at the regional level has been just under the long-term (1969-2016) average for the last four years, after being considerably above that average from 2003 through 2010. Weather conditions and a lack of snow during the season likely helped contribute to a reduced harvest in 2016. An estimated 718 BTB elk were harvested in R1 in 2016. Cow harvest and overall harvest is variable, influenced by earlier regulations that allowed for antlerless harvest on a general license, the number of antlerless permits issued, and snow conditions during the season.

In 2016, Region 1 had one shoulder season in the Eureka area and issued 50 antlerless B licenses for hunting districts 101 and 109. The licenses were valid on private property only. The season ran from August 15 through October 16. Harvest surveys of license holders indicate that 13 elk were harvested during the shoulder season. No major issues were reported in regard to the season, game damage complaints were reduced while the hunt was happening, and landowner comments were supportive of the hunt. The number of antlerless permits available was reduced to 40 for the 2017 shoulder season.

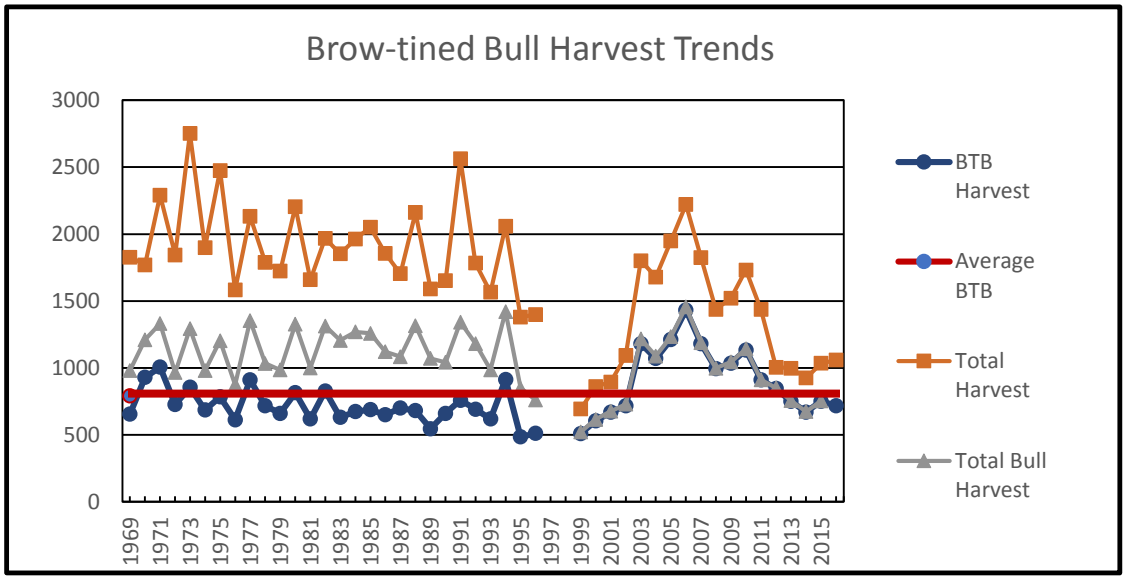


Figure 6. Elk harvest in Region 1 since 1969. Prior to 1996, regulations allowed for harvest of antlered bull elk, which includes spikes, and the first week of season was open for antlerless elk.

Summary

The winter of 2016/2017 started late, with little snow falling during the 2016 general season. Snow levels increased greatly starting in early December, resulting in a significant snowpack that stressed deer and elk populations. As a result, Region 1 observed decreased fawn and calf survival compared to the previous three years in many areas. Due to winter's late start and the good condition of deer coming into the winter, fawn losses were not as great as observed in the mid-1990s, and hunters should see deer numbers similar to what they observed the last two seasons. Deer populations likely didn't increase, but stayed relatively static in terms of overall numbers. Calf survival was quite low in the areas surveyed, ranging from 6 to 13 calves per 100 cows. The overall effect of this reduction in recruitment should be limited provided calf survival rebounds in the next couple of years. Biologists reduced antlerless harvest opportunity for white-tailed deer and elk in several hunting districts for the 2017 season in response to the lower recruitment observed.

Habitat Conservation in Northwest Montana

by Alan Wood, Ph.D.
Science Program Supervisor

The Montana Department of Fish, Wildlife & Parks (FWP) has a long history of conserving important wildlife habitats in the state. Our first project was the purchase of the Judith River Wildlife Management Area (WMA) in 1940, followed by the Gallatin (1945), Sun River (1948), and Blackfoot-Clearwater (1948). These iconic properties set the department on a course that has continued to focus our agency on the conservation of key habitats needed to sustain the diversity of Montana wildlife species that we all cherish. Region 1, here in northwest Montana, acquired our first wildlife properties in 1953 with the purchase of lands that have become the Bowser Lake and Ninepipe WMAs.

Sun River WMA on the Rocky Mountain Front

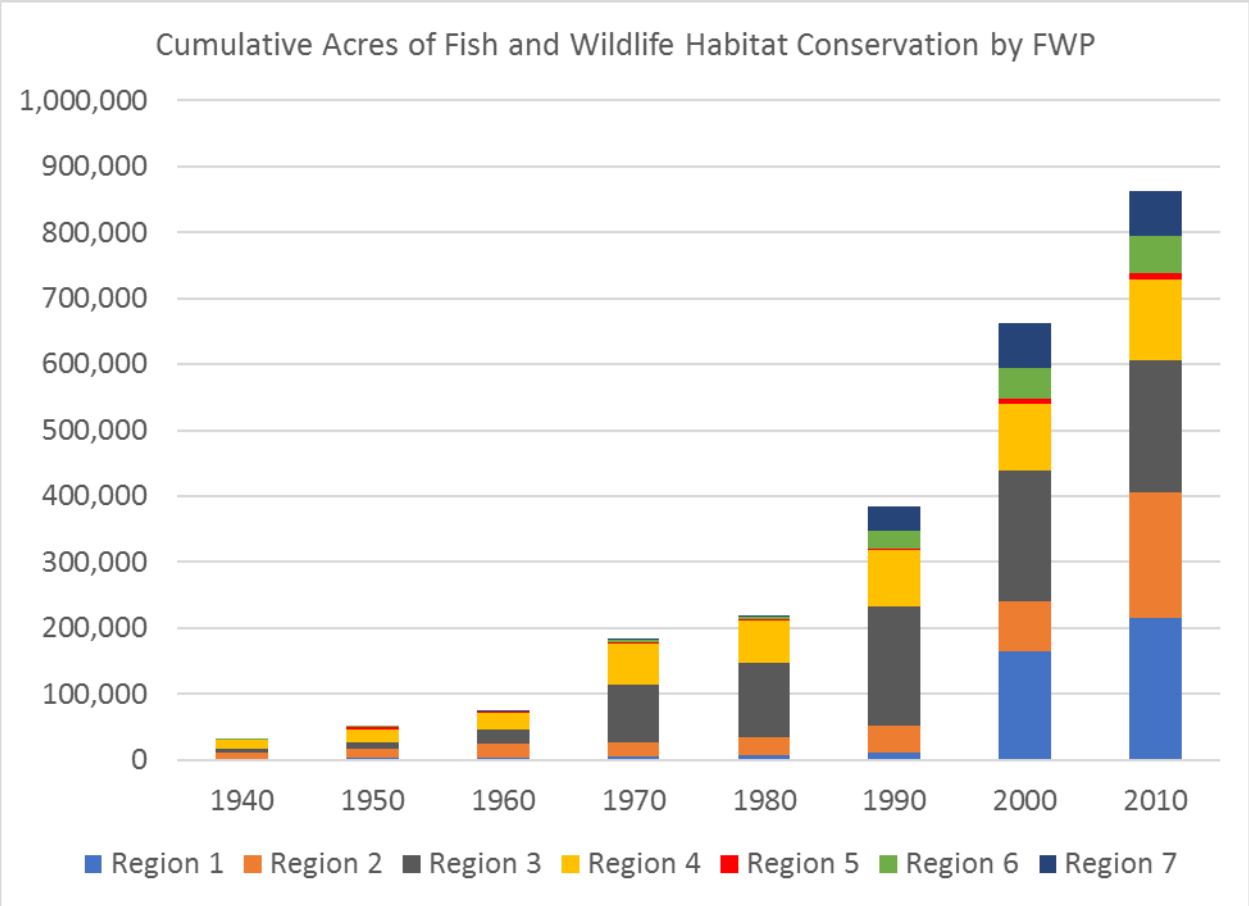
Over most of our history, these conservation efforts were undertaken when opportunity and funding happened to align. For nearly half a century there was no specific funding available to protect the most important wildlife areas in the state. In the 1980s, conservationists started discussing the possibility of committing dedicated funding for FWP to acquire important habitat on a more consistent basis. That effort ultimately led to the passage of House Bill 526 by the 1987 Montana Legislature. HB526 sets aside a defined portion of state hunting license dollars specifically for the conservation and maintenance of wildlife habitats in Montana. The program currently generates about $5 million each year and specifies that 20% be spent on property management. The program prioritizes projects that achieve the following public benefits:

- Conserve and enhance land, water, and wildlife.
- Contribute to hunting and fishing opportunities.
- Provide incentives for habitat conservation on private lands.
- Contribute to nonhunting recreation.
- Protect open space and scenic areas.
- Demonstrate compatibility of wildlife habitat and sustainable land management.
- Maintain the local tax base.

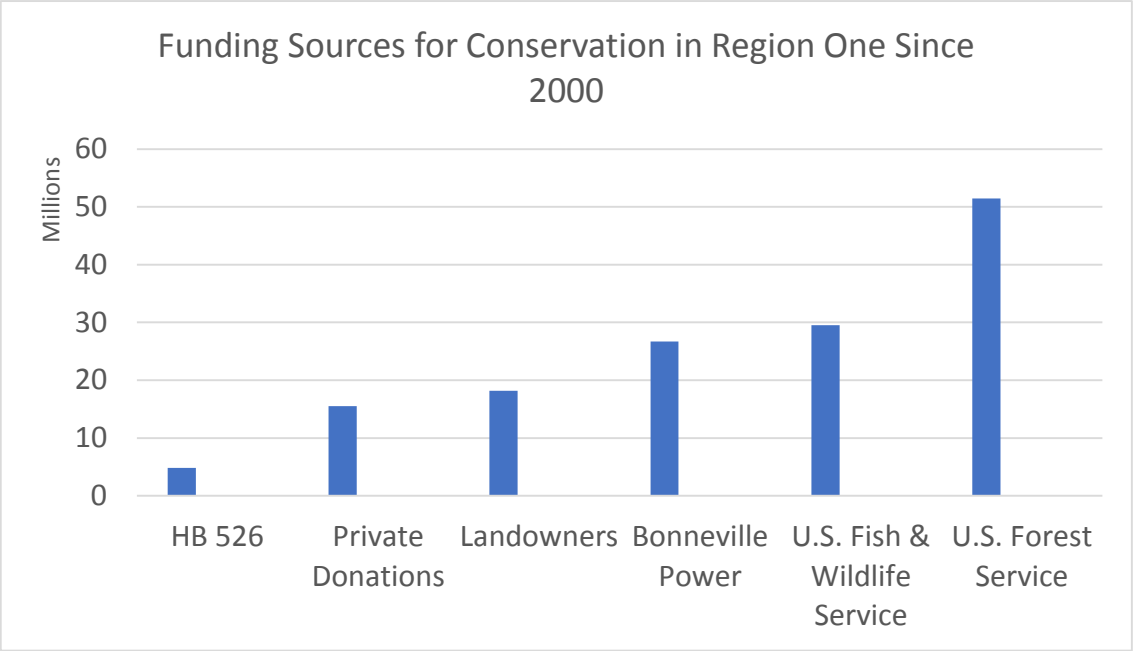
There are a couple of different options that FWP can use to permanently conserve wildlife habitat in the state. The most direct approach, and the one we have been using the longest, is the purchase and management of property to achieve specific conservation objectives. FWP currently holds title to about 400,000 acres of fish and wildlife habitat across the state, including 16,000 in Region 1. FWP manages these properties for fish and wildlife habitat values and compatible public recreation opportunities. State law also requires that FWP pay county property taxes at a rate equivalent to what would be paid if that land were in private ownership.

Over the last 20+ years, conservation easements have become a more common tool for FWP to use to achieve multiple public benefits. A conservation easement is a voluntary, perpetual agreement negotiated with a landowner to protect wildlife habitat and all the public benefits outlined earlier. Conservation easements essentially establish a permanent private-public partnership designed to achieve shared conservation goals with the private landowner.

Conservation easements are an excellent tool for FWP because they can be customized to fit each particular property in a way that is compatible with the landowner's management objectives for their land. It also keeps the land in private ownership and keeps the responsibilities of property management in private hands. FWP monitors the land on at least an annual basis to ensure that the property continues to be managed in a sustainable manner consistent with the agreed-upon terms of the conservation easement. A conservation easement can also be a valuable tool for the private landowner to help with their estate planning or who wishes to find a partner that can help to continue their family's life-long commitment to stewardship of their land. FWP currently holds conservation easements on about 480,000 acres statewide, including almost 200,000 in Region 1.



Over the past 18 years, hunters' license dollars have continued to contribute to conservation efforts in northwest Montana. However, other programs have allowed us to significantly increase the size and number of conservation projects. In Region 1, for example, nearly $5 million from HB526 has been spent on habitat conservation projects along with $140 million from other sources. This increased funding has allowed us to increase the number of acres of fish and wildlife habitat protected in northwest Montana, from a little more than 10,000 acres conserved from 1950 through 1999, to over 214,000 acres today.



Federal programs that FWP uses to help achieve habitat conservation in northwest Montana.	
Bonneville Power Administration	BPA, part of the U.S. Department of Energy, markets wholesale electrical power produced at 31 federal hydroelectric projects in the U.S. portion of the Columbia River Basin. They are obligated under the Northwest Power Act to use some of that money to fund projects to protect, mitigate, and enhance fish and wildlife affected by the development, operation, and management of those hydroelectric projects.
U.S. Fish and Wildlife Service, Habitat Conservation Plan Land Acquisition Grants	This program was established by Congress in 1997 to promote the recovery of threatened and endangered species by reducing potential conflicts between those species and land uses on important habitat with approved habitat conservation plans. Montana has two plans that cover native salmonids on former Plum Creek lands and one on DNRC state forest for the conservation of grizzly bear, Canada lynx, and bull trout.

U.S. Forest Service, Forest Legacy Program	The Forest Legacy program was established by Congress in 1990 to protect nationally significant working forests threatened by conversion to other nontraditional forest uses. This program prioritizes projects that promote water quality, wildlife habitat, sustainable forest products, opportunities for recreation, and other public benefits.

The key to success of these conservation efforts has been the establishment of effective partnerships across diverse interest groups. In addition to the conservation projects that FWP has completed as described above, there are a wide variety of other governmental and tribal programs, corporations, conservation groups, land trusts, and private landowners who are also working across the state to achieve shared conservation goals. These groups have collectively conserved over two million acres of private land in Montana since 1976, maintaining the working farms and ranches, protecting water quality and wildlife habitat, and preserving open lands, thereby retaining the values that make Montana such an attractive place for us all to live, work, and recreate.

Wildlife areas in Region 1 represent a diversity of habitats and species that characterize northwest Montana, along with many different opportunities for public recreation. The following five properties in Region 1 highlight only some of that diversity and the associated recreational opportunities available across the state. For more information on these properties, or others across the state, please visit our FWP website.

Ninepipe WMA

Signs on the Ninepipe Wildlife Management Area educational trail.

The Ninepipe WMA consists of approximately 4,200 acres surrounding the Ninepipe National Wildlife Refuge. The property includes rolling, open grasslands and numerous prairie potholes, or kettle ponds, scattered among agricultural fields – important habitat for a diversity of bird species. It is located in the lower Flathead Valley about one mile east of Charlo. The area lies within the exterior boundaries of the Flathead Indian Reservation. Recently completed viewing platforms and an educational trail provide easy access for people interested in viewing wildlife or learning more about the area. The WMA also offers excellent pheasant and duck hunting opportunities.

Kootenai Valleys Conservation Easement

A misty fall morning over the Kootenai River adjacent to the Kootenai Valleys conservation easement. Photo courtesy of Randy Beacham.

The Kootenai Valleys conservation easement includes multiple parcels of land that cover almost 28,000 acres of important wildlife habitat. The property stretches from the south end of Bull Lake, north through the Lake Creek drainage to Troy, and then northwest along both sides of the Kootenai River to the Idaho border. It provides important seasonal habitat for deer, elk, black bear, grizzly bear, fisher, wolverine, and many other species. The property is owned and managed by Stimson Lumber Company, who joined with FWP and The Trust for Public Land to permanently conserve these productive forestlands. It's a good place to try your luck at bagging an elusive bull elk during the fall hunting season.

Thompson/Fisher Conservation Easement

At 142,000 acres, this conservation easement is the largest of FWP's habitat projects. The property is located along the Thompson and Fisher Rivers in Lincoln, Sanders, and Flathead Counties, between Libby and Kalispell. The property is home to a variety of game and nongame fish and wildlife species and includes important big game winter ranges for deer and elk. The land is owned and managed by Weyerhaeuser. The property is open for public recreation, including year-round camping for up to 14 days at a campsite. Campers must pack out all garbage, leave the area clean, and be careful with fire. Both the Thompson and Fisher River valleys are popular destinations for hunters from Libby, Kalispell, and Thompson Falls.

Autumn along the Thompson River, land permanently conserved for sustainable forest management, fish and wildlife habitat, and public recreation.

North Shore WMA

Rising above the surrounding landscape, the McClarty Barn is a prominent fixture on the WMA and the gateway for public access to this property.

The 427-acre North Shore WMA is in Flathead County, along State Highway 82 between Bigfork and Somers. The property's wetlands, uplands, and agricultural fields are managed to provide habitat for waterfowl, upland game birds, songbirds, and other nongame bird species. During spring, thousands of migratory waterfowl visit this property to refuel on their annual journey to northern nesting grounds. The WMA provides diverse public recreation from July 16 through the end of February, when it is open to the public. Management of the WMA strives to demonstrate integration and connection between soil health, water quality, wildlife habitat, and agricultural productivity. In the center of the property, a historic barn, remnants of the McClarty family homestead, and several ornamental and fruit trees serve as a public gateway to the property.

Roundhorn WMA

The Roundhorn WMA is located along U.S. Highway 200 between Thompson Falls and Plains in the lower Clark Fork River Valley of Sanders County. The 27-acre property includes rugged, rocky cliffs and flat rangeland. Timber is scattered among both the cliff areas and pastures. The Lolo National Forest sits on the property's northern boundary, with private land to the east and west. It is open to walk-in public access from noon on May 15 through November 30 each year. It is closed the remainder of the year to provide critical winter and spring range for 85-90 bighorn sheep from the Thompson Falls herd.

Views from the parking area looking across the rangeland toward the cliffs on the WMA.