

Washington State Elk Herd Plan

YAKIMA ELK HERD

Washington Department of Fish and Wildlife
Wildlife Program
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Olympia, WA 98501-1091

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Director, Washington Department of Fish and Wildlife

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YAKIMA ELK HERD PLAN

Executive Summary

The Yakima Elk Herd is one of the largest of ten herds identified in the State. It is an important resource that provides significant recreational, aesthetic and economic benefit to Washington citizens. The purpose of this plan is to provide direction for the management of the Yakima elk resource for the next 5 years. The plan is subject to amendment. Priority management activities will be implemented as funding and resources become available.

There are three primary goals stated in the Yakima Elk Herd Plan; (1) to preserve, protect, perpetuate, manage and enhance elk and their habitats to ensure healthy, productive populations and ecosystem integrity; (2) to manage elk for a variety of recreational, educational and aesthetic purposes including hunting, scientific study, cultural, subsistence, and ceremonial uses by Native Americans, wildlife viewing and photography; and (3) to manage the elk herd for a sustained yield.

Specific elk herd and habitat management goals, objectives, problems and strategies have been stated in the plan. These are priority objectives identified to address specific problems in elk management. To accomplish each objective a variety of strategies have been developed. The following objectives have been identified:

- ! Reduce and then maintain the post-hunting season elk population at 9,500 animals for the Cascade slope portion of the Yakima Herd.
- ! Reduce and maintain the Arid Lands Ecology Reserve population in the Rattlesnake Hills at a population level that minimizes damage to private lands (estimated <350 elk).
- ! Improve the scientific basis for managing the elk population.
- ! Manage for a post hunting season bull ratio consistent with the Statewide Plan (currently equal to or greater than 12 bulls/100 cows in combination with overall bull mortality of less than 50 percent).
- ! Minimize damage caused by elk through aggressive removals of elk below the elk fence and improve Department/ landowner relations.
- ! Maintain an effective and efficient elk winter-feeding program.
- ! Share elk population data with the Yakama Indian Nation, The Confederated Tribes of the Umatilla Indian Reservation, and Medicine Creek Treaty Tribes.
- ! Increase public awareness and viewing opportunities of elk.
- ! Cooperate with the U. S. Fish Wildlife Service and U. S. Department of Energy in the management of elk on the Arid Lands Ecology Reserve, and with the U. S. Army on the Yakima Training Center.
- ! Cooperate and coordinate to improve elk habitat quality and effectiveness on National Forest and Washington Department of Natural Resources lands.
- ! Improve elk habitat quality and effectiveness on private lands with willing cooperators.
- ! Secure more critical elk habitat.

Spending priorities have been identified for the first year and next 5 years. Achieving spending levels will be contingent upon availability of funds and creation of partnerships. The recommended annual priority expenditures for the Yakima herd are as follows:

<u>Priority</u>	<u>First year cost</u>	<u>Five year cost</u>
1. Winter elk feeding	\$126,000.00	\$606,000.00
2. Herd population/composition surveys	\$14,000.00	\$70,000.00
3. Improve collection of hunter harvest and effort information.	\$26,000.00	\$130,000.00
4. Elk Habitat Study	\$150,000.00	\$600,000.00
5. Elk fence construction.	\$500,000.00	\$700,000.00
6. Address landowner/elk conflicts.	\$90,160.00	\$453,820.00
7. Habitat preservation program.	\$200,000.00	\$1,000,000.00
8. Road management	\$16,000.00	\$80,000.00
9. Elk habitat improvement	<u>\$40,000.00</u>	<u>\$200,000.00</u>
TOTAL	\$1,162,160.00	\$3,839,820.00

YAKIMA ELK HERD PLAN

Introduction

The Yakima Elk Herd Plan is a step-down planning document under the umbrella of the Final Environmental Impact Statement for the Game Management Plan (Washington Department of Fish and Wildlife 2002). For management and administrative purposes the State has been divided into Game Management Units (GMUs). A group of GMUs is described as a Population Management Unit (PMU). The Yakima Elk Herd is one of ten herds designated in Washington. In this context a herd means a population within a recognized boundary as described by a combination of GMUs. The Yakima Elk Herd is in PMU 33 (GMUs 336, 340, 342, 346), PMU 34 (GMUs 371, 372, 382), PMU 35 (GMUs 352, 356, 360), and PMU 36 (GMUs 364, 368) (Map 1). The Yakima Elk Herd is made up of a core population residing on the east-facing slopes of the Cascade Mountain Range and consists of two distinct sub-herds: Cascade Slope and Rattlesnake Hills.

The Cascade Slope sub-herd exhibits a typical seasonal migration from high elevation summer ranges to lower elevation wintering grounds and includes PMUs 33, 35 and 36 while the Rattlesnake Hills Sub-herd (PMU 34) is east of the Yakima River and west of the Columbia River (Map 1). Elk use in PMU 34 is centered on the Fitzner/Eberhardt Arid Lands Ecological Reserve and Yakima Training Center. The Arid Lands Ecology Reserve is closed to public access and the army controls Yakima Training Center. There are small bands of elk scattered throughout the remainder of PMU 34.

The Yakima Elk Herd Plan is a five-year planning document subject to annual review and amendment. The Washington Department of Fish and Wildlife (WDFW) recognizes the sovereign status of federally recognized treaty tribes. This document recognizes the responsibility of the Washington Department of Fish and Wildlife, the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, and the Medicine Creek Treaty Tribes to work cooperatively in achieving elk management goals and objectives. It also recognizes the role of private landowners and public land management agencies in providing habitat for elk, notably the U.S. Forest Service, U. S. Bureau of Land Management, U. S. Department of Energy, U. S. Fish and Wildlife Service, U.S. Army-Yakima Training Center, Washington Department of Natural Resources, and the Boise Cascade Corporation.

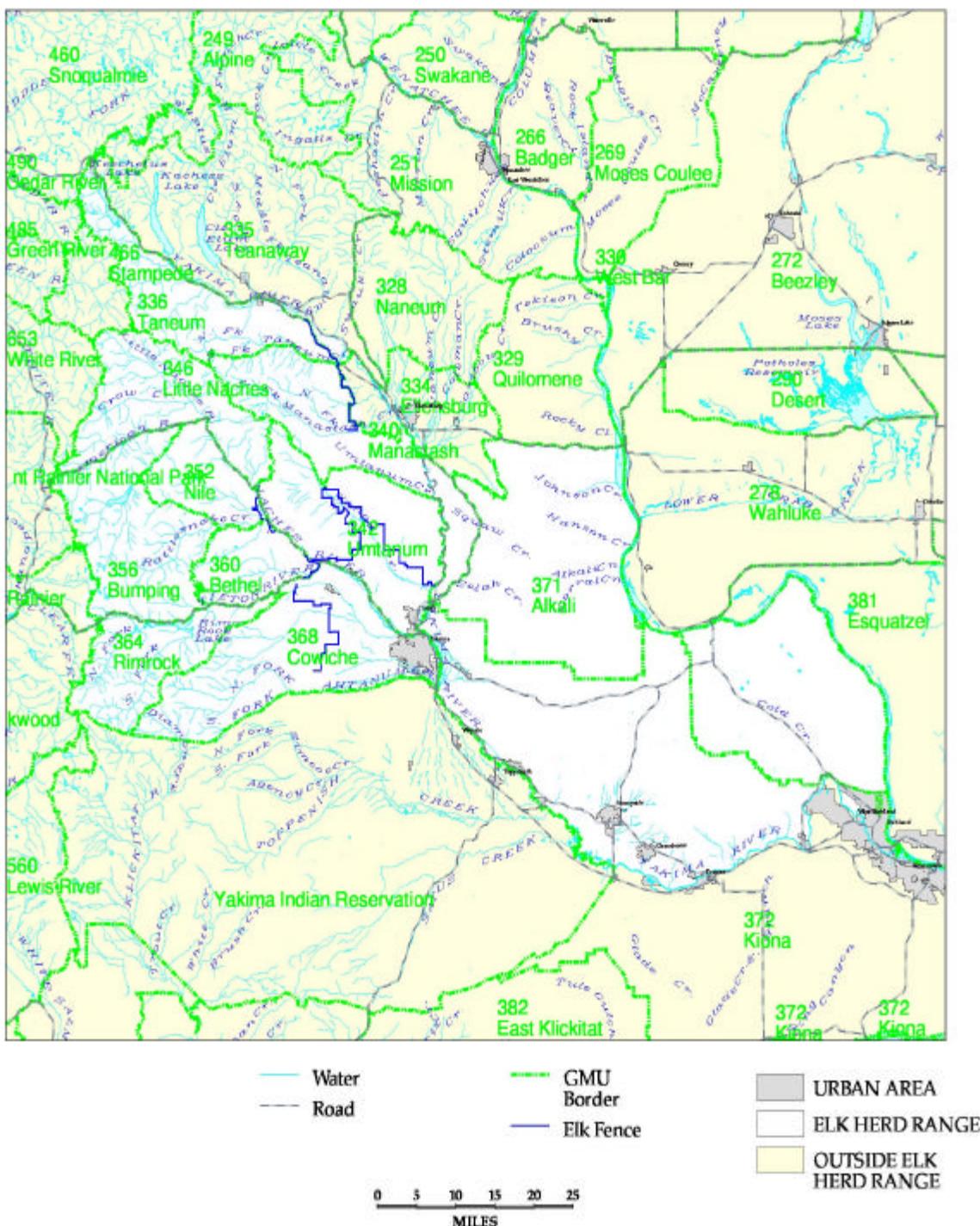
Area Description

Location

The Yakima Elk Herd encompasses that portion of Kittitas County south of I-90, all of Yakima County except the Yakama Indian Reservation, and Benton County north of the Yakima River (Map 1). GMUs that comprise the Yakima Herd area include 336 (Taneum), 340 (Manastash), 342 (Umtanum), 346 (Little Naches), 352 (Nile), 356 (Bumping), 360 (Bethel), 364 (Rimrock), 368 (Cowiche), 371 (Alkali), and 372 (Kiona) north of the Yakima River.

The Rattlesnake Hills Elk Sub-herd consists of that portion of PMU 34 north of the Yakima River (GMU 371 and 372 north of the Yakima River), (Map1). The area is within the Columbia Basin shrub-steppe province.

Map 1. Yakima Elk Herd Area



Ownership

Land within the Cascade Slope Sub-herd is of mixed ownership (Table 1). The federal government (mostly U.S. Forest Service) and state own approximately 57 percent and 21 percent of the elk range. Industrial timber and other private holdings make up 15 percent and 8 percent of the ownership within the normal elk range.

The Rattlesnake Elk Sub-herd area landownership is primarily private. Two large blocks of federal ownership are located on the Yakima Training Center administered by the US Department of the Army and the Hanford Site owned by U. S. Department of Energy. There are also scattered holdings of State owned lands administered by Department of Natural Resources and Washington Department of Fish and Wildlife. Some alternate sections of Bureau of Land Management administered lands are found on Rattlesnake Hills.

Table 1. Land Ownership (acres) Cascade Slope Sub-herd Above the Elk Fence

PMU	Federal Wilderness	Federal non- Wilderness	State	Industrial Timber Company	Other Private	Total
33	36,539	179,962	144,838	112,804	43,731	517,874
35	166,228	114,673	27,738	6,676	3,791	319,106
36	38,129	71,310	52,194	38,105	35,025	234,763
Total	240,896	365,945	224,770	157,585	82,547	1,071,743

Topography

The Cascade Slope Sub-herd area varies in elevation from 213m (700 feet) on the Yakima River to over 2,134m (7,000 feet) at the Cascade crest. Physiographically, the area is part of the Southern Washington Cascades and the Columbia Basin Provinces as described in Franklin and Dyrness (1973). Major watersheds drain to the east from the Cascade crest joining together to form the Yakima River and ultimately joining the Columbia River.

The most significant topographical feature within the Rattlesnake Hills Elk Sub-herd area is Rattlesnake Mountain that rises to an elevation of 1,074 m (3,524 feet). The lowest point is on the Columbia River at 81m (267 feet) above sea level. The area is covered by Columbia River Basalt, a layering of lava beds laid down approximately 20 millions years ago. The area was also heavily glaciated during the Pleistocene ice ages. Flooding caused by successive ice dams giving way have laid down huge sand and gravel deposits throughout the area.

There are several ridges lying in an east-west direction including the Saddle Mountains, Umtanum Ridge, Yakima Ridge, and Rattlesnake Hills. The most prominent of these is Rattlesnake Hills with Rattlesnake Mountain on the eastern extension of the range. The Columbia River forms the eastern and southern boundaries of the area and the Yakima River bisects the sub-herd area in approximately two equal halves.

Vegetation

The east facing slopes of the Cascade Range is a mosaic of diverse forest cover-types and non-forested meadows and rangeland. On drier low-elevation sites ponderosa pine (*Pinus ponderosa*) and Douglas fir (*Pseudotsuga menziesii*) are the most conspicuous over-story species. Canopy cover typically ranges between 20-50 percent on these relatively dry, low-elevation sites. At mid-elevations, grand fir (*Abies grandis*) is the climax species, with Douglas fir (*Pseudotsuga menziesii*), lodgepole pine (*Pinus contorta*), ponderosa pine, and western larch (*Larix occidentalis*) as minor components. At higher elevations, sub-alpine fir (*Abies lasiocarpa*) is the climax tree species. Canopy cover at higher elevations is generally greater than 40 percent. Other tree species commonly found in the sub-alpine fir zone include Engelmann spruce (*Picea engelmannii*), lodgepole pine, and western larch.

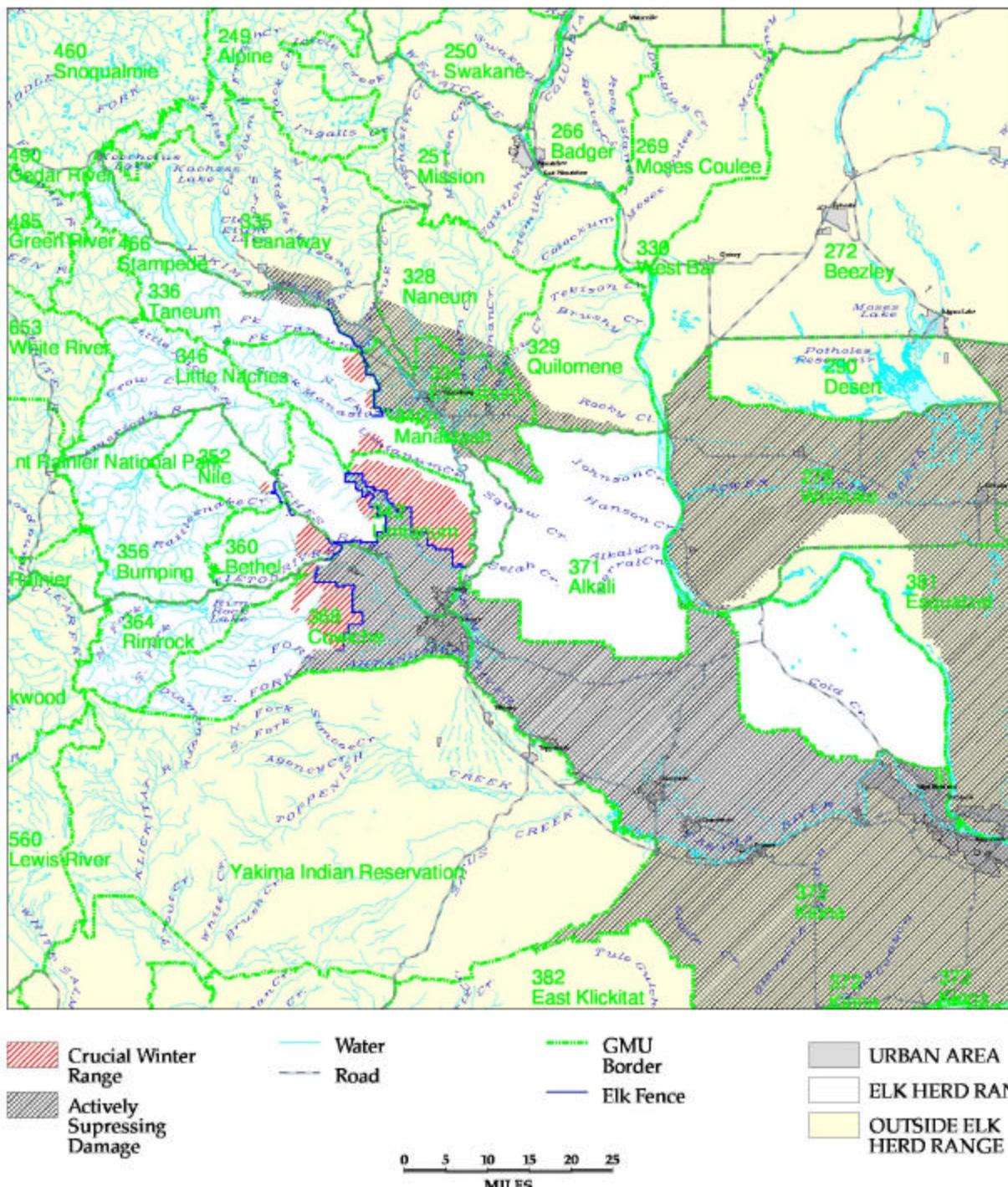
The understory component of the forest cover types varies greatly with precipitation, aspect, elevation, and canopy cover. Under sparse canopy cover, the understory often resembles shrub steppe communities with antelope bitterbrush (*Purshia tridentata*), ocean spray (*Holodiscus spp.*), Oregon grape (*Berberis nervosa*), sagebrush (*Artemesia spp.*), snowbrush (*Ceanothus velutinus*), and Spiraea (*Spirea spp.*) in the shrub component. At higher elevations additional shrubs include barberry (*Berberis spp.*), currant (*Ribes spp.*), huckleberry (*Vaccinium spp.*), mountain snowberry (*Symporicarpus albus*), and mountain boxwood (*Paxistima myrsintes*). Forbs commonly found in understory communities include arrowleaf balsamroot (*Balsamorhiza sagittata*), cinquefoil (*Potentilla spp.*), heartleaf arnica (*Arnica cordifolia*), lupine (*Lupinus spp.*), vetch (*Astragalus spp.*), and western yarrow (*Achillea lanulosa*). Pinegrass (*Calamagrostis rubescens*) and elk sedge (*Carex geyeri*) are the major forage plants of the grass/sedge component.

The remaining area supports shrub-steppe plant community's characteristic of the Columbia Basin physiographic province (Franklin and Dyrness 1973). Bunchgrass and sagebrush communities are the typical vegetation types on deep gently sloping upland soils (Daubenmire 1970). Common shrubs include antelope bitterbrush, big sagebrush, gray rabbitbrush (*Chrysothamnus spp.*), and spiny hopsage (*Gray spinosa*). Perennial bunchgrasses, such as basin wildrye (*Elymus cinereus*), bluebunch wheatgrass (*Agropyron spicatum*), Idaho fescue (*Festuca idahoensis*), and Thurber's needlegrass (*Stipa thurberiana*), are important forage species on relatively undisturbed sites. Alien grasses (e.g. cheat and Kentucky bluegrass) and forbs (e.g. knapweeds) often are dominant on disturbed areas. On shallow soils, low growing shrubs, such as stiff sagebrush and a variety of buckwheat (*Eriogonum spp.*), and Sandberg bluegrass (*Poa sandbergii*), are the dominant species. Common forbs in the shrub-steppe zone include Carey's balsamroot (*Balsamorhiza careyana*), lupine (*Lupinus spp.*), longleaf phlox (*Phlox longifolia*), western yarrow, and Indian paintbrush (*Castilleja spp.*).

Human Influences

Human influence on the Yakima herd is high. A fence limits the movement of elk into many of the lower elevation deep soil sites that are used mostly for agriculture/residential purposes. Elk are fed during the winter at 9 sites (Map 2). Timber and livestock management has influenced much of the landscape occupied by elk. Recreational use also has an impact on the herd. Hunting accounts for an estimated 90 percent of the annual mortality. Non-hunting recreation may heavily influence elk movements in localized areas and contribute to mortality. Disturbance caused by elk shed-antler hunting has become a major concern in the spring.

Map 2. Yakima Elk Fence and Feedlot Locations



Other Ungulates

Mule deer (*Odocoileus hemionus* sp.) use the entire range of the Yakima elk herd area. Mountain goats (*Oreamnos americanus*) occupy portions of the high-elevation rugged terrain in GMUs 336, 340, 346, 356 and 364. California bighorn sheep (*Ovis canadensis californiana*) occur primarily in GMUs 342 and 360. Domestic livestock, primarily cattle and sheep, are common throughout much of the area.

Distribution

Historic Distribution

The Yakima Elk Herd is a reintroduced herd resulting from an initial transplant of 50 Rocky Mountain elk (*Cervus elaphus nelsoni*) from Gardiner, Montana in January 1913 and an additional 6 elk from Montana purchased from Manitou Park in Spokane, Washington in 1913. These animals were released on the Stevens Ranch on the Naches River (Pautzke et al. 1939). They noted that, "There were no elk native to Yakima County at the time of these plantings, nor is there definite evidence that elk ever occupied that area in recent times." Based on recent archeological records from the Columbia Basin the evidence suggests that elk were present and utilized by the early inhabitants (Dixon et al. 1996 and McCorquodale 1985). Elk were possibly extirpated from the region by the late 1880's (McCorquodale 1985).

Current Distribution

West of the Yakima River, elk are present throughout the herd area above the fence (Map 3). Animals occasionally go through and around the fence, but generally do not travel far from the barrier. Yakima elk display distinct seasonal migrations. Major wintering concentrations occur in GMUs 340, 342, 352, 360, and 368. Elk usually concentrate on winter-spring range from mid-November to March. Past and recent studies have confirmed that some elk wintering in the Yakima herd area migrate to the west side of the Cascade Range in GMUs 490, 461, 485, 653, 513, and 516 during summer (Bradley 1982, Calvert letter 2002).

The Rattlesnake Hills sub-herd is currently concentrated in two areas, the Yakima Training Center and the Arid Lands Ecology Reserve. The numbers of elk found on the Yakima Training Center have fluctuated over the years. During severe winter conditions, elk migrate into the Yakima Training Center from the north and west. Elk also migrate onto the Yakima Training Center from the Arid Lands Ecology Reserve during the spring and summer. Some elk apparently remain on the Yakima Training Center as yearlong residents.

A second and major concentration of elk is centered on the Arid Lands Ecology Reserve. This population developed as a result of a natural colonization when 7 elk were observed on the Arid Lands Ecology Reserve in 1975 (Rickard et al. 1977). These elk concentrate on the Arid Lands Ecology Reserve during the winter and spring. Some animals move off during the summer and are a problem on wheat, alfalfa, orchards and vineyards to the north, west and south of the reserve.

Proposed Distribution

No expansion is proposed for the overall distribution of Yakima Elk Herd. The proposed distribution for the Cascade slope population is to maintain elk entirely west of the Yakima River and above the elk fence (Map 3). The Washington Department of Fish and Wildlife will encourage a shift of elk use to public lands provided that environmental damage is not an issue

and discourage elk use of private lands where specific problems occur. Elk presence below the fence will be actively suppressed.

Minimal populations of elk will be tolerated on the Arid Lands Ecology Reserve and the Yakima Training Center. Elk will be actively suppressed in all other areas of the Rattlesnake Hills sub-herd.

Herd Management

Herd History, Current Status, and Management Activities

Cascade Slope Sub-herd

Herd History

The current Yakima elk population developed from the reintroduction of Rocky Mountain elk from Yellowstone National Park in 1913, which significantly contributed to any remnant animals in the area (Bryant and Maser 1982). These animals were released west of Yakima near Cleman Mountain (Houston 1982, Robbins et al. 1982, Morse 1988). The herd built to over 3,000 animals and had spread throughout much of its current range by 1939 (Pautzke et al 1939). Hard winters and accompanying damage problems eventually resulted in intolerance for elk by local landowners. Farmers and ranchers raised concerns over potential damage from elk by the early 1920's. The Yakima Elk Herd has periodically been reduced through significant cow harvest in 1938, 1943, 1949-51, 1966-70, 1973, 1975, 1977, 1982 and 1994.

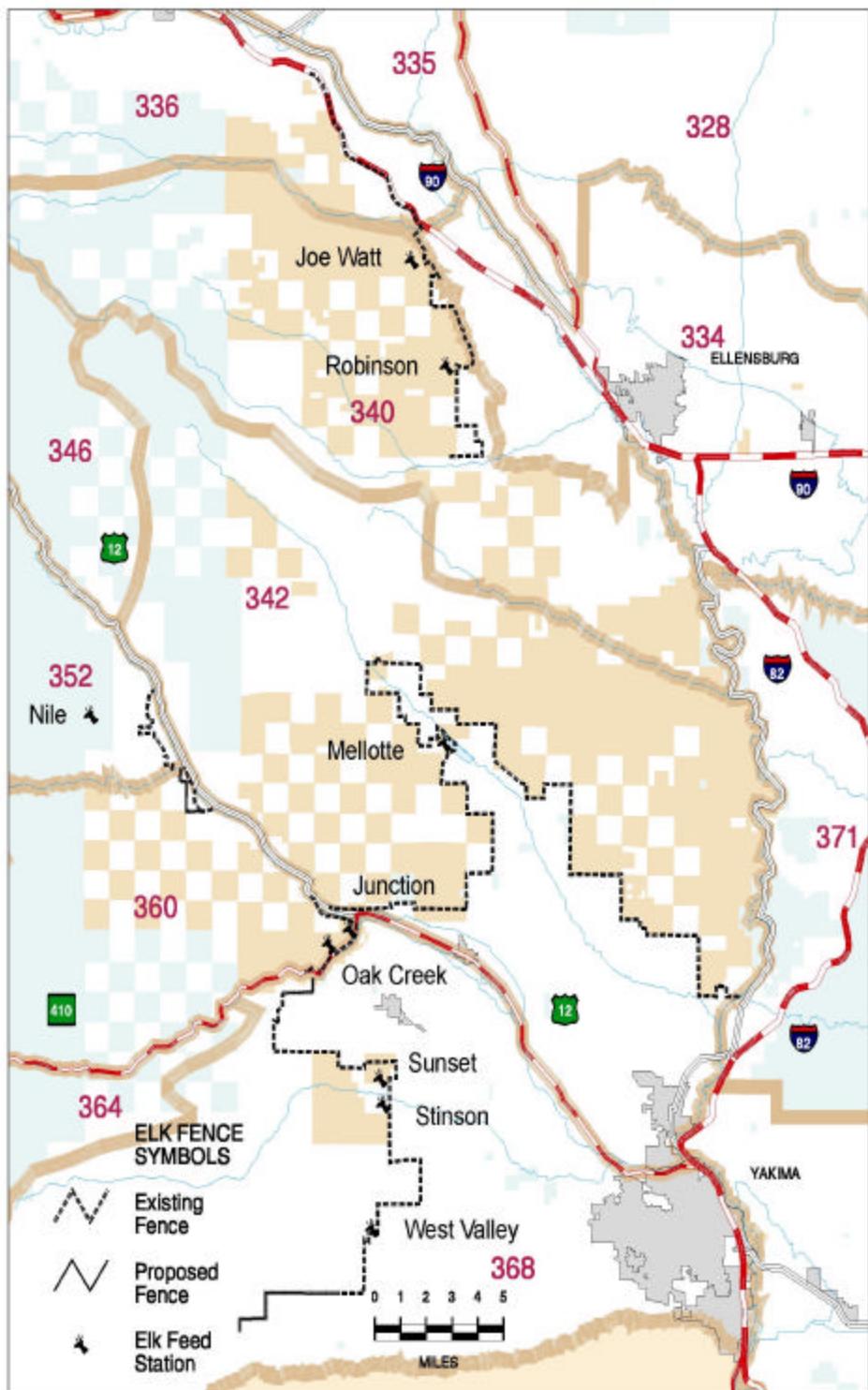
The County Game Commission was given authority in 1931 to declare elk "predatory" and have them killed to protect property. In 1933 the Washington State Game Commission was created shifting wildlife management authority to the State. In 1943, the legislature authorized the first damage claim payment and fencing to protect crops. The first damage claim law was passed in 1949 and a population cap of 3000 elk set for the Yakima Elk Herd in 1955 by the Washington State Game Commission, which subsequently lifted the cap in 1980.

The Washington State Game Department was established in 1933 and Yakima elk population level became a major issue. The Game Department hired the Washington State College Wildlife Department to study the landowner/elk conflict issue and provide recommendations. The resulting reports [WDFW Region 3 District Biologist files, Mitchell and Lauckhart (1948) and Pautzke et al. (1939)] suggested purchasing land and building fence or reduce the herd to a non-huntable population. The former was selected. The first parcel of what is now the Oak Creek Wildlife Area was purchased in 1938. During the 1940's, the majority of Oak Creek Wildlife Area was purchased and the first 10 miles of elk fence built. Elk were often herded back into the foothills to prevent damage and/or being shot by irate farmers. Land purchases/exchanges, fence building, and herding have continued through the present.

Private citizens probably fed elk soon after their reintroduction. Official feeding sites were temporarily developed to save elk during hard winters and reduce damage during the winter of 1942-43. During the severe winter of 1955, for example, 1200 tons of hay was fed to elk.

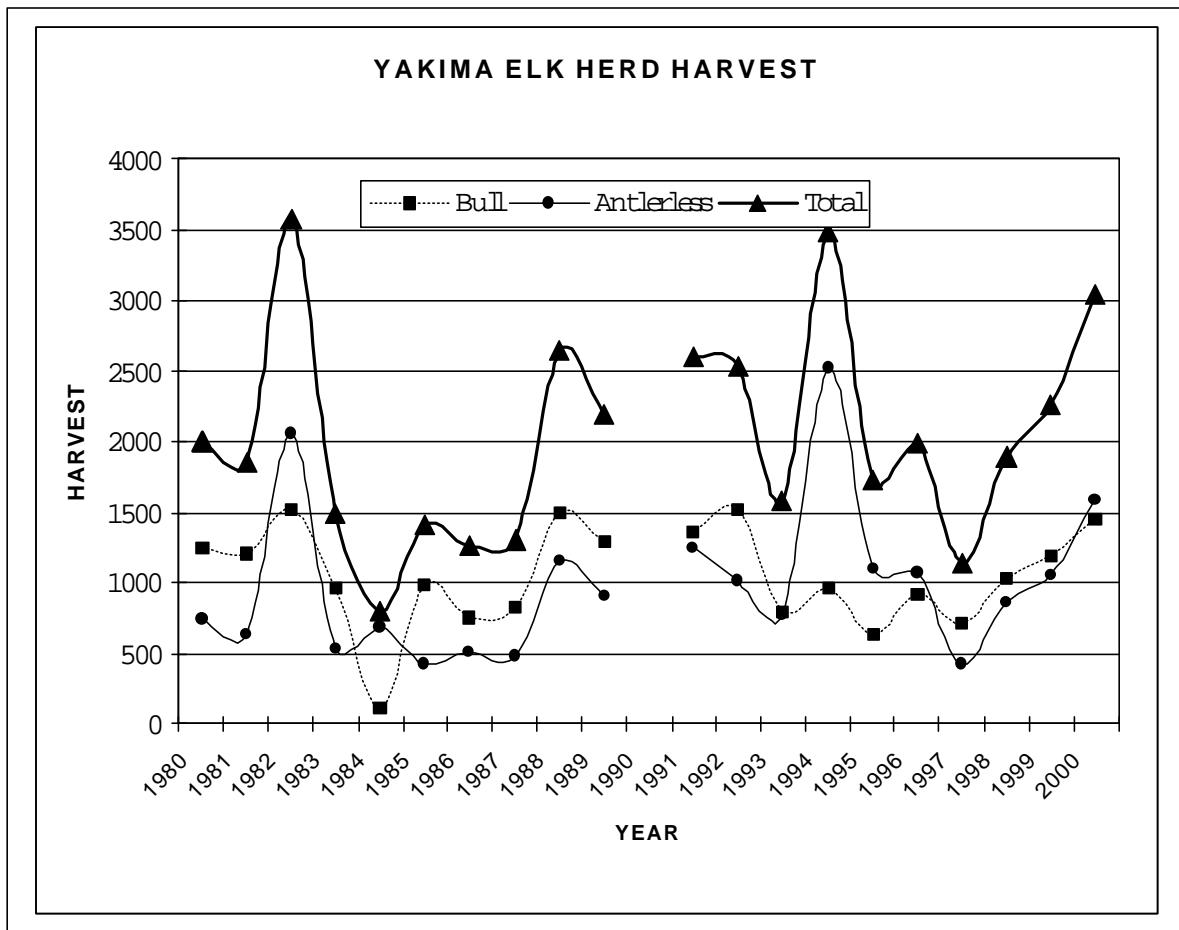
The County Game Commissions established the first elk-hunting seasons in the Yakima herd in 1927. The elk-hunting season in 1927 and 1928 allowed harvest of "antlered" elk in Yakima County and "any" elk in Kittitas County. Almost 600 elk were harvested during the two seasons. No further antlerless harvest occurred until 1938 when the Oak Creek winter range was opened

Map 3. Yakima Elk Herd Distribution



to "any" elk. An estimated 614 antlerless and 512 antlered elk were harvested in Yakima and Kittitas counties in 1938. From 1938 to 1994, general seasons typically remained as any-antlered elk, with select areas having general seasons or permits for antlerless animals (Appendix B). The most liberal seasons occurred from 1949-1951 when 12,630 (9,108 cows) elk were harvested. Herd reduction has typically been followed by greatly reduced harvest. From 1952-54, only 1,870 (254 cows) elk were harvested. The cycle of heavy harvest followed by conservative seasons has continued the last 2 decades (Figure 1).

Figure 1. Yakima elk herd harvest trends (1980-2000).



In 1994, the harvest strategy was changed to spike-only bull hunting during the general season, with branched antlered bull hunting by permit only. The objective was to increase post-season bull:cow ratios and increase the numbers of older adult bulls in the herd. The theory was that an increase in the numbers of older bulls would equate to earlier, more effective breeding, shorter rutting seasons, and better herd health (Noyes et al. 1996). Reproductive tracts collected from Yakima elk 1987-89 indicated that 82 percent (including yearlings) were pregnant and recruitment was high despite the low post-season bull:cow ratios. Zahn (1993) concluded that low post-season bull:cow ratios were not affecting recruitment in the Yakima Elk Herd. Reproductive tract data showed slightly higher pregnancy rates and earlier conception dates in high bull:cow ratio areas. In the high bull:cow ratio areas, more cows became pregnant in the first half of September, but thereafter, dates were similar to low bull:cow ratio areas. Calf

recruitment has not improved since implementing spike-only management (Table 2). The increase in adult bulls has probably boosted hunter satisfaction and created a boom in non-consumptive use of elk, particularly shed-antler hunting.

Herd Composition

Historically, the Yakima elk herd was primarily monitored using harvest data. From 1990-97 post-season composition (calves/bulls per 100 cows) data was collected from a helicopter. During the heavy snow winters of 1992-93 and 1996-97, the population was estimated by adding 10 percent to a total count of all elk on feedlots, survey units, and other known concentrations. In February 1999 (post season 1998), surveys were designed and implemented to estimate population using a sightability-correction model developed in Idaho (Unsworth et al. 1994). The 1999 survey was limited, resulting in a wide variance on the population estimate. Since 1999, survey efforts have been intensified, and confidence in the population estimates has increased.

Post-hunting season herd composition in the Cascade Slope sub-herd ranged from 1-7 bulls per 100 cows prior to spike only management in 1994 (Table 2). The 2001 estimate was 17 bulls per 100 cows. The average ratio of calves to cows prior to 1994 was 44 per 100. Since reaching bull escapement goals in 1997, the ratio of calves to cows has averaged 36 per 100. In 2000, the calf ratio dropped to 31 per 100, but increased to 38 per 100 in 2001. These changes from the 1997-2001 average are not considered significant. Prior to 1998, survey effort was not consistent and sample sizes were small, leading to data that might not accurately represent the entire elk population.

Table 2. Cascade Slope Sub-herd Post Season Composition (bulls and calves/100 cows)

Year	PMU 33 GMUs 336, 340, 342, 346			PMU 35 GMUs 352, 356, 360			PMU 36 GMUs 364, 368			Cascade Sub-herd Total		
	Bulls	Calves	N	Bulls	Calves	N	Bulls	Calves	N	Bulls	Calves	N
1990	2	50	470	7	46	239	2	34	745	3	40	1454
1991	4	43	373	0	53	87	14	46	195	6	45	655
1992	1	28	1355		No Data			No Data		1	28	1355
1993	6	46	933	9	41	266	6	63	304	7	48	1503
1994		No Data			No Data			No Data			No Data	
1995	5	47	816	6	65	303	3	74	69	5	53	1188
1996	10	32	1348	9	40	903	7	35	234	9	35	2485
1997	8	47	1490	Insufficient Data		48	13	37	1571	10	43	3109
1998	10	27	2540	18	36	2769	8	41	631	14	33	5940
1999	9	35	3833	12	26	2987	12	35	1712	11	33	8532
2000	11	32	4351	17	28	3057	15	34	2152	14	31	9560
2001	15	33	3571	19	44	3261	17	41	2310	17	38	9142

Estimated Population Size

During the winter of 1992-93 and 1996-97, the post-season population estimate, based on a total count plus a 10 percent expansion factor, was 10,000-11,000 elk. An estimate using the sightability-correction model (Unsworth et al. 1994) has ranged from 10,460 (February 2001) to 16,786 (February 1999). The 2000 survey (11,848 " 753) is believed to be the most accurate estimate of the population. The 1999 estimate had a wide variance as only 30 percent of the units were sampled and elk had started leaving the feedlots by the time of the survey. A light snow pack and problems with the stratification of units may have resulted in an underestimate of the population in 2001. In addition, the population may have been reduced in some PMUs after the increased harvest in 2000.

Population and Composition by PMU

The elk population in PMU 33 has likely been fluctuating over the last decade. The high bull harvest in the early 1990's indicated there was a substantial cow population that was probably significantly reduced from 1994-1996 (Appendix A). In PMU 33 from 1994-96 the average cow harvest (923) was twice the average bull harvest (453). Most population models indicate that high cow harvest will reduce a population fairly rapidly. Harvest report cards indicated ~70 percent of the bull harvest was spike (yearling) elk. Thus, bull harvest is an indication of recruitment. The trend reversed in 1997-1999. The average cow harvest (375) was less than the average bull harvest (420). The bull harvest also increase from 293 in 1977 to 600 in 2000.

The population estimate for PMU 33 in 1999 and 2000 was 5,700 " 1,303 and 5,586 " 769 (Table 3). The difference in the estimated cow population between years was only 26 animals. In 2001, the population estimate declined 1,300 animals. The decrease was probably due to sampling error during the survey and/or fewer elk than normal may have been on the winter range because of a light snow pack in 2001. The actual population is believed to be closer to 5,500 elk.

Calf recruitment in PMU 33 is considered good compared to other areas of Washington, but the data are insufficient to monitor trends. Historically, the sample size of composition surveys was small and estimates of annual variability were large (Table 2). Larger samples in the last 4 years indicate stable calf recruitment.

PMU 33 exceeded the objective of 12 bulls per 100 cows in 2001 (Table 2). PMU 33 has the smallest percentage of wilderness (7 percent) and a high road density. Bull mortality from 7 months of age to 19 months is approximately 70 percent. February bull recruitment has averaged 4.7 yearling bulls per 100 cows from 1999-2001. The relatively low yearling recruitment in PMU 33 translates into fewer branched antler bull permits than in other PMUs.

Elk harvest from PMU 35 has been highly variable and greatly influenced by the type and timing of hunting seasons and climatic conditions prior to and during the season. Significant increases in antlerless harvest occurred in 1982 and 1994, which impacted bull harvest in subsequent years. Harvest data indicate the herd has been building since 1994 (Appendix A). The 1998-2000 average antlerless harvest was only 57 percent of the estimated average February recruitment. The current population estimate is $3,655 \pm 134$ elk (Table 3).

PMU 35 reached bull escapement objectives in 1998 (Table 2). This unit is 52 percent wilderness

area and has the lowest overall calf to spike mortality (60 percent). “Calf to spike” mortality is defined as mortality during the timeframe from being detected as a calf recruit in February (age 7-8 months) to being detected the next February [or not] as a spike bull that survived the spike hunting season (age 19-20 months). However, low calf recruitment in February 1999 and 2000

Table 3. Yakima Elk Herd Post Season Population Estimates of cow, calves and bulls (1999-2001) by PMU.

Area	Year	Cows	Calves	Bulls	Population Estimate**
PMU 33	1999	3943	1397	360	5700 ± 1303
PMU 33	2000	3917	1244	425	5586 ± 769
PMU 33	2001	2892	953	441	4286 ± 302
PMU 34	1999	410	160	268	838*
PMU 34	2000	282	90	287	659*
PMU 35	1999	2772	733	328	3833 ± 1028
PMU 35	2000	2496	704	434	3634 ± 309
PMU 35	2001	2282	929	444	3655 ± 134
PMU 36	1999	3735	1326	462	5523 ± 2784
PMU 36	2000	1712	580	257	2549 ± 325
PMU 36	2001	1598	650	272	2519 ± 67
HERD TOTAL**	1999	10860	3616	1418	16786 ± 4334
HERD TOTAL	2000	8407	2618	1403	11848 ± 753
HERD TOTAL	2001	6772	2532	1157	10460 ± 503

* PMU 34 Summer survey total count and projected estimate.

** Population estimates for PMUs 33,35,36 only.

has resulted in an average of 5.4 yearling bulls per 100 cows. The good calf crop in 2001 should result in better yearling recruitment in 2002.

The historic population trend in PMU 36 has been similar to PMUs 33 and 35, with widely fluctuating harvests. The 1999 population estimate for PMU 36 was more than double the 2000 and 2001 estimate (Table 3). The 1999 estimate was likely biased because only 3 of the 9 survey units were actually flown. Two of the 3 units were near elk feedlots and had high densities of elk. When the data were extrapolated, an overestimate likely occurred. Recent harvest and survey information indicate the population is approximately 2,500 animals.

Total harvest in PMU 36 in 1999 and 2000 was the highest in history. The increased harvest was largely due to a muzzleloader damage hunt. Antlerless harvest exceeded estimated recruitment, resulting in a declining population.

The bull:cow ratio in PMU 36 exceeded the objective of 12:100 in 1997, fell below objective in 1998, and increased to 17:100 in 2001 (Table 2). Calf to yearling bull mortality is approximately 65 percent and yearling bull recruitment has averaged 6.4:100 cows. Yearling bull recruitment has been high because of excellent calf survival during the last 5 years.

Mortality

No studies documenting causes or rates of mortality specific to the Cascade slope sub-herd have been conducted. Smith et al. (1994) determined that statewide 59 percent of the adult elk mortality was due to legal hunting, 15 percent to poaching, and 7 percent to wounding loss.

Myers et al. (1999), working in the Blue Mountains, found that predation may also be a significant cause of elk mortality, especially for calves. Elk mortalities also occur on highways and in irrigation canals, but the levels are unknown.

Harvest

Elk harvest 1991-00 for the Yakima herd averaged 2,183 animals (range 1,489-3,454), (Appendix A). The number of bull elk harvested has historically and largely reflected the previous year's recruitment. Harvest report cards indicated that prior to implementation of spike-only management, yearling bulls accounted for 70-79 percent of the harvest. For the 3 years following implementation of spike-only management, yearling bulls accounted for 80-90 percent of harvest. In 1998, after 5 years of spike-only general seasons, yearling bulls accounted for 66 percent of bull harvest, indicating that the number of branched bull permits may now have a large effect on total harvest. In recent decades, permit numbers have determined antlerless harvest. In 1999, the recorded bull and antlerless mortality from hunting was estimated at 50 percent and 8 percent of the fall population. Post-season calf to spike mortality is estimated to be 60-70 percent.

Tribal Harvest

The Yakama Nation has traditionally exercised their treaty hunting rights within the boundaries of the Yakima Elk Herd, particularly PMU 36. In the 1990's, other tribes were also documented hunting Yakima herd elk. Tribal harvest for the herd is not available, but it is not believed to be significant relative to nontribal harvest. Yakama tribal members typically hunt within their reservation and recent court decisions have limited other tribal hunting activity within their ceded areas.

Rattlesnake Hills Sub-herd - PMU 34

Herd History

The main concentration of elk in PMU 34 is centered on the Arid Lands Ecology Reserve. The first elk were documented on the reserve in winter 1972 (Tiller 1993). Intensive elk studies began in 1982 when a few elk were captured and fitted with radio telemetry collars. Pacific Northwest National Laboratory (PNNL) has been monitoring elk movements and population dynamics using ground and aerial surveys.

The elk apparently maintained permanent residency on the Arid Lands Ecology Reserve until 1986 (McCorquodale et al. 1988). As the population expanded and a concurrent change in land uses surrounding the reserve made off-site movement more attractive, elk increased movements onto privately owned land to the west and south of the Arid Lands Ecology Reserve during the summer and early fall. The majority of the herd winters on the Arid Lands Ecology Reserve.

In 1982 the first either sex elk-hunting season was allowed in PMU 34. No hunting has been allowed on the Arid Lands Ecology Reserve and access to surrounding lands is limited. Elk mortality was initially minimal and the herd grew at a rapid rate (Eberhardt et al. 1996). Experiments to control the elk population using immunocontraception in 1993 proved ineffective. The rapidly expanding herd and movements off of the Arid Lands Ecology Reserve created conflict with surrounding landowners. The modern firearm seasons were liberalized to allow antlerless harvest during 3 different seasons (23 days total) in 1998. The 2000 elk-hunting season was further expanded to 75 total days with any elk or antlerless animals legal.

Population modeling indicated hunting was unlikely to reverse or control the growth of the herd without access to the Arid Lands Ecology Reserve or increased harvests on private land. The herd was expected to exceed 1000 animals in 2000. Local government officials and landowners asked the Washington Department of Fish and Wildlife and the U. S. Fish and Wildlife Service to reduce the herd to a level of <350 because of increase damage problems. Increased harvest in fall 1999 on surrounding lands and the trapping of 177 elk on the Arid Lands Ecology Reserve in late winter 2000 reduced the herd by approximately 300 animals.

In June of 2000, a fire burned 164,000 acres on the Arid Lands Ecology Reserve. The fire shifted elk use from the Arid Lands Ecology Reserve to surrounding lands, particularly dry-land wheat fields (Tiller et al. 2000). While this resulted in a sharp rise in damage (\$206,650 in 2000 Robert Schafer personal communication), it also provided an opportunity to harvest more elk because of their availability. The modern firearm-hunting season was amended and expanded to 75 days in 2000. The combination of the fire dispersing elk off of the reserve and a longer hunting season resulted in a record harvest of 253 elk (Appendix A). Thus, trapping and harvest reduced the estimated herd from 838 elk in the summer 1998 to approximately 439 in March 2001. Drought conditions throughout 2000 and early 2001 slowed vegetative growth on the Arid Lands Ecology Reserve. Elk have recently been noted using the Central Hanford Site where they are not wanted and elk showed some movements into dry land wheat fields in 2001. However, it appears recruitment has exceeded harvest in 2001 and the herd is expanding once again.

Herd Composition

Pacific Northwest National Laboratory collects composition data for the Rattlesnake sub-herd in the summer using aerial and/or ground surveys (Tiller et al. 2000). Data are not directly comparable to the Cascade slope sub-herd because of the difference in the season in which the data are collected. Calf recruitment on Arid Lands Ecology Reserve has ranged between 29 and 71 calves per 100 cows (Table 4). Calf recruitment may be related to range conditions that are heavily influenced by annual moisture.

The post-season bull ratio has not dropped below the goal of 12:100. The pre-season bull to cow ratios has ranged between 37 and 102 per 100 cows. In January 2001, the observed ratio was 33 bulls per 100 cows. A smaller number of elk occur on the Yakima Training Center. Little is known about the historic numbers, but Yakima Training Center records indicate only 4 elk were harvested from 1968-69.

The Department has noted elk movement on and off of the Yakima Training Center from the north (Colockum herd), west, and south (Yakima herd). During the winter of 1996-97, heavy snow caused elk to migrate onto the Yakima Training Center from the north and west. Damage complaints from private landowners adjacent to the northwest corner of the Yakima Training Center started during the summer of 1997. General hunting seasons and hotspot hunts did not

reduce the damage complaints. Elk hunting seasons were liberalized on the Yakima Training Center and hunters removed 82 elk in 1999 and 41 in 2000. An aerial deer survey of 50 percent of Yakima Training Center conducted in December 2000 noted only 3 elk. Fresh snow during the survey made it apparent that few elk were on the Yakima Training Center. It is unknown if harvest removed the majority of elk or if they migrated off the Yakima Training Center.

Estimated Population Size

Minimum summer population counts provided for the Arid Lands Ecology Reserve elk population showed an increase from 40 elk in 1983 to 837 elk in 1999 (Table 4). The estimated average annual herd growth over the period was ~25 percent. Additional elk on the Yakima Training Center brought the estimated population in PMU 34 to ~1000 elk in August of 1999. Harvest, trap-transplant efforts, and some emigration have reduced the estimated population to 450-500 (440 on the Arid Lands Ecology Reserve) elk in February of 2001.

Table 4. Rattlesnake Hills Post-Calving (summer) Elk Census Data*

Year	Cows	Calves	Bulls	Total	Calf/100 cows	Bulls/100 Cows
1983	19	13	8	40	68	42
1984	21	15	19	55	71	90
1985	29	17	25	71	59	86
1986	38	21	30	89	55	79
1987	48	27	19	94	56	40
1988	47	23	25	95	49	53
1989	51	23	28	102	45	55
1990	60	21	34	115	35	57
1991	79	23	31	133	29	39
1992	105	44	41	190	42	39
1993	127	59	52	238	46	41
1994	154	73	64	291	47	42
1995	174	96	76	346	55	44
1996	245	119	91	455	49	37
1997	280	157	154	591	56	55
1998	354	144	214	712	41	60
1999	410	160	268	838	39	65
2000	282	90	287	660	32	102
2001	264	122	174	561	46	66

*Pacific Northwest National Laboratory data.

Mortality

Pacific Northwest National Laboratory has attempted to document all mortalities and model the Arid Lands Ecology Reserve population. Hunting (including crippling loss and poaching) accounts for the majority of adult mortality (Brett Tiller 2000, pers. comm.). Road kills resulting from vehicle collisions with elk on the major highways account for some of the remaining

mortality. Cougar have been documented in the area and coyotes have been seen chasing calves, but there have been no documented mortalities due to predators. There is a large discrepancy between pregnancy rates and observed calf ratios, but data on pregnancy rates are limited. There may be significant spring calf mortality, but if so the cause is not known.

Harvest

Prior to 1980, few elk were documented as being harvested in PMU 34. During the 1980's, the average annual harvest was 9 elk (Appendix A). The expanding herd and liberalized seasons resulted in 183 elk being harvested in 1999. In 2000, 253 elk were reported harvested in PMU 34. The movement of elk off of the Arid Lands Ecology Reserve, due to the fire, contributed significantly to the 2000 harvest.

The Washington Department of Fish and Wildlife monitored legal elk harvest through a statewide annual harvest survey of 10 percent of the licensed hunters and report card returns of successful hunters. The Yakima Training Center requires all hunters to check in/out and report harvest. Since 1983, Pacific Northwest National Laboratory has compiled data on elk harvest from lands surrounding the Arid Lands Ecology Reserve by questioning hunters, landowners and Department field officers. The Yakima Training Center and Pacific Northwest National Laboratory data are considered to be more accurate than the Washington Department of Fish and Wildlife harvest survey data and have been used since 1983 (Appendix A).

Tribal Harvest

The Rattlesnake Hills Elk Sub-herd area encompasses portions of the ceded territory of the Yakama Nation and The Confederated Tribes of the Umatilla Indian Reservation. Tribes establish their own hunting seasons and regulations for their members on their respective ceded areas. No recent elk hunting activity has been reported by the Umatilla Tribe and only light activity by the Yakama Tribe. Neither Tribe has provided elk harvest estimates.

Social and Economic Values

Number of Elk Hunters and Elk Hunter Days

In the 1990's, an average of 25,844 state authorized hunters spent an estimated 123,743 days afield hunting Yakima elk (Appendix A). This represents an increase of 3,599 hunters compared to the 1980's average. Hunter numbers declined with the implementation of spike-only management in 1994, but rebounded to record numbers in 1999. Based upon 1996 data (U.S. Department of Interior and U.S. Department of Commerce, 1998), Yakima elk herd hunters spend approximately 14.3 million dollars annually in-state (excluding licenses). Approximately 5.5 million was spent on food, gas, lodging etc. and 8.8 million was spent on equipment.

Hunter participation during any given year is influenced by many factors. During 1984-2000, the Department annually tracked hunter participation and hunter effort through a harvest questionnaire (Figure 2). Season structure, license and tag fees, climatic conditions, season forecasts, and previous year's hunter success rates, etc has influenced hunter participation. Similarly, hunter days afield can be highly variable from one year to the next. The impacts of hunter participation following an elk population reduction would be difficult to predict. During 1999, the highest hunter of numbers and days afield expended since 1984 occurred (Figure 2); it is reasonable to presume that hunter participation may eventually decline as a result of a

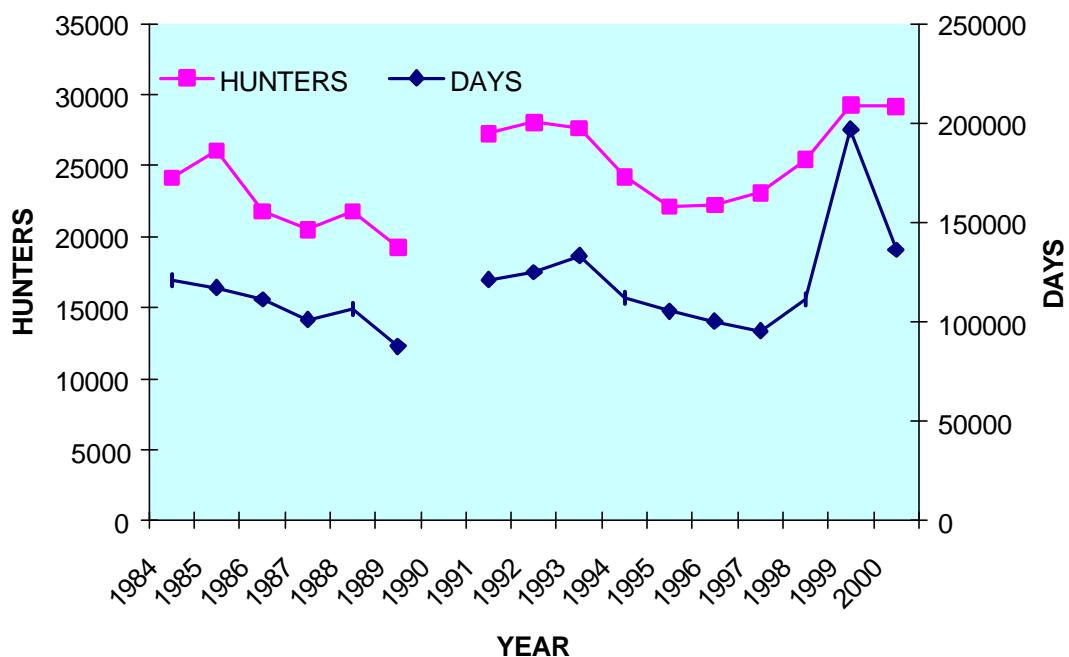
reduction in the elk population.

Harvest Strategies

Specific harvest strategy recommendations will be made every three years as a part of the current Washington Fish and Wildlife Commission's Policy of adopting hunting seasons for a three-year period and annually establishing permit seasons and necessary amendments to manage populations or control damage. The three-year hunting package will serve as the state's harvest plan. Tribal participation in formulating specific recommendations and harvest strategies begins at the regional level. The Washington Department of Fish and Wildlife's regional staff and field personnel meet with tribal representatives periodically to coordinate harvest strategies, share harvest data and discuss other elk management activities such as habitat enhancements.

Elk hunting seasons in the Cascade portion of the Yakima herd prior to 1994 generally allowed archery hunters to take any elk; muzzleloader hunters to take any elk until 1983 and any elk or bull-only depending on the unit during 1984-94 (Appendix B). Modern firearm hunters were restricted to any bull elk with antlerless elk by special permit. These seasons and regulations resulted in low bull escapement. In 1994, the strategy for bull harvest was changed to spike-only with branched antlered bulls by permit-only for all hunters. Archery and muzzleloader hunters have seasons that allow for antlerless harvest in designated units and modern firearm antlerless hunting opportunity remains by permit-only.

FIGURE 2. Yakima elk herd hunter participation and days of effort.



Elk hunting seasons for the Rattlesnake Hills sub-herd has allowed either-sex elk hunting seasons since 1983. In 1995, the area was split with Yakima Training Center becoming a separate unit (GMU 371). Elk hunting seasons were liberalized significantly in this area in 1983

to address a growing damage problem. There were 4 separate hunting seasons for any elk or antlerless elk by modern firearm hunters (Appendix B). The harvest strategy and hunt boundaries have varied annually within the sub-herd area.

Damage

Almost since the inception of the modern Yakima elk herd in 1913 conflicts with the agricultural industry have occurred. A passage from the second Biennial Report of the Washington State Game Commission reveals the thinking of the times. *“Looking at the grazing problems in a broad light, the current obstacles facing conservationists is wrought with difficulties. Millions of acres of public land is rented to stockmen by the government at a price so low that it shapes up as a government subsidy.”* (Washington State Game Commission 1935). To lessen the conflict between elk and agriculture it was necessary to limit elk numbers by declaring a cow elk season, which put an end to the philosophy of unbridled expansion of the elk resource.

“By 1938 game damage was becoming a problem of grave concern to the Department and called for protective measures. During the winter months from 1938 to 1942, herding operations were carried on in an effort to discourage elk and deer from entering agricultural fields adjacent to the lower extremities of their winter range. Such activities did not solve the problem but under existing laws governing Department expenditures, they were the only aides that could be offered to property owners.” (Washington State Game Commission 1944). *The Game Department also experimented with the idea of trapping and transplanting elk from problem areas to other problem free ranges. The passage of the controlled hunt law in 1941 allowed the Game Department to issue limited permits to control the number of hunters. As a result, the first damage related permit control hunts were held in 2 areas of the Blue Mountains and in the Wenas Valley of Yakima County that year (Op cited 1944).*

In 1943 the state legislature appropriated \$100,000 from the Game Fund for prevention of game damage by constructing fences to protect crops and elk proof drift fences. By 1953 there were 166 miles of deer/elk proof fence in place, including elk proof drift fencing. Landowners were also permitted to present claims to the legislature for payment of game damage suffered. Finally, the legislature authorized the Game Department to issue special “kill” permits to lethally remove deer and elk in limited numbers.

The Washington State Game Commission (1953) was empowered by the legislature in 1949 to settle claims for game damage of up to \$1,000. Higher amounts required legislative action. During this period elk herding on foot and horseback continued and use of new pyrotechnics and herding by helicopter were implemented.

More recently damage “hot spot” hunts and “landowner damage access permit” hunts have been used to address deer and elk problems. Hot spot hunts were designed to help alleviate problems rapidly and efficiently. Hunters are selected by the Department to participate during a specific time period on a described landowners damage area. Hunters must have an unused elk transport tag and are currently selected from a pool of unsuccessful special permit hunt applicants who applied for a permit located nearest to the damage area.

The landowner damage (preference) permit hunt was initiated in 1997 as a pilot program. The Fish and Wildlife Commission authorized a Landowner Damage (Landowner Preference) Hunt within a season framework of August 1 through March 31, statewide, using any legal weapon. A maximum statewide quota of 600 antlerless deer and 100 antlerless elk was established. A

landowner with deer/elk damage must enter into a cooperative agreement with the Department establishing a season within the framework, boundary of the hunt, and the number of animals to be removed. The landowner then selects a hunter with a valid tag and agrees not to claim damage payments and must allow access to hunters during the general deer/elk season.

Fencing

In the Yakima elk herd area there are over 100 miles of elk proof fencing in place (Map 3). Fencing is a very expensive, but necessary, program for this elk herd because of the loss of historic winter range and the continuing loss of low elevation habitats for agriculture and rural and sub-urban development. Elk fence-building and maintenance has been ongoing since 1943. The primary objective of elk fencing is to keep elk from accessing the high value croplands and orchards. A special "Yakima Elk Control Program" report from the Sixth Biennial Report of the Washington State Game Commission (1944) is quoted, explaining the rationale of the fencing program at the time.

"Elk damage in Yakima County south of the Tieton River presented a problem peculiar to that area and one that could not be economically or adequately controlled by the usual method of fencing individual farms. The damage was caused by large bands of elk that moved into the irrigated and intensively farmed Tieton and Cowiche orchard district. The animals that moved into this area came from two sources or herds of elk. The smaller of the two bands, numbering between 250 and 300 animals, came directly down from the west in the head of the Cowiche and Ahtanum Creeks where their summer range extends south of Rimrock Lake. The other group moved into this area from the large herds of the Department owned Oak Creek Elk Winter Range which is situated directly north and across the Tieton River.

To solve this problem it was necessary to develop controls that would guarantee that both of these herds would be prevented from again invading this farming area. For control of the Oak Creek herd, a fence was designed and partially completed along the breaks on the south side of the Tieton River. The fence design took advantage of perpendicular cliffs and the Tieton irrigation canal so that it was necessary to construct only about three miles of fence to control the elk along about 10 miles of river. When completed this fence will make it impossible for Oak Creek or Rattlesnake elk to again get into the fruit-raising district of this area. Court actions pertaining to the acquisition of right-of-way for some of the fence have halted the work and prevented its completion.

However, this fence will not control the Cowiche herd, which moves in from the west and enters the area behind the fence. After a thorough study of this problem, it was concluded that there were no practical means of controlling this herd by further fencing because they ranged down to the farming area in a broad semi-circle through the Cowiche and Ahtanum covering a frontage of many miles.

As there were no other means of controlling these animals, it was concluded that the only permanent solution would be found in the complete elimination of the Cowiche elk herd by hunting. This was largely accomplished in the 1943 seasons by the opening of this area to elk of either-sex throughout the entire month of December. The resultant take was 286 animals and a survey following the season showed only a small herd left in the area."

Such was the beginning of elk proof fencing to protect agricultural crops. Fencing alone is not the solution to elk damage. Currently, there are some serious gaps where fencing needs to be constructed to eliminate elk access to lower elevations. Existing elk fences need better maintenance, one-way re-entry gate retrofitting, and cattle guard installation on roads. Elk access the Kittitas Valley through or around the south end of the fence. When the original fence was constructed, the fencing material was placed on the wrong side of the posts, making it easy for elk to push through. The fence is currently being reconstructed. Fence vandalism is an ongoing problem.

The negative aspects of fencing continue to be raised, however no viable solutions have been provided to protect private property, especially during years with heavy snow that drives deer and elk to the lowest elevations. Those who are opposed to fencing most often cite the following reasons; (1) elk are prevented from use of their traditional ranges, (2) fencing changes migratory patterns, (3) fencing is extremely expensive to construct and maintain, (4) fencing denies public access, and (5) fencing destroys the scenic beauty of the area.

To reduce costs of maintaining the elk fences, a volunteer program similar to “adopt a highway” may be implemented or use of low cost labor from prison inmates or Americorp may be used. The effectiveness of the fences requires constant monitoring to make sure the fence is properly maintained.

Feeding

“Permanent” elk feeding began in the late 1960's. The main purpose of the feeding program is to keep elk at higher elevations above the elk proof fences. Feeding usually starts as soon as elk arrive in significant numbers (usually in December). The elk typically start leaving the feeding areas with spring green-up. During normal winters, an estimated 50-60 percent of the herd is fed alfalfa hay. In winters with extreme snow depths, up to 90 percent of the Yakima Elk Herd residing on the east Cascade slope may use the feeding stations.

Prior to 1996, Washington Department of Fish and Wildlife produced enough hay on state wildlife areas (1,000-1,100 tons) to supply the feeding areas for the Yakima Herd. An internal evaluation determined that it might be less expensive for the Department to buy hay from private sources. The main hay producing wildlife area (Wenas) was designated as a mitigation area for habitat lost to the Columbia River dams. As a result, the emphasis on Wenas and other wildlife areas changed from hay crop production to native vegetation restoration. The Sunnyside Wildlife Area is the only remaining hay producing area for the elk-feeding program. Overall wildlife area hay production declined from 1,100 tons in 1996 to 175 tons in 2000. Hay consumption has varied between 320 and 5,100 tons over the last 10 years (Table 5).

The impetus for elk feeding was probably influenced by the public sentiment that winter-feeding helps elk survive difficult winters. Wildlife managers have questioned the value and advisability of emergency feeding. With shrinking habitats, especially critical winter ranges, and fencing that prevents normal movement of elk to lower elevation winter ranges, feeding is primarily justified on the basis that it holds elk at higher elevations away from vulnerable damage areas. Criticism of the elk winter-feeding program includes the creation of abnormally high concentrations that increase risks of disease transmission, destruction of habitats near feeding areas, the sustaining of artificially inflated populations beyond natural carrying capacity, and relatively high cost.

Table 5. Amount of Hay Fed at Yakima Elk Feeding Sites

Winter Ending	Tons of Hay	Winter Ending	Tons of Hay	Winter Ending	Tons of Hay
1955	1200	1971	1580	1987	1360
1956	0	1972	508	1988	1160
1957	0	1973	750	1989	403
1958	0	1974	636	1990	400
1959	0	1975	150	1991	610
1960	0	1976	15	1992	2430
1961	400	1977	1035	1993	1670
1962	0	1978	800	1994	320
1963	0	1979	1400	1995	720
1964	820	1980	200	1996	880
1965	1210	1981	1070	1997	5100
1966	0	1982	789	1998	960
1967	700	1983	805	1999	1340
1968	1455	1984	1192	2000	1660
1969	700	1985	1900	2001	1870
1970	600	1986	700		

The current feeding program is an integral part of the overall elk damage control program for the Yakima herd. Elk feeding is currently conducted at 9 sites: Joe Watt and Robinson in GMU 340, Mellotte in GMU 342, Nile in GMU 352, Oak Creek and Junction in GMU 360, Sunset, Stinson and West Valley in GMU 368 (Map 3). The Nile feeding site is authorized under a memorandum of understanding with the U.S. Forest Service and functions to address nuisance and damage to the rural residents of the area. Continuation of this site is under evaluation.

The elk feeding budget and expenditures have varied from year to year primarily driven by the severity of the winter. During severe conditions, the State Legislature has provided supplemental funds to emergency feed elk and deer. The Department elk feeding budget and tons of hay fed since 1994 are shown in Table 6.

Table 6. The Department Elk Feeding Budget and Tons of Hay Fed

Fiscal Year	Statewide Feeding Budget	Tons Fed
1994	\$79,000	320
1995	\$79,000	720
1996	\$73,000	880
1997	\$60,000	5100
1998	\$60,000	960
1999	\$116,000	1340
2000	\$138,000	1660
2001	\$138,000	1870
2002	\$118,000	

Cascade Slope Sub-herd (PMU 33, 35, 36)

Elk damage to fences and crops is a continuing problem in the Yakima Elk Herd. The enforcement program spent an average of 139 staff days per year responding to damage complaints in a timely manner over the last 5 years (Table 7). The inclusion of rangeland as an agricultural crop, subject to damage claims, will likely increase the work effort (Appendix C). Enforcement personnel address elk damage complaints by providing scare-away devices, by herding elk, issuing permits to lethally remove elk, and conducting special "hot spot" hunts. Due to quick response and good landowner relations, the enforcement program has kept the number of formal damage claims to an average of 2 (0-6) per year. The average amount paid by the Washington Department of Fish and Wildlife annually for the Cascade sub-herd is \$3,478 (0-\$30,040). In PMU 33, elk damage complaints are common in the Kittitas Valley (eastern GMU 340). Elk typically move onto irrigated hay (timothy, alfalfa) fields in August as range forage desiccates. If permitted, elk will stay in the area through fall when damage to a newly seeded field can be significant. In the winter, when snow depths accumulate, haystack damage can be a problem.

Table 7. A Summary of Cascade Slope Sub-herd Damage

*Year	Staff Days Used on Damage	Applications Requested	Applications Returned	Crop Type	Total Claimed	Total Paid
1991	unk	3	3	Grain, Hay	\$16,115	\$2,250
1992	unk	0	0		0	0
1993	unk	9	6	Hay, Orchard	\$32,025	\$3,793
1994	unk	1	1	Hay	\$2,000	\$445
1995	unk	0	0		0	0
1996	unk	1	1	Hay	\$1,153	\$1,100
1997	160	12	4	Orchard, Hay	\$349,740	\$30,040
1998	123	4	1	Orchard	\$10,000	0
1999	118	2	2	Hay	\$6,550	0
2000	145	4	1	Hay	\$285	\$119
2001	148	5	4	Hay, Grain	\$6,403	\$513
Average	139	3.7	2.1	Orchard, Hay, Grain	\$38,570	\$3,478

Elk damage control in the Kittitas Valley is getting more difficult as agriculture lands are converted to residential development. As the area becomes urbanized, hunting and issuing kill permits may not be acceptable damage control options. More people and smaller parcels of land ownership also make herding problematic. There are two elk feeding stations (Joe Watt and Robinson) in the Kittitas Valley that hold elk away from problem areas (Map 3). Continuing to feed, installing more re-entry gates, maintaining the elk fence, and allocating helicopter time for herding is needed for this area. Habitat improvements at lower elevations may help reduce problems in August.

A permit hunt (Shushuskin) was developed to control damage at the south end of the Kittitas Valley and to prevent elk movements onto agricultural lands. This hunt has been moderately successful at controlling winter damage. In 1999, the elk began residing year round in the Shushuskin area. Hunting seasons held in the fall of 1999 were unsuccessful at reducing the summer herd, partially because animals reside in the thick riparian cover or on the opposite side of the river where there is a firearm restriction ordinance in effect. These elk left during the winter of 1999-2000, but returned in the summer 2000. In 2000, 165 landowner preference permits were issued in an attempt to control the herd and 65 elk were harvested (R. Schafer, pers. comm.). This herd can become a major problem if not controlled because of the juxtaposition of agriculture, houses, a golf course and riparian vegetation. All potential methods of lethal removal need to be explored.

Another major elk damage problem area exists in PMU 33 in the Wenas Valley. An elk fence protects the lower valley. Elk are commonly found on the wrong side of the fence (as many as 300), where there are high value orchards and irrigated fields. The problems are numerous and especially severe during dry summers and in winters with deep snow. The Mellotte feed site helps to minimize problems in the winter. Public use in the area is high and gates are often left open. Holes have also been cut in the fence. Where the fence crosses roads, standard cattle guards are not adequate to stop elk from crossing onto the wrong side of the fence. During spring, elk migrate up the valley and may concentrate on a few ranches above the fence.

In PMU 35, the main problem is centered near the Nile community, where there are numerous small farms and ranchettes that raise and store hay. The fence protecting the area was originally built in 1943 to keep elk from moving in from the west. The fence is in poor condition and not continuous (Map 3). Elk are also entering the area from the east. A portion of the herd is resident year round. Some residents intentionally feed and attract elk to the Valley. Solving elk conflicts in the Nile will be difficult. Herding is not successful as elk can go through or around the fence quickly. Hot spot hunts are sometimes useful but have not solved the problems and are unpopular with some residents.

In PMU 36, elk damage typically occurs within a few miles of the elk fence. There are high value, irrigated crops along the entire length of the fence. Damage complaints occur in fall and winter. In recent years, elk have been a continual problem in the northeast portion of GMU 368. A hotspot hunt was held in December 2000-January 2001 and a total of 30 elk were removed (R. Schafer, pers. comm.). The main problem in this area is the porous nature of the elk fence. When constructed, the irrigation canal and rock areas were incorrectly assumed to exclude elk. The Sunset, Stinson and West Valley feeding areas were all created to keep elk out of agricultural areas during the winter.

Rattlesnake Hills Sub-herd (PMU 34)

Elk damage complaints in PMU 34 are most common surrounding the Arid Lands Ecology Reserve and in the Badger Pocket area northwest of Yakima Training Center. Elk movements off the Arid Lands Ecology Reserve were uncommon during the 1980's but increased during the 1990's (Tiller et al 2000). Rangeland, hay, grain and orchards border the Arid Lands Ecology Reserve on the south and west. Most elk movement and damage occurs during the summer and fall. Complaints increased in the 1990's, but no formal damages were filed until 1999 (Table 8). Following the fire that engulfed the Arid Lands Ecology Reserve in the summer of 2000, elk damage claims and payments totaled \$261,122.

Table 8. A Summary of Rattlesnake Hills Sub-herd Damage

*Year	Staff Days Used on Damage	Applications Requested	Applications Returned	Crop Type	Total Claimed	Total Paid
1997	41	0	0		0	0
1998	70	0	0		0	0
1999	69	0	0		0	0
2000	385	4	2	Wheat, Orchard	\$14,381	\$8,477
2001	202	6	5	Wheat	\$261,122	\$206,650
Average	184	2	1.4	Wheat, Orchard	\$55,101	\$43,025

* Damage year is July 1 – June 30. Year listed is end of damage year (June).

Elk movement off the Arid Lands Ecology Reserve may be density dependent. The mass movement in 2000 was due to fire eliminating most forage. The long-term impact of the fire on elk forage is unknown. The effectiveness of a general hunting season to control the Rattlesnake Hills elk population has not been satisfactory because the Arid Lands Ecology Reserve provide elk safe harbor. Hunting access onto private lands adjacent to the reserve is managed inconsistently. Some landowners will not allow hunting on their lands, others allow hunting on a limited and tightly controlled basis. We conclude that the most effective way of controlling elk damage to agricultural crops may be by constructing a fence to control elk movement off of the Arid Lands Ecology Reserve. Managing elk numbers in the reserve consistent with available habitat may require the use of many alternatives in lethal and live removal of animals. The Department is ready to assist the U.S. Fish and Wildlife Service in administering a hunting program on the Arid Lands Ecology Reserve as a cost efficient and viable management tool in controlling elk numbers.

In the Badger Pocket area elk damage is mainly on irrigated hay and orchard trees. Damage complaints began in 1997. General season and hotspot hunts proved ineffective in alleviating damage. An either-sex general hunting season on the Yakima Training Center in 1999 resulted in harvest of a large number of elk, but was labor intensive for the Yakima Training Center staff. The hunting season was changed to permit only and either-sex in 2000. The elk population on the Yakima Training Center appeared to be greatly reduced after the 2000 season.

Rangeland/Elk Conflicts

In every PMU, there are claims that elk are competing with livestock for available forage. Historically, the Washington Department of Fish and Wildlife alleviated some rancher's concerns by allowing grazing on Department owned lands. All grazing agreements on Department lands within the Yakima Elk Herd area have been canceled in recent years because of conflicts with other wildlife species and concerns over native plants. This is a significant issue with the ranching community and may have contributed to a bill that was passed by the 2001 Legislature to allow private landowners to claim damage on rangelands (Appendix C).

The main private land conflict in the Cascade sub-herd area occurs during the spring when elk are moving from feedlots and winter range to summer range. In winters with high snow-pack,

elk may stay on private range for an extended period. Holding elk on Department owned winter range longer would ease conflicts. Habitat improvements may attract elk to public lands, but human disturbance needs to be greatly reduced to encourage elk to use these areas.

Elk/livestock conflicts in the Rattlesnake sub-herd are typically near the Arid Lands Ecology Reserve and occur during the summer. During dry periods, elk/cattle may compete for available green forage near water. Some ranchers are also concerned about elk utilizing limited water supplies.

U. S. Forest Service officials have expressed concern that elk may be contributing to damage to sensitive habitats, such as wet meadow systems, on the herd's summer range. Studies to measure the impact of elk on Forest Service lands as well as individual ranches are needed.

Loss of Open Space

One of the more serious conflicts that threaten the Yakima elk herd is the continued and persistent loss of habitat caused by human development. Yakima County Plan 2015-A Blueprint for Yakima County Progress (1997) has a stated goal to, "*Provide for the maintenance and protection of habitat areas for fish and wildlife.*"

County planning and policy development has helped curb but not eliminate development on remaining critical elk winter range. The Washington Department of Fish and Wildlife has major concerns for any agriculture crop development or home building above the elk proof fence because of elk and deer damage and nuisance conflicts and further loss of critical winter habitat.

Nonconsumptive Uses

Wildlife viewing of elk is becoming an increasingly popular human past time. The Interagency Committee for Outdoor Recreation recently completed a public lands inventory project that included a survey of public land uses in the State of Washington. They found that nature activities, which included observing/ photographing wildlife among other things, was ranked number 2 or 3 among 15 other outdoor recreational activities by all age groups of Washington residents (Richmond 2001).

Public viewing of the Yakima herd is highest in the winter, particularly at the Oak Creek and Joe Watt feed lots. The Oak Creek Wildlife Area attracted an estimated 100,000 visitors to view elk in 1999-2000. Since 1994, the increase in the numbers of large bulls has encouraged spring "shed-antler hunting". The activity has become so popular that concern for harassment of elk has developed. During the summer months, elk viewing is a favorite pastime of hikers, fishers and campers.

The Rattlesnake Hills elk sub-herd lends itself to elk observations because of their large size and living in a treeless environment. The relative abundance of branched-antlered bulls in the Arid Lands Ecology Reserve elk population is an added attraction and presents a unique opportunity to observe them from vantage points along Highway's 24 and 240.

Habitat Management

Cascade Slope Sub-herd (PMUs 33, 35, 36)

Acquisition of critical elk wintering areas has enhanced the Department's ability to maintain the current elk herd. Over 75 percent of Yakima's elk now winter on Department managed lands. The only major area where elk are not on Department land is in the Cowiche Unit of PMU 36. The conversion from rangeland to residential development and conflicts with cattle grazing is a significant issue in GMU 368. Land acquisitions, trades or easements on winter range may be needed to maintain elk population levels in PMU 36.

The capability of the habitat to support the current population of elk has not been determined. Some preliminary modeling is being conducted in a cooperative effort between the U.S. Forest Service, Rocky Mountain Elk Foundation and the Washington Department of Fish and Wildlife. However, the current modeling effort is not designed to predict the capacity of the environment to support elk. Future efforts to determine the habitat carrying capacity for this elk herd is a priority and will play a significant role in future elk population management. However, significant new data will be required to address the habitat capacity issue.

Habitat enhancements on public lands, particularly Department owned and leased lands, could reduce reliance of elk on winter-feeding. Habitat enhancements may also reduce the use of mid-elevation private range in spring by holding elk on Department Wildlife Areas. Potential enhancements include forage planting, fertilizing, weed control, developing water sources, prescribed burning or controlled grazing. Past projects completed with assistance from Rocky Mountain Elk Foundation and other partners in the Yakima Elk Herd area are summarized in Appendix D.

Department Wildlife Areas have changed somewhat from a "game," emphasis to a broader "wildlife" and ecosystem emphasis. Livestock grazing on Department Wildlife Areas in Region 3 within the range of the Yakima elk herd was eliminated in keeping with this new emphasis. Livestock grazing can improve range for big game if managed properly. Designing a grazing program that meets Department management goals and public scrutiny will be difficult. Further, stock fences have been removed or are in disrepair. A full evaluation and participation by affected parties in a Coordinated Resource Management Planning process is needed.

Preserving and improving habitat may not provide intended benefits if human disturbance is high. Human use often displaces elk from public land and reduces habitat effectiveness. The disturbance factor is most critical on winter and spring ranges and is increasing. Disturbance depletes elk energy reserves, potentially increasing mortality and may reduce productivity. Displaced elk can also increase damage and nuisance problems. In recent years, a large increase in shed antler hunting has become a major concern on elk winter/spring range. Critical winter/spring ranges should be closed to all human use from mid November until the elk leave the area the following spring.

Road/area closures are intended to increase habitat effectiveness, improve escapement of bull elk, reduce poaching, and reduce crowding of hunters. Road closures with permanent barriers are more effective at meeting goals than seasonal or sign closures. However, due to budget and public concerns, the Green Dot System is the most common form of road management within the boundaries of the Yakima Elk Herd. There are currently 584 miles of closed roads under this system. All roads under the Green-Dot System are closed unless posted open with a green dot reflector. The Green Dot System is reliant upon voluntary compliance for the most part because access is not physically altered. Many hunters feel road closures are discriminatory to seniors and disabled persons. Open road densities still exceed the Department goal of 1 mile per section

on much of the area. More roads need to be gated or permanently closed, especially on winter range. Additional road closures may occur under the forest and fish rules protecting riparian systems. A recent hunter opinion survey (Responsive Management 2002) conducted in Washington showed that 80 percent of elk hunters thought that road closures were important in controlling hunter numbers and impacts to wildlife. When asked if they supported or opposed the cooperative road management systems (Green Dot and Posted Closed systems) 83 percent of deer and 75 percent of elk hunters supported these systems. Agencies and private landowners are increasingly concerned with high costs of road maintenance. These roads are maintained at landowner expense, placing an additional burden on them when roads are unnecessarily damaged from use during wet conditions and create environmental damage.

The spread of noxious weeds (knapweed, thistle) is a problem, particularly on elk winter range. Noxious weeds may be reducing forage quality and quantity for elk. The Department conducts an annual weed control program on Department owned acreage as time and funds allow. Increased effort is needed, particularly in GMUs 340 and 342.

Rattlesnake Hills Sub-herd (PMU 34)

Fires and overgrazing have resulted in a proliferation of cheat grass in many areas of the Rattlesnake sub-herd. The U.S. Army - Yakima Training Center, U. S. Department of Energy, Washington Department of Fish and Wildlife and some private landowners are attempting to restore native range destroyed by wildfire. The goal of the projects is to restore native vegetation, especially the shrub-steppe vegetative community. In the low elevation elk winter habitat, cheat grass is the dominant species that is subject to frequent fire events.

The management goal for the Rattlesnake sub-herd is to maintain populations at levels compatible with the native vegetation. No elk habitat enhancement projects are currently justified or proposed in this area.

Research Needs

1. Very limited formal research data are available for the Yakima elk herd. Better data are needed on the distribution, movements, and habitat use of the Yakima elk herd in order to improve management of this resource and assess the effects of the elk population on other native and domestic ungulates and sensitive habitats. Basic radio telemetry data from elk in each of the three PMUs are needed to define the scale of the landscape for this herd and evaluate the adequacy of current management unit boundaries.
2. Research is needed to quantify nutritional condition dynamics of Yakima herd elk, including data from elk that are fed during winter and those that utilize natural winter range. These data should include autumn data from hunter-killed elk as well as assessments of live elk during early and late winter. Current technology provides the means to make highly precise assessments of elk nutritional status.
3. Research is needed to evaluate the adequacy of current population monitoring protocols and refine them where needed.
4. Research is needed to better quantify the seasonal habitat base used by Yakima herd elk. Such efforts are critical to assessing the appropriateness of population management objectives and the capacity of the environment to support elk use with acceptable consequences to the environment and society.

Herd Management Goals

The Yakima Elk Herd Plan provides a historical background and current condition of the herd. Other than harvest, there is little data to assess the herd trend over time. The plan is an assessment document that identifies management problems, suggests solutions, and sets direction. The plan outlines goals, objectives, problems, strategies, and helps establish priorities for managing the elk herd. It provides readily accessible resource and biological information from the herd and identifies inadequacies in scientific information. Fundamental goals for the management of the Yakima elk herd are to:

1. Preserve, protect, perpetuate, manage and enhance elk and their habitats to ensure healthy, productive populations and ecosystem integrity.
2. Manage elk for a variety of recreational, educational, and aesthetic purposes, including hunting, scientific study, wildlife view, photography, and use by Native Americans.
3. Manage the Yakima elk herd for a sustained yield.

Management Objectives, Problems and Strategies

Herd Management

Objective # 1

Reduce and then maintain the post-season elk population range objective of 9,025 – 9,975 animals for the Cascade slope portion of the Yakima Elk Herd. Specific objectives for each PMU are as follows:

Cascade Slope sub-herd [Final EIS for the Game Mgmt. Plan (WDFW 2002)]

PMU (GMU's)	February 2000 Estimate				Objective			
	Bull	Cow	Calf	Total	Bull	Cow	Calf	Total
33 (336-346)	440	3900	1250	5590	350	3000	990	4340
35 (352-360)	445	2300	930	3675	300	2000	620	2920
36 (364,368)	280	1610	650	2540	200	1500	540	2240
Total	1165	7810	2830	11805	850	6500	2156	9500

Problems

Hunter's favor maintaining the elk herd at a high level within habitat constraints. Agricultural interests have indicated they'd prefer a much lower population to reduce potential damage concerns. Population surveys have only recently improved and may not accurately determine population levels. Calf recruitment has also shown wide variation over the last 5 years and is difficult to predict. Habitat studies on the Yakima herd haven't determined elk carrying capacity or current condition and trends of vegetation over the long term. The U.S. Forest Service, Washington Department of Natural

Resources and the Yakama Nation have expressed some concern relative to potential adverse impacts to habitat by too many elk.

Strategies

1. Reduce this herd to address damage and nuisance concerns and minimize movements of elk below the fence. Concentrate elk herd reduction in areas with high agricultural conflicts. Target problem animals and animals below the elk fence.
2. Continue sampling >70 percent of the units within each Cascade Slope sub-herd PMU. Re-stratify the units using current knowledge of population abundance. Develop models with better confidence in the population estimate.
3. Increase antlerless permits over the next few years to reduce the population and measure population response. Base permits recommendations on previous years recruitment as determined from surveys.
4. Conduct research to develop refined population management objectives.
5. Trap and transplant elk as a method of herd reduction when suitable release sites are identified.

Objective # 2

Reduce and maintain the Arid Lands Ecology Reserve population in the Rattlesnake Hills at a population level that does not result in significant damage to private lands (estimated <350 elk). Specific population levels and objectives for PMU 34 is as follows:

Rattlesnake Hills sub-herd [Final EIS for the Game Mgmt. Plan (WDFW 2002)]

PMU 34	February 2001 Estimate				Objective			
	Bull	Cow	Calf	Total	Bull	Cow	Calf	Total
	138	228	72	438	<87	<163	<100	<350

Problems

The U. S. Fish and Wildlife Service has cooperated to help the state meet the goal of maintaining this herd at approximately 350 as an interim plan until a plan is developed for the Hanford Reach National Monument. The Rattlesnake Hills sub-herd population objective will be based on a population that will stay within the Arid Lands Ecology Reserve and cause minimal damage on neighboring private property. It has not been determined if the elk population can be controlled with off-site hunting alone.

Controlling elk populations in the Rattlesnake Hills sub-herd requires cooperation from private landowners, U.S. Fish and Wildlife Service, and Department of Energy. Liberal hunting seasons over time have not resulted in adequate damage control because hunter access is not available to all lands. Some private lands, the Arid Lands Ecology Reserve, and Central Hanford site act as refuge for elk during the hunting season.

Strategies

1. In PMU 34 (Rattlesnake Hills) maintain liberal hunting seasons to control elk damage. Authorize landowner kill permits and other damage control techniques

- as needed. Work cooperatively with private landowners to develop elk hunting season strategies that will control elk populations and reduce or eliminate damage problems.
2. If the Arid Lands Ecology Reserve elk population objective of 350 in PMU 34 cannot be accomplished through hunting because elk find refuge within Arid Lands Ecology Reserve and the Central Hanford Area, a contingency plan will be needed to remove animals directly from these areas in cooperation with the U. S. Department of Energy and U. S. Fish and Wildlife Service at their expense.
 3. Maintain flexibility with the population objective on Arid Lands Ecology Reserve. If damage persists, consider reducing the elk population below 350.
 4. Work cooperatively with the Yakima Training Center to maintain recreational hunting as a viable management tool in controlling elk on the area and eliminate damage problems on adjacent private lands.
 5. The only sure way of controlling Arid Lands Ecology Reserve elk from causing damage to adjacent agricultural crops and private rangelands is for the U.S. Fish and Wildlife Service to fence the elk within the reserve. This strategy is consistent with Objective 6 strategy number 8.

Objective # 3

Improve the scientific database for managing the elk population.

Problems

Population/composition surveys and harvest data collection are critical elements in monitoring herd status and making management adjustments. February population surveys have not provided composition data to the desired accuracy at the PMU level. Harvest estimates collected from report cards and the hunter questionnaire has had wide confidence intervals at the PMU level. Tribal harvest is not known.

Strategies:

1. Maintain/increase accuracy of post-season aerial herd composition surveys by sampling >70 percent of the survey units within PMUs 33, 35, and 36. This will require approximately 30 hours of helicopter time. A more accurate stratification of units and population estimate will be developed.
2. Conduct pre-season (September) surveys to more accurately determine herd composition. Helicopter surveys in the Cascade Slope sub-herd would require approximately 10 hours.
3. Initiate (2001) mandatory reporting system and refine the system for harvest data collection to better assess state recreational harvest.
4. Encourage the Yakama Indian Nation to estimate tribal harvest on elk within bounds of Yakima herd.
5. Maintain coordination and exchange of information on elk surveys conducted by the Pacific Northwest National Laboratory and U. S. Fish and Wildlife Service on the elk population utilizing the Arid Lands Ecology Reserve.
6. Conduct research to acquire needed biological information on movements and distribution of the elk herd to improve the scientific foundations for managing the Cascade Slope sub-herd of the Yakima elk herd. Also collect data to refine

population monitoring.

Objective # 4

Conduct a Yakima elk (Cascade Slope Sub-herd) study

Problem

Effective management of Yakima elk (Cascade slope sub-herd) and the habitat complex they use requires relatively detailed knowledge of seasonal elk distribution, movement patterns, habitat use, and the quantity and quality of habitats used seasonally by elk. However, no comprehensive studies of the Cascade slope sub-herd have been conducted. The ability of management agencies to predict the effects of elk population size and management alternatives on individual elk condition, herd productivity, and habitat condition will continue to be hampered by the paucity of real data in the absence of new initiatives to collect better data. The ability to prescribe management actions focused on alleviating specific problems such as elk damage to agricultural crops and impacts to sensitive natural habitats would also likely be enhanced if more detailed information about elk movements and seasonal habitat use were available.

Strategies:

1. Instrument a representative sample of Cascade slope sub-herd elk (all PMUs) with radio telemetry collars and gather data on elk movements and landscape use (including both winter-fed elk and elk that are not fed).
2. Quantify seasonal nutritional condition dynamics of radio-collared elk, and the effects of current range condition on the nutritional status of individual elk.
3. Collect data on herd productivity and survival.
4. Produce a detailed, computerized map of relevant habitat attributes for managing the Cascade slope sub-herd and it's habitat base.
5. Collect necessary habitat oriented data to assess the relative capacity of the Cascade slope sub-herd area to support seasonal elk use with acceptable consequences (e.g., other native wildlife, attributes of plant communities, constraints on other land uses).

Objective # 5

Manage for a post hunting season bull ratio consistent with the Statewide Plan (currently 12 bulls/100 cows in combination with overall bull mortality of <50 percent).

Problem

All PMUs have reached the current escapement goal of 12 bulls/100 cows at the present time.

Strategies:

1. Maintain harvest strategies that retain recreational opportunity and achieve bull

ratio goals in the Cascade Slope sub-herd.

2. Manage for bull mortality objective once the population objective is reached.

Objective # 6

Minimize damage caused by elk and improve Washington Department of Fish and Wildlife landowner relations.

Problems

Elk can cause damage to high value crops and damage fences. The livestock industry is concerned that elk compete with livestock for forage. Grassland and meadow health on lands administered by the Forest Service appear to be in poor condition and declining (Beebe et al. 2001). Removing the specific animals that cause damage is not always possible. Yet significantly reducing the herd could conflict with recreational objectives and may not solve damage issues.

Strategies:

1. Continue operation of the winter feeding program to help keep elk out of agricultural and horticultural crops. Reevaluate the Nile feeding site and coordinate with U.S. Forest Service and Nile residents.
2. Develop solutions to elk/livestock conflicts through the Coordinated Resource Management Planning (CRMP) process.
3. Fund studies to determine if elk are impacting and competing with livestock for available rangeland forage.
4. Convert current Washington Department of Fish and Wildlife winter-feeding seasonal positions to full-time. The employees would maintain the elk fence, repair broken stock fence, and herd elk when not feeding.
5. Concentrate herd reduction in GMUs 340, 342, 352, 368, 371 and 372.
6. Where it is justified, safe, and socially acceptable, use hot spot hunts, kill permits, or landowner permits to remove elk causing crop damage and other specific damage problems. Investigate possibility of using tribal hunters to remove damage causing animals.
7. Continue to work with the local residents in developing solutions to elk conflicts particularly in the Nile area of GMU 352.
8. Build new fences where needed to prevent damage to agricultural and horticultural crops. Provide materials for private individuals to install elk proof fence in specific problems areas.
9. Patrol, replace and maintain elk fence on a regular scheduled basis.
10. Retrofit elk fence with re-entry gates in problem areas, install elk-proof cattle guards and/or scare devices at fence/road intersects.
11. Fund flights to locate and herd elk out of problem areas.
12. Reduce human caused harassment of elk on Washington Department of Fish and Wildlife land with seasonal closures. Lock some gates for portions of the year and close areas to public entry until elk have migrated off the winter range.
13. Continue the cooperative studies with the Forest Service on the Cascade slope area to resolve resource/habitat issues concerning mountain meadow and grassland conditions.

14. Target the removal of elk causing damage below the elk fence as a priority.
15. Select hunting season strategies that meet with local approval.
16. Work with residents on haystack protection.

Objective # 7

Maintain an effective and efficient elk winter-feeding program.

Problem

Without winter-feeding the Cascade Slope population of the Yakima Elk Herd cannot be sustained at significant levels and damage problems would greatly increase.

Strategies:

1. Contract and purchase early to get the best hay prices.
2. Determine if it is economical and feasible to increase hay production on Washington Department of Fish and Wildlife land.
3. Investigate alternate sources for funding winter-feeding including concessions, raffles, privatization, etc. to maintain consistent, reliable funding.
4. Reduce labor cost by using larger bales and automatic feeders.
5. Retain current distribution of feeding sites to address local damage areas and to keep elk dispersed.

Objective # 8

Share elk population data with the Yakama Nation, The Confederated Tribes of the Umatilla Indian Reservation, The Medicine Creek Treaty Tribes, and others.

Problem

Historically, there has been limited communication between the tribes, public agencies, and the Washington Department of Fish and Wildlife regarding the Yakima Elk Herd.

Strategy:

1. Meet at least annually with tribal biologists to review status of the herd and share management information. Encourage tribal participation in studies and surveys.
2. Annually review and share information with other agencies such as U.S. Forest Service, and Washington Department of Natural Resources.

Objective # 9

Increase public awareness and viewing opportunities of the elk resource.

Problem

The majority of the public in Washington is unaware of the value or management complexity of the Yakima Elk Herd. Those involved with non-consumptive use may not be aware that their activities may adversely impact the herd, especially during late winter and spring.

Strategies:

1. Develop a brochure for the public on where the best elk viewing areas are, elk natural history, the value of elk in the state, and elk management.
2. Develop and enhance additional viewing opportunities, in natural settings and develop a live Internet photocam of elk.
3. Enhance public information displays at the Oak Creek winter-feeding area.

Objective # 10

Cooperate with the U. S. Fish and Wildlife Service and U. S. Department of Energy in the management of elk on the Arid Lands Ecology Reserve; and with the US Army on the Yakima Training Center.

Problem

The Arid Lands Ecology Reserve is closed to the general public. The U.S. Army controls access to the Yakima Training Center. Elk utilizing the Arid Lands Ecology Reserve and the Yakima Training Center often exhibit daily and seasonal movements outside of these areas to adjacent private lands causing damage or nuisance problems.

Strategies:

1. Meet the Arid Lands Ecology Reserve staff formally at least annually or more frequently as needs dictate to discuss population status, trend, damage issues and determine management needs and actions.
2. Share biological information such as herd composition and population survey data, harvest and other mortalities, general herd health, and habitat conditions.

Habitat Management

Objective # 11

Improve elk habitat quality and effectiveness on National Forest Lands consistent with ecosystem integrity.

Problem

The U. S. Forest Service manages over 50 percent of the land within the Cascade Slope sub-herd planning area. Elk habitat is only one factor in U. S. Forest Service management decisions. There is limited analysis of current habitat condition.

Strategies:

1. The Rocky Mountain Elk Foundation is helping fund an elk habitat analysis project within the Yakima Elk Herd. The information should be used to identify habitat improvement projects.
2. Work with the U. S. Forest Service on their new Fire Management Plan and to encourage use of prescribed burns to enhance elk habitat.
3. Work with the U. S. Forest Service on the new Road Management Plan to reduce

- road density in critical elk habitat.
4. Monitor and evaluate projects to determine effectiveness.
 5. Work with the U. S. Forest Service to maintain or enhance habitat productivity on summer and fall ranges and consult together to determine where habitat effectiveness needs to be improved.
 6. Cooperate and coordinate with U.S. Forest Service to make herd management goals consistent with maintenance of ecosystem integrity.

Objective # 12

Improve elk habitat quality and effectiveness on state land.

Problem

Washington Department of Fish and Wildlife and Department of Natural Resources (Department of Natural Resources) make up 21 percent of the land base within the PMU's 33, 35, and 36, and the majority of the winter range. Department of Natural Resources has multiple use objectives. Washington Department of Fish and Wildlife management considers a wide variety of fish, wildlife and recreational uses.

Strategies:

1. Incorporate elk habitat considerations into BPA mitigation projects.
2. Develop partnership projects with Rocky Mountain Elk Foundation and other organizations.
3. Monitor and evaluate projects to determine effectiveness.

Objective # 13

Reduce disturbance of wintering elk.

Problem

On the Cascade Slope area over 75 percent of elk in the Yakima herd winter on lands controlled by the Washington Department of Fish and Wildlife. Recreational use of the areas is increasing, reducing the habitat effectiveness and potentially moving elk off winter range prematurely. The problem has become more pronounced in recent years with large numbers of people looking for shed antlers. Increasing the number of gates and closed areas is probably the most cost effective way of increasing the capacity of the range and reducing damage caused by elk, but is unpopular with some of the public.

Strategies:

1. Use authority under RCW 77.12.210 and WAC 232-12-177 to control access and designate closures.
2. Close areas with high densities of elk to all public entry during critical periods.
3. Place gates and closure signs on roads leading into high-density wintering areas.

Objective # 14

Improve elk habitat quality and effectiveness on private lands with willing cooperators.

Problem

Private lands make-up 23 percent of land area within the Cascade Slope sub-herd. Improving elk habitat is frequently not a priority for the private landowner trying to manage a business. Residential development and agricultural expansion is threatening elk range and leading to more elk/human conflicts.

Strategies:

1. Continue to develop and encourage habitat improvement partnership projects on private lands. Monitor and evaluate projects to determine effectiveness.
2. Encourage the permanent closure of non-essential roads and gates on other private roads where road densities are high.
3. Work with counties on growth management to mitigate the loss of elk winter range to development.
4. Secure more elk habitat with the highest priority on winter and transition range.

Spending Priorities

Priority # 1

Winter Elk Feeding

The feeding program discourages elk from going through or around fences. If the program is not adequately funded, significant damage claims could incur. Winter elk feeding also provides significant viewing opportunity. Additional funding for equipment would improve efficiency. Operating concessions and partnering at select feeding sites may offer opportunities to help fund the program.

Priority: High. Without adequate funding for winter-feeding, the Yakima Elk Herd will need to be significantly reduced.

Time line: Annually

Cost: \$126,000/year for feed and labor. An additional \$8000 per year for 2 years will provide automatic feeders that will reduce labor costs. This does not include the cost of replacing trucks used for feeding.

1 st year	\$126,000
2 nd year	\$126,000
3 rd year	\$118,000
4 th year	\$118,000
5 th year	<u>\$118,000</u>
Total	\$606,000

Priority # 2

Herd Population/Composition Surveys

The Washington Department of Fish and Wildlife needs adequate funding to conduct annual population surveys, with the objective of obtaining precise and accurate data on population size and composition. An analysis of post season herd data from the Yakima area in 2000 and 2001 indicated that sampling 70 percent of the units derived a population estimate at the herd level that was \pm 5-6 percent of the mean. At the PMU level, all population estimates were within the target level of \pm 10 percent. Calf:cow ratios were generally within \pm 10 percent at all levels. Estimates of bull:cow ratios are generally greater than \pm 10 percent of the mean. Confidence intervals should improve with better stratification over time. However, it is difficult to obtain good estimates of the bull population post season because of sightability bias and the relatively small number and clumped distribution of bulls. Surveys during the rut may provide more accurate bull:cow ratios because bulls and cows should not be segregated. However, overall sightabilities may be lower during fall surveys and may contribute to imprecise estimates for key population parameters. Data collection specifically directed at assessing the relative sources of error in winter vs. fall surveys is needed. Such data could also be used to derive area and season specific sightability correction models for use in aerial surveys.

Post-season surveys: Post-season aerial surveys will require 30 hours of helicopter flight time in order to cover >70 percent of the survey zones in each PMU. The current budget of ~\$9,000 covers 70 percent of the units within the herd boundary. The estimated annual cost to cover >70 percent of units in each PMU is \$10,000 annually.

Pre-season surveys: Pre-season surveys will provide more accurate estimates of bull to cow ratios. Population models can also be derived using preseason surveys and harvest data. If the models prove accurate, post-season surveys would not be needed, saving more than \$5,000 annually. There is no current budget for pre-season Yakima elk surveys. Estimated need is 12 hours of flight time or about \$4,000.

Priority: High - Basic biological data collection is essential for responsible management of the Yakima Elk Herd.

Time line: Maintain and conduct annual herd composition and population surveys.

Costs: \$14,000 annually. Total for five years \$70,000.

Priority # 3

Improve Collection of Hunter Harvest and Effort Information

There is a need to improve accuracy of all harvest and hunter effort information for use in management decision-making. Increase the accuracy of state recreational elk harvest data through implementation of mandatory hunter reporting.

Priority: High

Time line: 2001

Cost: \$26,000 estimated annually. Total for five years \$130,000.

Priority # 4

Address Landowner/Elk Conflicts

Elk/landowner conflicts and agricultural damage are a major problem in the Yakima area and a continuous threat to this elk population. Maintaining the elk fence, herding, and repairing stock fence broken by elk minimizes conflicts. Install additional re-entry gates, elk proof cattle guards, and flight time for herding would improve landowner relations and reduce damage claims. Two people are currently employed to feed elk during the winter and fix fence in a small area during the spring. This proposal would be to employ two people year round and supply them with materials for fence repair, feeding, and herding. The use of volunteers to maintain elk fences would reduce cost. The assistance of volunteer organizations and individuals in an "Adopt A Fence" program has merit. The use of prison labor for fence maintenance also has potential.

Priority: High

Time line: Annually

Costs: Salaries/benefits - Current funding \$25,000 (\$22,000 already covered by winter feed, \$3,000 by enforcement for fence repair in the Kittitas Valley). New funding - \$41,560 for a total of \$66,560.

Materials - for vehicle, re-entry gates, cattle guards and miscellaneous tools and materials. Flight time of about 5 hours for fixed winged and 10 hours for helicopter (\$23,600 total) aircraft.

Total:

•	1 st year	\$90,160
•	2 nd year	\$90,160
•	3 rd year	\$90,500
•	4 th year	\$91,000
•	5 th year	<u>\$92,000</u>
	Total	\$453,820

Priority # 5

Elk Fence Construction

The elk fence should be a high priority in the capital budget. The fence should be extended and sections added to prevent elk from entering agricultural land. The installation of one-way re-entry gates would allow easy elk access back through the elk fence. One-way gates are particularly important to be able to herd elk away from damage areas and above the elk proof fence.

Priority 5.1: High. Tieton extension, (1.5 miles).

Time line: 2002.

Cost: \$100,000.

Priority 5.2: High. Tampico extension, (5 miles).

Time Line: Annual 2002-2006.

Cost: \$300,000 total.

Priority 5.3: High. The Nile Valley cooperative crop and orchard fencing project. One mile per year estimated cost \$10,000 annually for material.

Time Line: 2002-2005.

Costs: \$40,000.

Priority 5.4: High. Nile Valley rebuilds. Estimated 6 miles.

Time Line: 2002-2006.

Costs: \$260,000.

Total Cost:

•	1 st year	\$500,000
•	2 nd - 4 th year	\$200,000
	Total	\$700,000

Priority # 6

Habitat Preservation Program – (acquisition, easements and incentives)

Key areas of elk winter range should be identified and given a high priority in future land acquisitions, leases, easements or incentives for creation or preservation of elk habitat. Funds would also need to be secured for operation and management of these properties.

Priority 6.1: High (GMU-368) Secure private lands with valuable winter range.

Time line: 2002 as land becomes available.

Cost: \$175-\$500/acre. (\$1,242,500 - \$3,550,000) Purchase/Easement Program \$100,000/year.

Priority 6.2: Moderate (GMU-342) Secure in-holdings in the Wenas Wildlife Area.

Time line: 2002 as lands become available.

Cost: \$175 - \$500/acre. (\$525,000 - \$1.5 mil.) \$100,000/year.

1 st year	\$ 200,000
Total for 5 years	\$1,000,000

Priority # 7

Road Management

There are 4 green dot systems within the Yakima elk herd area: L.T. Murray, Clemans Mt./Wenas, Oak Creek, and Ahtanum/Cowiche. A fifth, Little Naches, was recently canceled. All green dot management systems involve cooperators who jointly pay for signs, posts, maps, etc. The Department currently does not fund the costs to maintain the systems. Gating some roads would make some systems more efficient. Improving habitat effectiveness and reducing stress on elk will increase herd health, potentially increasing recruitment and recreational opportunity. Improving habitat effectiveness is more cost efficient than any other habitat project.

Priority 7.1: Moderate. Green dot posts and reader boards.

Time line: Annual.

Cost: \$3,500/year.

Priority 7.2: High. Gates to permanently close roads.

Time line: Annual.

Cost: \$12,500/year.

Total Cost:

1 st year	<u>\$16,000</u>
Total for 5 years	\$80,000

Priority # 8

Elk Habitat Improvements

Habitat improvements may reduce winter-feeding and damage. In recent years, few projects have been implemented. Funding through organizations such, as Rocky Mountain Elk Foundation often require matching money. This fund would be used to apply for other grants. Projects such as forage enhancement, weed control, fertilizing, controlled burning, controlled livestock grazing and spring development are under consideration.

Priority: Moderate

Time line: FY 2001-2005

Cost: \$40,000 annually, 5 year total \$200,000.

Priority # 9

Elk Habitat Study

Public land managers and private livestock growers have expressed concerns over the effect of elk use on plant communities and with the availability of livestock forage. Data are needed on: 1) elk movements and landscape use; 2) nutritional condition dynamics of elk, stratified by summer range area, PMU, and whether elk are winter-fed or not; 3) the nature of the habitat base used by Yakima herd elk to assess the sustainability of elk populations of a specified size with acceptable consequences to other resources. This is a partnership study.

Priority: High

Time line: FY 2001-2002

Cost: \$150,000 annually for four years, total \$600,000.

Plan Review and Maintenance

The Yakima Elk Herd Plan is identified as a five-year document subject to annual review and amendment. As new information is gathered and conditions change, it will be necessary to track strategies and their impact on the plan's goals and objectives in order to re-evaluate and modify this plan as needed. Maintain a free exchange of communication between the Washington Department of Fish and Wildlife, Indian Treaty Tribes, cooperators and the public. An annual review meeting with delegates from Tribes will be arranged by the Department's Region 3 Wildlife Program Manager. Emergent issues can be addressed, as needed either at the technical or policy level.

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APPENDIX A. Elk Harvest and Hunter Trends for the Yakima Herd, 1970-2000.

Year	PMU 33		PMU 34*		PMU 35		PMU 36		Herd Total			
	Bull	Antler -less	Bull	Antler -less	Bull	Antler -less	Bull	Antler -less	Bull	Antler -less	# Hunters	Hunter Days
1970-79 AVG	457	462	0	0	480	384	146	157	1,083	1,003	-	-
1980	455	225	0	0	495	385	300	135	1,250	745	-	-
1981	500	240	5	0	445	300	265	95	1,210	635	-	-
1982	785	890	0	0	535	935	205	230	1,525	2,055	-	-
1983	590	205	0	10	245	190	125	140	960	535	-	-
1984	586	223	9	3	278	237	228	216	1,111	682	24,150	120,908
1985	659	258	2	1	215	81	113	61	993	418	26,073	117,326
1986	422	293	10	2	153	100	144	82	754	511	21,774	111,202
1987	522	254	8	13	179	139	107	17	824	482	20,484	101,295
1988	754	689	5	10	517	288	208	132	1,492	1,154	21,750	106,657
1989	640	525	8	3	398	261	240	110	1,294	901	19,241	87,794
1980-89 AVG	591	380	5	4	346	292	194	122	1,141	812	22,245	107,530
1991	729	627	14	0	423	446	186	170	1,351	1,246	27,252	121,444
1992	802	563	8	0	462	308	244	149	1,516	1,020	28,046	124,903
1993	399	461	13	1	184	185	185	119	800	770	27,648	133,264
1994	545	1596	18	15	256	645	140	272	956	2,526	24,214	112,335
1995	338	511	17	3	122	177	148	193	634	1,095	22,120	105,389
1996	475	663	17	2	277	250	151	148	911	1,069	22,225	100,408
1997	293	198	21	13	237	101	177	127	717	426	23,084	95,619
1998	377	500	19	17	286	181	226	183	1,030	864	25,422	111,222
1999	591	428	62	121	286	221	232	241	1,197	1,060	29,257	196,802
2000	600	621	128	125	371	277	380	464	1,456	1,583	29,172	136,049
1991-00 AVG	515	617	32	30	290	279	207	207	1,041	1,142	25,844	123,743

* Yakima Training Center and Pacific Northwest National Laboratory harvest data.

APPENDIX B. Elk Hunting Seasons In The Yakima Herd Area

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1970	Bow area 5 Bald Mountain	11/23 – 12/06	14	Either-sex	Archer elk season (Archery stamp required).
	Bow area 7 Ahtanum	12/05 – 12/20	16	Either-sex	
	4A	11/23 – 11/27	5	Either-sex	Muzzleloader elk season
	4M, 4G, 4D, 4F, 4B, 4L, 4C, 4H, 4R, 4N, 4S, 9F, 9P	11/07 – 11/22	14	Bull/visible antlers	General elk season
	4N and 4R	11/07 – 11/22	16	Either-sex	General elk season
	Area no. 3	11/28 – 12/31	34	Either-sex	General elk season
	4B (400)	11/09 – 11/18	10	Either-sex	Modern firearm elk permit hunts
	4C (250)	11/09 – 02/04	87		
	4D (800)	11/09 – 11/18	10		
	4E and 4K (450)	11/09 – 11/13	5		
	4F (350)	11/09 – 11/18	10		
	4G (300)	11/09 – 11/18	10		
1971	4H (400)	11/09 – 11/18	10		
	4L (150)	11/09 – 11/18	10		
	4M (250)	11/09 – 11/18	10		
	4F and 4M	11/20 – 12/05	16	Either-sex	Archer elk season (Archery stamp required).
	Bow area 5 Bald Mountain	11/20 – 12/26	37	Either-sex	
	Bow area 7 Ahtanum	11/20 – 12/19	30	Either-sex	
	4A	12/15 – 12/21	7	Either-sex	Muzzleloader elk season
	4M, 4G, 4D, 4F, 4B, 4L, 4C, 4H, 4R, 4N, 4S, 9F, 9P	11/01 – 11/14	14	Bull/visible antlers	General elk season
	4N	11/01 – 11/07	7	Either-sex	General elk season
	Area no. 3	11/27 – 12/12	16	Either-sex	General elk season
	4B (400)	11/09 – 11/18	11	Either-sex	Modern firearm elk permit hunts
	4C (250)	11/09 – 02/04	96		
1972	4D (600)	11/09 – 11/18	11		
	4F (350)	11/09 – 11/18	11		
	4G (300)	11/09 – 11/18	11		
	4H (400)	11/09 – 11/18	11		
	4L (150)	11/09 – 11/18	11		
	4M (250)	11/09 – 11/18	11		
	4F	11/18 – 11/26	9	Either-sex	Archer elk season (Archery stamp required).
	Bow area 7 Ahtanum	11/23 – 12/31	39	Either-sex	
	ML area 5 Bald Mt.	12/16 – 12/24	8	Either-sex	Muzzleloader elk season
	4M, 4G, 4D, 4F, 4B, 4L, 4C, 4H, 4R, 4N, 4S, 9P	10/30 – 11/12	14	Bull/visible antlers	General elk season
	9F	10/30 – 11/12	14	Either-sex	General elk season
	Area no. 3	12/02 – 12/10	9	Either-sex	General elk season
1973	4B & 4L (550)	11/06 – 11/16	11	Either-sex	Modern firearm elk permit hunts
	4C (250)	11/01 – 02/04	96		
	4D (600)	11/01 – 11/10	11		
	4F (350)	11/01 – 11/10	11		
	4G (300)	11/01 – 11/10	11		
	4H (400)	11/01 – 11/10	11		
	4M (250)	11/01 – 11/10	11		
1973	4F	11/19 – 12/01	13	Either-sex	Archer elk season (Archery stamp required).
	Bow area 7 Ahtanum	11/22 – 12/16	25	Either-sex	

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1973	ML area 5 Bald Mt.	12/15 – 12/23	8	Either-sex	Muzzleloader elk season
	ML area 3 Teanaway	11/22 – 11/30	9	Either-sex	
	4M, 4G, 4D, 4F, 4B, 4L, 4C, 4H, 4R, 4N, 4S, 9P	11/05 – 11/18	14	Bull/visible antlers	General elk season
	9F	11/05 – 11/18	14	Either-sex	General elk season
	Area no. 3	12/01 – 12/09	9	Either-sex	General elk season
	4B & 4L (700)	11/06 – 11/16	11	Either-sex	Modern firearm elk permit hunts
	4C & 4H (650)	11/06 – 11/16	11		
	4D (800)	11/06 – 11/16	11		
	4F (350)	11/06 – 11/16	11		
	4G (350)	11/06 – 11/16	11		
	4M (250)	11/06 – 11/16	11		
1974	4F	11/18 – 11/30	13	Either-sex	Archer elk season (Archery stamp required).
	Bow area 7 Ahtanum	11/23 – 12/15	23	Either-sex	
	ML area 5 Bald Mt.	12/14 – 12/24	11	Either-sex	Muzzleloader elk season
	ML area 3 Teanaway	11/23 – 11/29	7	Either-sex	
	4M, 4G, 4D, 4F, 4B, 4L, 4C, 4H, 4R, 4N, 4S, 9P	11/04 – 11/17	14	Bull/visible antlers	General elk season
	9F	11/04 – 11/17	14	Either-sex	General elk season
	Area no. 3	11/30 – 12/08	9	Either-sex	General elk season
	4B & 4L (700)	11/05 – 11/15	11	Either-sex	Modern firearm elk permit hunts
	4C & 4H (500)	11/05 – 11/15	11		
	4D (700)	11/05 – 11/15	11		
1975	4F (250)	11/05 – 11/15	11		
	4G (350)	11/05 – 11/15	11		
	4M (250)	11/05 – 11/15	11		
	352 Nile	11/17 – 11/28	12	Either-sex	Archer elk season (Archery stamp required).
	Bow area 7 Ahtanum	11/22 – 12/14	23	Either-sex	
	ML area 5 Bald Mt.	12/13 – 12/23	11	Either-sex	Muzzleloader elk season
	ML area 3 CleElum	11/22 – 11/28	7	Either-sex	
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376, 580, 584	11/03 – 11/16	14	Bull/visible antlers	General elk season
	348, 372	11/04 – 11/07	4	Either-sex	General elk season
	384	11/03 – 11/16	14	Either-sex	General elk season
1976	336 Taneum (250)	11/04 – 11/14	11	Either-sex	Modern firearm elk permit hunts
	340 Manastash (350)	11/04 – 11/14	11		
	344 Wenas (700)	11/04 – 11/14	11		
	352 Nile (250)	11/04 – 11/14	11		
	356,360 Bump/Bethel (700)	11/04 – 11/14	11		
	364,368 Rim/Cowiche (500)	11/04 – 11/14	11		
	352 Nile	11/17 – 11/28	12	Either-sex	Archer elk season (Archery stamp required).
	Bow area 7 Ahtanum	11/22 – 12/12	21	Either-sex	
	ML area 5 Bald Mt.	12/10 – 12/18	9	Either-sex	Muzzleloader elk season
	ML area 3 CleElum	11/20 – 11/26	7	Either-sex	
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376, 580, 584	11/03 – 11/16	14	Bull/visible antlers	General elk season
	348, 372	11/04 – 11/07	4	Either-sex	General elk season
	384	11/03 – 11/06	4	Either-sex	General elk season
	Elk area 3 CleElum	11/29 – 12/07	9	Either-sex	General elk season

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	336 Taneum (250) 340 Manastash (350) 344 Wenas (700) 352 Nile (250) 356, 360 Bumping/Bethel (700) 364,368 Rimrock/Cowiche (500)	11/04 – 11/14 11/04 – 11/14 11/04 – 11/14 11/04 – 11/14 11/04 – 11/14 11/04 – 11/14	11 11 11 11 11 11	Either-sex	Modern firearm elk permit hunts
1977	352 Nile Bow area 6 Rattlesnake	11/19 – 12/02 11/19 – 12/04	14 16	Either-sex Either-sex	Archer elk season (Archery stamp required).
	ML area 5 Bald Mt.	12/10 – 12/18	11	Either-sex	Muzzleloader elk season
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376, 580, 584	10/31 – 11/13	14	Bull/visible antlers	General elk season
	348, 372	10/01 – 11/11	11	Either-sex	General elk season
	336 Taneum (200) 340 Manastash (350) 344 Wenas (600) 352 Nile (250) 356, 360 Bump/Bethel (700) 364,368 Rim/Cowiche (450)	11/01 – 11/11 11/01 – 11/11 11/01 – 11/11 11/01 – 11/11 11/01 – 11/11 11/01 – 11/11	11 11 11 11 11 11	Either-sex	Modern firearm elk permit hunts
1978	352 Nile Bow area 6 Rattlesnake	11/23 – 12/01 11/23 – 12/10	9 18	Either-sex Either-sex	Archer elk season (Archery stamp required).
	ML area 5 Bald Mt.	12/09 – 12/17	9	Either-sex	Muzzle loader elk season
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376, 580, 584	11/06 – 11/19	14	Bull/visible antlers	General elk season
	348, 372	11/07 – 11/17	11	Either-sex	General elk season
	336 Taneum (150) 340 Manastash (200) 344 Wenas (500) 352 Nile (200) 356, 360 Bump/Bethel (700) 364,368 Rim/Cowiche (200)	11/07 – 11/17 11/07 – 11/17 11/07 – 11/17 11/07 – 11/17 11/07 – 11/17 11/07 – 11/17	11 11 11 11 11 11	Either-sex	Modern firearm elk permit hunts
1979	352 Nile Bow area 6 Rattlesnake	11/23 – 11/30 11/23 – 12/09	8 17	Either-sex Either-sex	Late archer general elk season (Archery stamp required MKWXY).
	ML area 10 CleElum	11/24 – 12/02	9	Either-sex	Early muzzleloader general elk season (MKWY)
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376	11/04 – 11/18 11/10 – 11/18	15 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (X) Late modern firearm general elk season (Y)
	580, 584	11/11 – 11/25	15	Bull/visible antlers	Modern firearm general elk season (W)
	336 Taneum (125) 340 Manastash (150) 344 Wenas (500) 352 Nile (175) 356, 360 Bump/Bethel (700) 364,368 Rim/Cowiche (175)	11/10 – 11/16 11/10 – 11/16 11/10 – 11/16 11/10 – 11/16 11/10 – 11/16 11/10 – 11/16	7 7 7 7 7 7	Either-sex	Modern firearm elk permit hunts
	ML area 5 Bald Mt. (200)	12/08 – 12/16	9	Either-sex	Either-sex permit controlled elk seasons (MKWY)
1980	352 Nile Bow area 6 Bow area 7	11/22 – 11/28 11/22 – 12/07 11/22 – 11/28	7 16 7	Either-sex Either-sex Either-sex	Late archer general elk season (Archery stamp required MKWXY).
	ML area 10 CleElum	11/22 – 11/30	9	Either-sex	Early muzzleloader general elk season (MKWY)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1981	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376	11/02 – 11/16 11/08 – 11/16	15 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (X) Late modern firearm general elk season (Y)
	580, 584	11/09 – 11/19	11	Bull/visible antlers	Modern firearm general elk season (W)
	336 Taneum (125)	11/08 – 11/14	7	Either-sex	Modern firearm elk permit hunts (Y)
	340 Manastash (150)	11/08 – 11/14	7		
	344 Wenas (500)	11/08 – 11/14	7		
	352 Nile (175)	11/08 – 11/14	7		
	356, 360 Bump/Bethel (700)	11/08 – 11/14	7		
	364,368 Rim/Cowiche (175)	11/08 – 11/14	7		
	ML area 5 Bald Mt. (200)	12/08 – 12/16	9	Either-sex	Either-sex permit controlled elk seasons (MKWY)
	352 Nile Bow area 6 Bow area 7	11/21 – 11/27 11/21 – 12/06 11/21 – 11/27	7 16 7	Either-sex Either-sex Either-sex	Late archer general elk season (Archery stamp required MKWXY).
	ML area 10 CleElum	11/21 – 11/29	9	Either-sex	Early muzzleloader general elk season (MKWY)
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376	11/01 – 11/15 11/07 – 11/15	15 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (X) Late modern firearm general elk season (Y)
	580, 584	11/07 – 11/17	11	Bull/visible antlers	Modern firearm general elk season (W)
	336 Taneum (125) 340 Manastash (150) 344 Wenas (500) 352 Nile (175) 356, 360 Bump/Bethel (700) 364,368 Rim/Cowiche (225)	11/07 – 11/13 11/07 – 11/13 11/07 – 11/13 11/07 – 11/13 11/07 – 11/13 11/07 – 11/13	7 7 7 7 7 7	Either-sex	Modern firearm elk permit hunts (Y)
	ML area 5 Bald Mt. (250)	12/05 – 12/13	9	Either-sex	Either-sex permit controlled elk seasons (MKWY)
1982	352 Nile Bow area 806 Bow area 807	11/23 – 11/27 11/23 – 12/08 11/23 – 11/27	5 16 5	Either-sex Either-sex Either-sex	Late archer general elk season (Archery stamp required MKWXY).
	324	11/23 – 12/05	13	Either-sex	Early muzzleloader general elk season (MKWY)
	348, 372	11/13 – 11/19	7	Either-sex	Special elk hunts open to specified tag holders (X or Y)
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376	11/07 – 11/21 11/13 – 11/21	15 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (X) Late modern firearm general elk season (Y)
	580, 584	11/06 – 11/16	11	Bull/visible antlers	Modern firearm general elk season (W)
	336 Taneum (125) 340 Manastash (150) 344 Wenas (500) 352 Nile (175) 356, 360 Bump/Bethel (700) 364,368 Rim/Cowiche (275)	11/13 – 11/19 11/13 – 11/19 11/13 – 11/19 11/13 – 11/19 11/13 – 11/19 11/13 – 11/19	7 7 7 7 7 7	Either-sex	Modern firearm elk permit hunts (Y)
	ML area 5 Bald Mt. (250)	12/05 – 12/13	9	Either-sex	Either-sex permit controlled elk seasons (MKWY)
	352 Nile Bow area 806 Bow area 807	11/22 – 11/26 11/19 – 11/23 11/20 – 12/02	5 5 13	Either-sex Either-sex Either-sex	Late archer general elk season (Archery stamp required MKWXY).
	ML area 910	11/22 – 12/04	13	Either-sex	Late muzzleloader general elk season (MKWY)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1984	348, 372	11/12 – 11/18	7	Either-sex	Special elk hunts open to specified tag holders (X or Y)
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376	11/06 – 11/20 11/12 – 11/20	15 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (X) Late modern firearm general elk season (Y)
	580, 584	11/05 – 11/15	11	Bull/visible antlers	Modern firearm general elk season (W)
	336 Taneum (75)	11/12 – 11/18	7	Either-sex	Modern firearm elk permit hunts (Y)
	340 Manastash (75)	11/12 – 11/18	7		
	344 Wenas (250)	11/12 – 11/18	7		
	352 Nile (100)	11/12 – 11/18	7		
	356 Bumping (200)	11/12 – 11/18	7		
	360 Bethel (200)	11/12 – 11/18	7		
	366 Rim/Cowiche (275)	11/12 – 11/18	7		
	344 Wenas (10)	10/01 – 10/11	11	5 point minimum	
	ML area 905 Bald Mt. (250)	12/03 – 12/11	9	Antlerless only	Muzzleloader only permit hunt (BKWY)
1985	336, 340, 352, 356, 360, 364, 372, 376	10/01 – 10/05 10/06 – 10/12	5 7	Bull only Either-sex	Early archery general elk season (YA)
	580 & 584	09/05 – 09/09 09/10 – 09/24	5 15	Bull only Either-sex	
	352 Nile	11/19 – 12/01	13	Either-sex	Late archer general elk season (BA, CA, YA or WA)
	Bow area 806	11/19 – 11/23	5	Either-sex	
	Bow area 807	11/20 – 12/02	13	Either-sex	
	368	10/06 – 10/11 11/22 – 12/04	6 13	Bull only Either-sex	Muzzleloader general elk season (YM) Muzzleloader general elk season (YM, CM)
	348, 372	11/10 – 11/18	9	Either-sex	Special elk hunts open to specified tag holders (YE, YL)
	336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376	11/01 – 11/18 11/10 – 11/18	18 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (X) Late modern firearm general elk season (Y)
	580, 584	11/07 – 11/18 11/10 – 11/18	12 9	Bull/visible antlers	Modern firearm general elk season (W)
	336 Taneum (75)	11/10 – 11/16	7	Antlerless only	Modern firearm elk permit hunts (YL, YM)
1986	340 Manastash (75)	11/10 – 11/16	7		
	344 Wenas (250)	11/10 – 11/16	7		
	352 Nile (100)	11/10 – 11/16	7		
	356 Bumping (200)	11/10 – 11/16	7		
	360 Bethel (200)	11/10 – 11/16	7		
	366 Rimrock/Cowiche (275)	11/10 – 11/16	7		
	344 Wenas (10)	10/01 – 10/11	11	5 point minimum	
	ML area 905 Bald Mt. (250)	11/25 – 12/02	8	Antlerless only	Muzzleloader only permit hunt (YM)
	336, 340, 352, 356, 360, 364, 372, 376	10/01 – 10/04 10/05 – 10/11	4 7	Bull only Either-sex	Early archery general elk season (YA)
	580 & 584	09/04 – 09/08 09/09 – 09/18	5 10	Bull only Either-sex	Early archery general elk season (WA)
1987	352 Nile	11/19 – 12/01	13	Either-sex	Late archer general elk season (BA, CA, YA or WA)
	Bow area 805	11/19 – 11/23	5	Either-sex	
	Bow area 806 & 807	11/19 – 12/01	13	Either-sex	
	368	10/01 – 10/11 11/20 – 12/04	11 15	Bull only Either-sex	Early muzzleloader general elk season (YM) Late muzzleloader general elk season (YM, CM)
1988	ML area 910	11/24 – 12/01	8	Either-sex	(YM)
	ML area 944				

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1986	348, 372	11/05 – 11/16	12	Either-sex	Special elk hunts open to specified tag holders (YE, YL)
	336, 340, 344, 348, 352, 356, 360, 364, 366, 368, 372, 376	11/05 – 11/17 11/09 – 11/17	13 9	Bull/visible antlers Bull/visible antlers	Early firearm general elk season (YE) Late firearm general elk season (YL)
	580, 584	11/06 – 11/17 11/09 – 11/17	12 9	Bull/visible antlers	Early firearm general elk season (WE) Late firearm general elk season (WL)
	336 Taneum (75) 340 Manastash (75) 344 Wenas (250) 352 Nile (75) 356 Bumping (325) 360 Bethel (100) 366 Rimrock/Cowiche (200) 344 Wenas (20)	11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 10/01 – 10/11	4 4 4 4 4 4 4 11	Antlerless only	Modern firearm elk permit hunts (YL, YM)
	ML area 905 Bald Mt. (250)	11/25 – 12/02	8	Antlerless only	Muzzleloader only permit hunt (YM)
	336, 340, 352, 356, 360, 364, 372, 376	10/01 – 10/03 10/04 – 10/10	3 7	Bull only Either-sex	Early archery general elk season (YA)
	580 & 584	09/03 – 09/07 09/08 – 09/17	5 10	Bull only Either-sex	Early archery general elk season (WA)
	352 Nile Bow area 805 Bow area 806 & 807	11/18 – 11/30 11/18 – 11/22 11/18 – 11/30	13 5 13	Either-sex Either-sex Either-sex	Late archer general elk season (BA, CA, YA or WA)
	368 ML area 910 ML area 944	10/01 – 10/10 11/18 – 12/07 11/23 – 11/30	10 20 8	Bull only Either-sex Either-sex	Early muzzleloader general elk season (YM) Late muzzleloader general season (YM, CM) (YM)
	348, 372	11/05 – 11/16	12	Either-sex	Special elk hunts open to specified tag holders (YE, YL)
	336, 340, 344, 348, 352, 356, 360, 364, 366, 368, 372, 376	11/05 – 11/16 11/08 – 11/16	12 9	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (YE) Late modern firearm general elk season (YL)
	580, 584	11/05 – 11/16 11/08 – 11/16	12 9	Bull/visible antlers	Early modern firearm general elk season (WE) Late modern firearm general elk season (WL)
	336 Taneum (125) 340 Manastash (75) 344 Wenas (350) 352 Nile (100) 356 Bumping (350) 360 Bethel (75) 366 Rimrock/Cowiche (200) 344 Wenas (20)	11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 10/01 – 10/10	4 4 4 4 4 4 4 10	Antlerless only	Modern firearm elk permit hunts (YL, YM)
	ML area 905 Bald Mt. (250)	11/23 – 11/30	8	Antlerless only	Muzzleloader only permit hunt (YM)
1987	340, 352, 356, 360, 364, 370, 580 & 584	10/01 – 10/16	16	Either-sex	Early archery general elk season (YA)
	336 & 352 Bow area 806 & 807	11/25 – 12/06 11/25 – 12/06	12 12	Either-sex Either-sex	Late archer general elk season (BA, CA, YA or WA)
	368 ML area 910 ML area 944	10/10 – 10/16 09/15 – 10/16 11/23 – 11/30	7 32 8	Bull only Antlerless only	Early muzzleloader general elk season (YM)
	ML area 910 ML area 944	11/16 – 12/06 11/17 – 11/23	21 7	Antlerless only Either-sex	Late muzzleloader general elk season (YM, CM) (YM or CM)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1987	370	11/01 – 11/30	30	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	336, 340, 344, 346, 352, 356, 360, 364, 366, 368, 370	11/01 – 11/12	12	Bull/visible antlers	Early modern firearm general elk season (YE)
		11/04 – 11/12	9	Bull/visible antlers	Late modern firearm general elk season (YL)
	580, 584	11/04 – 11/15	12	Bull/visible antlers	Early modern firearm general elk season (WE)
		11/07 – 11/15	9	Bull/visible antlers	Late modern firearm general elk season (WL)
	336 Taneum (150)	11/13 – 11/15	3	Antlerless only	Modern firearm elk permit hunts (YL, YM)
	340 Manastash (150)	11/13 – 11/15	3		
	344 Wenas (350)	11/13 – 11/15	3		
	352 Nile (100)	11/13 – 11/15	3		
	356 Bumping (100)	11/13 – 11/15	3		
	360 Bethel (200)	11/13 – 11/15	3		
	366 Rimrock/Cowiche (200)	11/13 – 11/15	3		
	ML area 905 Bald Mt. (250)	11/17 – 11/23	7	Antlerless only	Muzzleloader only permit hunt (YM)
1988	334(S. of I90) 336, 340, 352, 356, 360, 364 & 370	10/01 – 10/14	14	Either-sex	Early archery general elk season (YA)
	580 & 584	10/01 – 10/14	14	Either-sex	
	336 & 352 Bow area 806 & 807	11/23 – 12/04	12	Either-sex	Late archer general elk season (BA, CA, YA or WA)
		11/23 – 12/04	12	Either-sex	
	368 ML area 910	10/08 – 10/14	7	Bull only	Early muzzleloader general elk season (YM)
		09/17 – 10/07	21	Antlerless only	Early muzzleloader general season (YM, CM)
		10/08 – 10/14	7	Either-sex	
	ML area 910	11/17 – 11/26	10	Antlerless only	Late muzzleloader general season (YM, CM) (YM or CM)
		11/27 – 12/03	7	Either-sex	
		11/18 – 11/21	4	Either-sex	
	ML area 944				
	370	11/01 – 11/30	30	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	336, 340, 342, 346, 352, 356, 360, 364, 366, 368, 370	11/01 – 11/12	12	Bull/visible antlers	Early modern firearm general elk season (YE) Late modern firearm general elk season (YL)
		11/04 – 11/12	6	Bull/visible antlers	
	580, 584	11/02 – 11/13	12	Bull/visible antlers	Early modern firearm general elk season (WE) Late modern firearm general elk season (WL)
		11/05 – 11/13	9	Bull/visible antlers	
	336 Taneum E (150) 336 Taneum L (100) 340 Manastash E (150) 340 Manastash L (50) 344 Wenas E (350) 344 Wenas L (150) 344 Wenas Bull (20) 352 Nile E (100) 352 Nile L (75) 356 Bumping E (150) 356 Bumping L (100) 360 Bethel (200) 366 Rimrock/Cowiche (250)	10/29 – 10/31	3	Antlerless only	Modern firearm elk permit hunts (YL, YM)
		11/13 – 11/15	3	Antlerless only	
		11/01 – 11/04	4	Antlerless only	
		11/13 – 11/15	3	Antlerless only	
		10/29 – 10/31	3	Antlerless only	
		11/13 – 11/15	3	Antlerless only	
		10/01 – 10/14	14	5 point minimum	
		10/29 – 10/31	3	Antlerless only	
		11/13 – 11/15	3	Antlerless only	
		10/29 – 10/31	3	Antlerless only	
		11/13 – 11/15	3	Antlerless only	
		11/13 – 11/15	3	Antlerless only	
		11/13 – 11/15	3	Antlerless only	
	ML area 905 Bald Mt. (250)	11/17 – 11/22	6	Antlerless only	Muzzleloader only permit hunt (YM)
1989	334(S. of I90) 336, 340, 352, 356, 364 & 370	09/30 – 10/13	14	Either-sex	Early archery general elk season (YA)
	580 & 584				

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	336, 346 & 352 Bow area 806 & 807	11/22 – 12/03 11/22 – 12/03	12 12	Either-sex Either-sex	Late archer general season (BA, CA, YA, WA)
	368 ML area 910	10/07 – 10/13 09/16 – 10/06 10/07 – 10/13	7 21 7	Bull only Antlerless only Either-sex	Early muzzleloader general elk season (YM) Early muzzleloader general season (YM, CM)
	ML area 910 ML area 944	11/17 – 11/26 11/27 – 12/03 11/18 – 11/21	10 7 4	Antlerless only Either-sex Either-sex	Late muzzleloader general season (YM, CM) (YM or CM) (YM)
	370	11/01 – 11/30	30	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	336, 340, 342, 346, 352, 356, 360, 364, 366, 368, 370	11/05 – 11/13 11/08 – 11/13	9 6	Bull/visible antlers Bull/visible antlers	Early modern firearm general elk season (YE) Late modern firearm general elk season (YL)
	580, 584	11/01 – 11/12 11/04 – 11/12	12 9	Bull/visible antlers	Early modern firearm general elk season (WE) Late modern firearm general elk season (WL)
	336 Taneum A (150) 336 Taneum B (50) 340 Manastash A (150) 340 Manastash B (50) 342,346 Naches/Um. A (300) 342,346 Naches/Um. B (100) 346 L. Naches (25) 352 Nile A (100) 352 Nile B (75) 356 Bumping A (250) 356 Bumping B (100) 360 Bethel (150) 366 Rimrock/Cowiche (200) 342 Umtanum (100) 346 Naches (250)	11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 09/30 – 10/13 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/01 – 11/04 09/30 – 10/13 11/18 – 11/21	4 3 4 3 4 3 14 4 3 4 3 4 3 4 14 4	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only 3 point minimum Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (YL, YM)
1990	334(S. of I90) 336, 340, 352, 356, 364 & 370 580	09/29 – 10/12 09/29 – 10/12	14 14	Either-sex Either-sex	Early archery general elk season (YA) Early archery general elk season (WA)
	336, 346 & 352 Bow area 806 & 807	11/21 – 12/02 11/21 – 12/02	12 12	Either-sex Either-sex	Late archer general elk season (BA, CA, YA or WA)
	368 ML area 910	10/06 – 10/12 09/15 – 10/12	7 28	Bull only Either-sex	Early muzzleloader general elk season (YM) Early muzzleloader general season (YM, CM)
	580 ML area 910 ML area 944	11/21 – 12/22 11/21 – 12/09 11/17 – 11/20	12 19 4	Either-sex Either-sex Either-sex	Late muzzleloader general elk season (WM) (YM or CM) (YM)
	370	11/01 – 11/30	30	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	336, 340, 342, 346, 352, 356, 360, 364, 366, 368, 370	11/05 – 11/13 11/08 – 11/13	9 6	Bull/visible antlers	Early modern firearm general elk season (YE) Late modern firearm general elk season (YL)
	580, 584	10/31 – 11/11 11/03 – 11/11	12 9	Bull/visible antlers	Early modern firearm general elk season (WE) Late modern firearm general elk season (WL)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	336 Taneum A (150) 336 Taneum B (50) 340 Manastash A (100) 340 Manastash B (100) 342,346 Naches/Um. A (350) 342,346 Naches/Um. B (150) 346 L. Naches (25) 352 Nile A (100) 352 Nile B (75) 356 Bumping A (250) 356 Bumping B (150) 360 Bethel (175) 366 Rim/Cowiche A (175) 366 Rim/Cowiche B (100) Elk area 031 Sushuskin (100)	11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 09/30 – 10/13 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/17 – 11/25	4 3 4 3 4 3 14 4 3 4 3 3 4 4 3 9	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only 3 point minimum Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (YL, YM)
	342 Umtanum (200) 346 Naches (250)	09/29 – 10/12 11/17 – 11/20	14 4	Antlerless only Antlerless only	Muzzleloader only permit hunt (YM)
1991	334(S. of I90) 336, 340, 352, 356, 364 & 370 580	09/28 – 10/11 09/28 – 10/11	14 14	Either-sex Either-sex	Early archery general elk season (YA)
	336, 346 & 352 Bow area 806 & 807	11/27 – 12/08 11/27 – 12/08	12 12	Either-sex Either-sex	Late archer general elk season (BA, CA, YA or WA)
	368 ML area 910	10/05 – 10/11 10/05 – 10/11	7 7	Bull only Either-sex	Early muzzleloader general elk season (YM)
	580 ML area 910 ML area 944	11/27 – 12/15 11/17 – 12/08 11/17 – 11/20	19 22 4	Either-sex Antlerless only Either-sex	Early muzzleloader general season (YM,CM)
	370	11/01 – 11/30	30	Either-sex	Late muzzleloader general elk season (WM)
	334 (S of I90), 336, 340, 342, 346, 352, 356, 360, 364,366, 368, 370	11/06 – 11/17 11/09 – 11/17	12 9	Bull/visible antlers	Early modern firearm general elk season (YE)
	580, 584	10/31 – 11/11 11/03 – 11/11	12 9	Bull/visible antlers	Late modern firearm general elk season (YL)
	336 Taneum A (100) 336 Taneum B (100) 340 Manastash A (100) 340 Manastash B (100) 342,346 Naches/Um A (350) 342,346 Naches/Um. B (150) 346 L. Naches (25) 352 Nile A (100) 352 Nile B (75) 356 Bumping A (250) 356 Bumping B (150) 360 Bethel (175) 366 Rim/Cowiche A (175) 366 Rim/Cowiche B (100) Area 031 Sushuskin A (100) Area 031 Sushuskin B (100)	11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 09/29 – 10/12 11/01 – 11/04 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/14 – 11/16 11/01 – 11/04 11/14 – 11/16 11/16 – 11/24 11/30 – 12/08	4 3 4 3 4 3 14 4 3 4 3 3 4 4 3 9 9	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only 3 point minimum Antlerless only Antlerless only	Modern firearm elk permit hunts (YL, YM)
	342 Umtanum (200)	09/28 – 10/11	14	Antlerless only	Muzzleloader only permit hunt (YM)
	346 Naches (250)	11/16 – 11/19	4	Antlerless only	
	Area 031 Sushuskin C	12/16 – 12/30	15	Antlerless only	Special elk permit hunts AHE (any elk tag)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1992	336, 340, 352, 356, 364 & 370	09/01 – 09/14	14	Either-sex	Early archery general elk season (YA)
	580	09/01 – 09/14	14	Either-sex	Early archery general elk season (WA)
	336, 346 & 352 Bow area 806 & 807 584	11/25 – 12/08	14	Either-sex	Late archery general season (BA, CA, YA, WA)
		11/25 – 12/08	14	Either-sex	(WA)
		11/25 – 12/15	21	Antlerless or 2 pt. min.	
	342 368 ML area 910	10/08 – 10/14	7	Antlerless only	Early muzzleloader general elk season (YM)
		10/08 – 10/14	7	Bull only	
		10/05 – 10/11	7	Either-sex	
	580 346 ML area 910 ML area 944	11/25 – 12/15	21	Either-sex	Late muzzleloader general elk season (WM)
		11/17 – 11/20	4	Antlerless only	Late muzzleloader general elk season (YM)
		11/17 – 12/08	22	Antlerless only	
		11/17 – 11/20	4	Either-sex	
	370	11/01 – 11/30	30	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	334 (S of I90), 336, 340, 342, 346, 352, 356, 360, 364, 366, 368, 370	11/05 – 11/13	12	Bull/visible antlers	Early modern firearm general elk season (YE)
		11/08 – 11/13	9		Late modern firearm general elk season (YL)
	580, 584	11/04 – 11/15	12	Bull/visible antlers	Early modern firearm general elk season (WE)
		11/07 – 11/15	9		Late modern firearm general elk season (WL)
	336 Taneum (300)	11/01 – 11/04	4	Antlerless only	Modern firearm elk permit hunts (YL, YM)
	340 Manastash (300)	11/01 – 11/04	4	Antlerless only	
	342 Umtanum(300)	11/01 – 11/04	4	Antlerless only	
	346 L. Naches A (300)	11/01 – 11/04	4	Antlerless only	
	346 L. Naches B (25)	10/02 – 11/15	14	3 point minimum	
	352 Nile (100)	11/01 – 11/04	4	Antlerless only	
	356 Bumping (450)	11/01 – 11/04	4	Antlerless only	
	360 Bethel (100)	11/01 – 11/04	4	Antlerless only	
	364 Rimrock (300)	11/01 – 11/04	4	Antlerless only	
	368 Cowiche (150)	11/01 – 11/04	4	Antlerless only	
	346 L. Naches C (10)	10/02 – 10/15	14	Either-sex	Persons of disability permit hunt (YL, YM)
	Elk area 031 Sushuskin (20)	12/16 – 12/30	15	Antlerless only	Special elk permit hunts AHE (any elk tag)
1993	336, 340, 352, 356, 364 & 370	09/01 – 09/14	14	Either-sex	Early archery general elk season (YA)
	336, 346 & 352 Bow area 806 & 807	11/24 – 12/08	15	Either-sex	Late archer general elk season (BA, CA, YA or WA)
		11/24 – 12/08	15	Either-sex	
	342 368 ML area 910	10/08 – 10/14	7	Antlerless only	Early muzzleloader general elk season (YM)
		10/08 – 10/14	7	Bull only	
		10/04 – 10/14	11	Either-sex	
	346 ML area 910 ML area 944	11/1 – 11/19	4	Antlerless only	Late muzzleloader general elk season (YM)
		11/17 – 12/08	22	Antlerless only	
		11/16 – 11/19	4	Either-sex	
	370	11/05 – 11/13	9	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	336, 340, 342, 346, 352, 356, 360, 364, 366, 368	11/05 – 11/13	9	Spike bull only	Early modern firearm general elk season (YE)
		11/08 – 11/13	6		Late modern firearm general elk season (YL)
	370	11/05 – 11/13	9	Bull/visible antlers	Early modern firearm general elk season (YE)
		11/08 – 11/13	6		Late modern firearm general elk season (YL)
	580, 584	11/03 – 11/14	12	Bull/visible antlers	Early modern firearm general elk season (WE)
		11/06 – 11/14	9		Late modern firearm general elk season (WL)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	336 Taneum (300) 340 Manastash (300) 342 Umtanum(300) 346 L. Naches A (300) 346 L. Naches B (25) 352 Nile (100) 356 Bumping (450) 360 Bethel (100) 364 Rimrock (300) 368 Cowiche (150)	11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 10/02 – 11/15 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04 11/01 – 11/04	4 4 4 4 14 4 4 4 4 4	Antlerless only Antlerless only Antlerless only Antlerless only 3 point minimum Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (YL, YM)
	346 L. Naches C (10)	10/02 – 10/15	14	Either-sex	Persons of disability permit hunt (YL, YM)
	Elk area 031 Sushuskin (20)	12/16 – 12/30	15	Antlerless only	Special elk permit hunts AHE (any elk tag)
1994	336, 340, 352, 356, 364 370	09/01 – 09/14 09/01 – 09/14	14 14	Spike or antlerless Either-sex	Early archery general elk season (YA)
	336, 346 & 352 Bow area 806 & 807	11/23 – 12/08 11/23 – 12/08	16 16	Spike or antlerless	Late archer general elk season (YA)
	342 368 ML area 910	10/06 – 10/12 10/06 – 10/12 10/01 – 10/12	7 7 12	Antlerless only Spike bull only Spike or antlerless	Early muzzleloader general elk season (YM)
	346 ML area 910 ML area 944	11/16 – 11/19 11/16 – 12/08 11/16 – 11/19	4 23 4	Spike or antlerless Spike or antlerless Spike or antlerless	Late muzzleloader general elk season (YM)
	370	11/05 – 11/13	9	Either-sex	Special elk hunts open to specified tag holders (CM, YE, YL, YM)
	336, 340, 342, 346, 352, 356, 360, 364,366, 368	11/05 – 11/15 11/08 – 11/15	11 8	Spike bull only	Early modern firearm general elk season (YE) Late modern firearm general elk season (YL)
	370	11/05 – 11/15 11/08 – 11/15	9 6	Bull/visible antlers	Early modern firearm general elk season (YE) Late modern firearm general elk season (YL)
	580, 584	11/02 – 11/13 11/05 – 11/13	12 9	Bull/visible antlers	Early modern firearm general elk season (WE) Late modern firearm general elk season (WL)
	302, 335 Swauk (60) Area 031 Shushuskin A (125)	10/25 – 11/13 11/23 – 12/15	20 23	Any bull	Modern firearm elk permit hunts (YL, YM)
	336 Taneum (400) 340 Manastash (400)	11/01 – 11/04 11/01 – 11/04	4 4	Antlerless only Antlerless only	
	342 Umtanum(400) 336,346 Peaches R. A (100)	11/01 – 11/04 10/25 – 11/13	4 20	Antlerless only Any elk	
	346 L. Naches A (400) 346 L. Naches B (35)	11/01 – 11/04 10/01 – 11/13	4 44	Antlerless only Any elk	
	340, 342 Observatory (100) 352, 356 Douglas A (100)	11/05 – 11/13 10/25 – 11/13	9 20	Any elk	
	352 Nile (150) 356 Bumping (600)	11/01 – 11/04 11/01 – 11/04	4 4	Antlerless only Antlerless only	
	360 Bethel A (100) 360 Bethel B (100)	11/01 – 11/04 11/05 – 11/13	4 9	Antlerless only Any elk	
	364 Rimrock A (400) 364 Rimrock B (25)	11/01 – 11/04 10/25 – 11/13	4 20	Antlerless only Any elk	
	368 Cowiche A (200) 368 Cowiche B (30)	11/01 – 11/04 11/05 – 11/13	4 9	Antlerless only Any elk	
	Ml area 910 CleElum A (75) ML area 910 CleElum B (75)	10/01 – 10/12 11/16 – 12/08 10/08 – 10/12	12 23 5	Any elk	Muzzleloader bull permit hunt (YM)
	342 Umtanum B (75) 368 Cowiche C (90)	10/08 – 10/12	5	Any elk	

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1995	336, 340 Robinson (145)	09/01 – 09/14	14	Any elk	Archery only permit hunt (YA)
	336 Taneum B (25)	11/23 – 12/08	16	Any elk	
	352, 356 Douglas B (75)	09/01 – 09/14	14	Any elk	
	Bow area 806, 807 (35)	11/23 – 12/08	16	Any elk	
	364,366,368 Cottonwd (90)	09/01 – 09/14	14	Any elk	
	340 Manastash B (10)	11/01 – 11/13	13	Antlerless only	Persons of disability permit hunt (YL, YM)
	346 L. Naches C (10)	10/01 – 10/14	14	Any elk	
	Elk area 031 Shushuskin (20)	12/16 – 12/30	15	Antlerless only	Special elk permit hunts AHE (any elk tag)
	336, 340, 352, 356, 364 371, 372	09/01 – 09/14 09/01 – 09/14	14 14	Spike or antlerless Either-sex	Early archery general elk season (YA)
	336, 346 & 352 Bow area 806 & 807	11/22 – 12/08 11/22 – 12/08	17 17	Spike or antlerless	Late archer general elk season (YA)
	342 368 ML area 910	10/06 – 10/12 10/06 – 10/12 10/01 – 10/12	7 7 12	Antlerless only Spike bull only Spike or antlerless	Early muzzleloader general elk season (YM)
	342 368 ML area 910	10/05 – 10/11 10/05 – 10/11 09/01 – 09/11	7 7 11	Antlerless only Spike bull only Spike bull or antlerless	Early muzzleloader general elk season (YM)
	346 ML area 910 ML area 944	11/16 – 11/19 11/16 – 12/08 11/16 – 11/19	4 23 4	Spike or antlerless Spike or antlerless Spike or antlerless	Late muzzleloader general elk season (YM)
	371, 372	11/05 – 11/15	11	Either-sex	Special elk hunts open to specified tag holders (CM, YB, YC, YM)
	336, 340, 342, 346, 352, 356, 360, 364,366, 368	11/05 – 11/15 11/08 – 11/15	11 8	Spike bull only	Early modern firearm general elk season (YB) Late modern firearm general elk season (YC)
	371, 372	11/05 – 11/15 11/08 – 11/15	11 8	Bull/visible antlers	Early modern firearm general elk season (YB) Late modern firearm general elk season (YC)
	580, 584	11/02 – 11/13 11/05 – 11/13	13 10	Bull/visible antlers	Early modern firearm general elk season (WB) Late modern firearm general elk season (WC)
	302, 335 Swauk (20) Area 031 Shushuskin A (125)	10/25 – 11/13 11/23 – 12/15	20 23	Any bull Antlerless only	Modern firearm elk permit hunts (YL, YM)
	336 Taneum (200)	11/01 – 11/04	4	Antlerless only	
	340 Manastash (200)	11/01 – 11/04	4	Antlerless only	
	342 Umtanum(200)	11/01 – 11/04	4	Antlerless only	
	336,346 Peaches R. A (40)	10/25 – 11/13	20	Any elk	
	346 L. Naches A (200)	11/01 – 11/04	4	Antlerless only	
	346 L. Naches B (15)	10/01 – 11/13	44	Any elk	
	340, 342 Observatory (40)	11/05 – 11/13	22	Any elk	
	352, 356 Goose Pr. A (40)	10/25 – 11/13	20	Any elk	
	352 Nile (75)	11/01 – 11/04	4	Antlerless only	
	356 Bumping (300)	11/01 – 11/04	4	Antlerless only	
	360 Bethel A (50)	11/01 – 11/04	4	Antlerless only	
	360 Bethel B (40)	11/05 – 11/13	9	Any elk	
	364 Rimrock A (300)	11/01 – 11/04	4	Antlerless only	
	364 Rimrock B (10)	10/25 – 11/15	22	Any elk	
	368 Cowiche A (150)	11/01 – 11/04	4	Antlerless only	
	368 Cowiche B (10)	11/05 – 11/13	9	Any elk	
	Ml area 910 CleElum A (30)	10/01 – 10/12	12	Any elk	Muzzleloader bull permit hunt (YM)
	ML area 910 CleElum B (30)	11/16 – 12/08	23	Any elk	
	342 Umtanum B (30)	10/08 – 10/12	5	Any elk	
	368 Cowiche C (40)	10/08 – 10/12	5	Any elk	

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1996	336, 340 Robinson (145) 336 Taneum B (25) 352, 356 Douglas B (75) Bow area 806, 807 (35) 364, 366, 368 Cottonwd (90)	09/01 – 09/14 11/23 – 12/08 09/01 – 09/14 11/23 – 12/08 09/01 – 09/14	14 16 14 16 14	Any elk Any elk Any elk Any elk Any elk	Archery only permit hunt (YA)
	340 Manastash B (10) 346 L. Naches C (10)	11/01 – 11/13 10/01 – 10/14	13 14	Antlerless only Antlerless only	Persons of disability permit hunt (YC, YM)
	Elk area 031 Sushuskin (20)	12/16 – 12/30	15	Antlerless only	Special elk permit hunts AHE (any elk tag)
	336, 340, 352, 356, 364 371 372	09/01 – 09/14 09/01 – 09/14 09/01 – 09/14	14 14 14	Spike or antlerless Spike bull only Either-sex	Early archery general elk season (YA)
	336, 346 & 352 Bow area 806 & 807	11/21 – 12/08 11/27 – 12/08	18 13	Spike or antlerless	Late archery general elk season (YA)
	342 368 ML area 910	10/03 – 10/09 10/03 – 10/09 10/01 – 10/12	7 7 12	Antlerless only Spike bull only Spike or antlerless	Early muzzleloader general elk season (YM)
	342 368 ML area 910	10/05 – 10/11 10/05 – 10/11 09/01 – 09/15	7 7 15	Antlerless only Spike bull only Spike bull or antlerless	Early muzzleloader general elk season (YM)
	346 ML area 910 ML area 944	11/16 – 11/19 11/16 – 12/08 11/16 – 11/19	4 23 4	Spike or antlerless Spike or antlerless Spike or antlerless	Late muzzleloader general elk season (YM)
	336, 340, 342, 346, 352, 356, 360, 364, 366, 368, 371, 372	11/05 – 11/15 11/08 – 11/15	11 8	Spike bull only	Early modern firearm general elk season (YG) Late modern firearm general elk season (YP)
	372	11/05 – 11/15	11	Either-sex	Special elk hunts open to specified tag holders (CM, YG, YP, YM)
1997	580, 584	11/06 – 11/17 11/09 – 11/17	12 9	Bull/visible antlers	Early modern firearm general elk season (WG) Late modern firearm general elk season (WP)
	302, 335 Swauk (20) Area 031 Shushuskin A (125)	10/25 – 11/15 11/23 – 12/15	22 23	Any bull Antlerless only	Modern firearm elk permit hunts (YP, YM)
	336 Taneum (200)	11/01 – 11/04	4	Antlerless only	
	340 Manastash (200)	11/01 – 11/04	4	Antlerless only	
	342 Umtanum (200)	11/01 – 11/04	4	Antlerless only	
	336, 346 Peaches R. A (40)	10/25 – 11/15	22	Any bull	
	346 L. Naches A (200)	11/01 – 11/04	4	Antlerless only	
	346 L. Naches B (15)	10/01 – 11/13	44	Any bull	
	340, 342 Observatory (40)	11/05 – 11/13	22	Any bull	
	352, 356 Goose Pr. A (40)	10/25 – 11/15	22	Any bull	
	352 Nile (75)	11/01 – 11/04	4	Antlerless only	
	356 Bumping (150)	11/01 – 11/04	4	Antlerless only	
	360 Bethel A (50)	11/01 – 11/04	4	Antlerless only	
	360 Bethel B (40)	10/25 – 11/15	22	Any bull	
	364 Rimrock A (350)	11/01 – 11/04	4	Antlerless only	
	364 Rimrock B (10)	10/25 – 11/15	22	Any elk	
	368 Cowiche A (150)	11/01 – 11/04	4	Antlerless only	
	368 Cowiche B (10)	10/25 – 11/15	22	Any bull	
1998	ML area 910 CleElum A (30)	09/01 – 09/30	30	Either-sex	Muzzleloader bull permit hunt (YM)
	ML area 910 CleElum B (30)	11/16 – 12/08	23		
	342 Umtanum B (30)	10/03 – 10/09	7		
	368 Cowiche C (40)	10/03 – 10/09	7		

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
1997	336, 340 Robinson (145) 336 Taneum B (25) 352, 356 Douglas B (75) Bow area 806, 807 (35) 364, 366, 368 Cottonwd. (90)	09/01 – 09/14 11/23 – 12/08 09/01 – 09/14 11/23 – 12/08 09/01 – 09/14	14 16 14 16 14	Either-sex	Archery only permit hunt (YA)
	340 Manastash B (10) 346 L. Naches C (10)	11/01 – 11/13 10/01 – 10/11	13 11	Antlerless only Antlerless only	Persons of disability permit hunt (YC, YM)
	Elk area 031 Sushuskin (20)	12/16 – 12/30	15	Antlerless only	Special elk permit hunts AHE (any elk tag)
	336, 340, 352, 356, 364, 371 334 (So. of I90), 372 582	09/01 – 09/14 09/01 – 09/14 09/01 – 09/14	14 14 14	Spike or antlerless Any elk Any elk	Early archery general elk season (YA) Early archery general elk season (YA) Early archery general elk season (WA)
	336, 346, 352, 368 & part of 360 north of Carmack Canyon and Bethel Ridge Rd.	11/25 – 12/08	14	Spike or antlerless	Late archer general elk season (YA)
	342, 356, 368	10/04 – 10/10	7	Spike bull only	Early muzzleloader general elk season (YM)
	346 ML area 944	11/26 – 12/08 11/26 – 12/08	13 13	Spike bull or antlerless	Early muzzleloader general elk season (YM)
	336, 340, 342, 346, 352, 356, 360, 364, 368, 371	10/25 – 11/02 10/27 – 11/02	9 7	Spike bull only	Early modern firearm general elk season (YG) Late modern firearm general elk season (YP)
	372	10/25 – 11/02 10/27 – 11/02	9 7	Any bull	Early modern firearm general elk season (YG) Late modern firearm general elk season (YP)
	582	11/08 – 11/16 11/10 – 11/16	9 7	Any elk	Early modern firearm general elk season (WG) Late modern firearm general elk season (WP)
1998	336,346 Peaches R. A (69) 340, 342 Observatory (39) 352, 356 Goose Pr. A (32) 360 Bethel A (17) 364 Rimrock A (50) 368 Cowiche A (9)	10/20 – 11/02 10/20 – 11/02 10/20 – 11/02 10/20 – 11/02 10/20 – 11/02 10/20 – 11/02	13 13 13 13 13 13	3 pt. minimum 3 pt. minimum 3 pt minimum 3 pt. minimum 3 pt minimum 3 pt minimum	Modern firearm bull permit hunts (YP)
	Area 031 Shushuskin A (150) 336 Taneum (100) 340 Manastash (100) 342 Umtanum A (150) 346 L. Naches A (100) 346 L. Naches B (15) 352 Nile (30) 356 Bumping (150) 360 Bethel B (25) 364 Rimrock B (100) 368 Cowiche B (200)	11/15 – 12/15 10/29 – 11/02 10/29 – 11/02 10/29 – 11/02 10/29 – 11/02 10/01 – 10/10 10/29 – 11/02 10/29 – 11/02 10/29 – 11/02 10/29 – 11/02 10/29 – 11/02 10/29 – 11/02	31 5 5 5 5 10 5 5 5 5 5 5 5	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only 3 pt minimum Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (CP, CM) Modern firearm elk permit hunts (YP, YM)
	336, 346 Peaches R. B (13) 340, 342 Obser. B (17) 352, 356 Goose P. C (12) 360 Bethel C (8) 364 Rimrock C (10) 368 Cowiche C (6)	10/01 – 10/10	10	3 pt minimum	Muzzleloader bull permit hunt (YM)
	336, 346 Peaches R. B (77) 340, 342 Obser. B (77) 352, 356 Goose P. C (41) 360 Bethel D (31) 364 Rimrock D (26) 368 Cowiche D (9)	09/01 – 09/14	14	3 pt minimum	Archery bull permit hunt (YA)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	340 Manastash B (5)	11/01 – 11/07	7	Antlerless only	Persons of disability special permit hunt (YC, YM)
	346 L. Naches C (5)	10/01 – 10/10	10	Antlerless only	
	Elk area 031 Sushuskin (75)	12/16 – 01/15		Antlerless only	Special elk permit hunts for AHE (any elk tag)
1998	336, 340, 352, 356, 364, 371	09/01 – 09/14	14	Spike or antlerless	Early archery general elk season (YA)
	334 (So. of I90), 372	09/01 – 09/14	14	Any elk	Early archery general elk season (YA)
	582	09/01 – 09/14	14	Any elk	Early archery general elk season (WA)
	336, 346, 352, 368 & part of 360 north of Carmack Canyon and Bethel Ridge Rd.	11/25 – 12/08	14	Spike or antlerless	Late archer general elk season (YA)
	342, 356, 368 ML 910	10/10 – 10/16 08/15 – 09/14	7 30	Spike bull only Any elk	Early muzzleloader general elk season (YM)
	346 ML area 944	11/14 – 11/18 11/25 – 12/08	5 14	Spike or antlerless	Early muzzleloader general elk season (YM)
	336, 340, 342, 346, 352, 356, 360, 364, 368, 371	10/31 – 11/08	9	Spike bull only	Modern firearm general elk season (YG)
	372	10/05 – 10/13 10/31 – 11/08 12/09 – 12/13	9 9 5	Antlerless only Any elk Antlerless only	Modern firearm general elk season (Any Yakima tag)
	582	11/07 – 11/15	9	Any elk	Modern firearm general elk season (WG)
	336, 346 Peaches R. A (88) 340, 342 Observatory A (52) 352, 356 Goose Pr. A (41) 360 Bethel A (30) 364 Rimrock A (63) 368 Cowiche A (11)	10/25 – 11/08	14	3 pt. minimum	Modern firearm bull permit hunts (YG)
	Area 031 Shushuskin A (50) 336 Taneum (150) 340 Manastash (300) 342 Umtanum A (350) 346 L. Naches A (250) 346 L. Naches B (19) 352 Nile (75) 356 Bumping (300) 360 Bethel B (100) 364 Rimrock B (350) 368 Cowiche B (200)	12/01 – 12/31 11/04 – 11/08 11/04 – 11/08 11/04 – 11/08 11/04 – 11/08 10/01 – 10/10 11/04 – 11/08 11/04 – 11/08 11/04 – 11/08 11/04 – 11/08 11/04 – 11/08	31 5 5 5 5 10 5 5 5 5	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only 3 pt minimum Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (YG, YM)
	336, 346 Peaches R. B (20) 340, 342 Obser. B (19) 352, 356 Goose P. C (5) 360 Bethel C (3) 364 Rimrock C (15) 368 Cowiche C (3)	10/01 – 10/10	10	3 pt minimum	Muzzleloader bull permit hunt (YM)
	336, 346 Peaches R. B (53) 340, 342 Obser. B (26) 352, 356 Goose P. C (29) 360 Bethel D (48) 364 Rimrock D (82) 368 Cowiche D (5)	09/01 – 09/14	14	3 pt minimum	Archery bull permit hunt (YA)
	340, 342 Obser. D (15) 346 L. Naches C (15)	10/25 – 11/08 10/01 – 10/10	14 10	Any elk Any elk	Persons of disability special permit hunt (YG, YM) (YG, YM or YA)
	Elk area 031 Sushuskin (75)	12/16 – 01/15		Antlerless only	Special elk permit hunts for AHE (any elk tag)
1999	336, 340, 352, 356, 364, 371 334 (So. of I90), 372, 382	09/01 – 09/14 09/01 – 09/14	14 14	Spike or antlerless Any elk	Early archery general elk season (YA) Early archery general elk season (YA)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	336, 346, 352, 368 & part of 360 north of Carmack Canyon and Bethel Ridge Rd.	11/24 – 12/08	15	Spike or antlerless	Late archer general elk season (YA)
	342, 356, 368 368 (part of unit as described)	10/09 – 10/15 10/09 – 09/15	7 7	Spike bull only Antlerless	Early muzzleloader general elk season (YM)
	346 ML area 944	11/14 – 11/18 11/24 – 12/08	5 15	Spike or antlerless Spike or antlerless	Early muzzleloader general elk season (YM)
	336, 340, 342, 346, 352, 356, 360, 364, 368	10/30 – 11/07	9	Spike bull only	Modern firearm general elk season (YF)
	372, 382	10/05 – 10/13 10/30 – 11/07 12/09 – 12/13	9 9 5	Antlerless only Any elk Antlerless only	Modern firearm general elk season (Any Yakima tag)
	336,346 Peaches R. A (118) 340, 342 Observatory A (67) 352, 356 Goose Pr. A (114) 360 Bethel A (71) 364 Rimrock A (94) 368 Cowiche A (8)	10/24 – 11/07	14	Any bull	Modern firearm bull permit hunts (YF)
	Area 031 Shushuskin A (50) 336 Taneum (150) 340 Manastash (250) 342 Umtanum A (300) 346 L. Naches A (225) 346 L. Naches B (18) 352 Nile (75) 356 Bumping (300) 360 Bethel B (100) 364 Rimrock B (350) 368 Cowiche B (200)	12/01 – 12/31 11/03 – 11/07 11/03 – 11/07 11/03 – 11/07 11/03 – 11/07 10/01 – 10/10 11/03 – 11/07 11/03 – 11/07 11/03 – 11/07 11/03 – 11/07 11/03 – 11/07	31 5 5 5 5 10 5 5 5 5 5	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only 3 pt minimum Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (YG, YM)
	336, 346 Peaches R. B (24) 340, 342 Obser. B (21) 352, 356 Goose P. C (16) 360 Bethel C (10) 364 Rimrock C (13) 368 Cowiche C (6)	10/01 – 10/10	10	Any bull	Muzzleloader bull permit hunt (YM)
	342 Umtanum B (125)	10/07 – 10/13	7	Antlerless only	Muzzleloader elk permit hunt (YM)
	336, 346 Peaches R. B (106) 340, 342 Obser. B (60) 352, 356 Goose P. C (82) 360 Bethel D (60) 364 Rimrock D (43) 368 Cowiche E (9)	09/01 – 09/14	14	Any bull	Archery bull permit hunt (YA)
	340, 342 Obser. D (3) 346 L. Naches C (3) 346 L. Naches D (4)	10/24 – 11/07 10/01 – 10/10 10/30 – 11/07	14 10 8	Any elk Any elk Antlerless only	Persons of disability special permit hunt (YG, YM) (YF, YM or YA) (YF, YM or YA)
2000	336, 340, 352, 356, 364 334	09/01 – 09/14 09/01 – 09/14	14 14	Spike or antlerless Any elk	Early archery general elk season (EA NA, BA, CA, YA)
	336, 346, 352, 368 & part of 360 north of Carmack Canyon and Bethel Ridge Rd.	11/22 – 12/08	17	Spike or antlerless	Late archer general elk season (EA, NA, BA, CA, YA)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	342, 356, 368 368 (part of unit as described)	10/07 – 10/13 10/07 – 09/13	7 7	Spike bull only Antlerless only	Early muzzleloader general elk season (EM, NM, BM, CM, YM)
	346, 368 (part of unit as described) & ML area 944	11/11 – 11/15	5	Spike or antlerless	Late muzzleloader general elk season (EM, NM, BM, CM, YM)
	336, 340, 342, 346, 352, 356, 360, 364, 368, 371	10/28 – 11/05	9	Spike bull only	Modern firearm general elk season (EF, NF, BF, CF, YF)
	372, 382	09/01 – 10/13 10/28 – 11/05 12/09 – 12/31	43 9 22	Antlerless only Any bull Antlerless only	Modern firearm general elk season (Any Yakima tag)
	336,346 Peaches R. A (53) 340, 342 Observatory A (36) 352, 356 Goose Pr. A (118) 360 Bethel A (86) 364 Rimrock A (88) 368 Cowiche A (21)	10/23 – 11/05	14	Any bull	Modern firearm bull permit hunts (EF)
	Area 031 Shushuskin A (48) 336 Taneum (156) 340 Manastash (270) 342 Umtanum A (333) 346 L. Naches A (250) 346 L. Naches B (18) 352 Nile (100) 356 Bumping (330) 360 Bethel B (120) 364 Rimrock B (280) 368 Cowiche B (180) 371 Alkali A (100)	12/01 – 12/31 11/01 – 11/05 11/01 – 11/05 11/01 – 11/05 11/01 – 11/05 10/01 – 10/10 11/01 – 11/05 11/01 – 11/05 11/01 – 11/05 11/01 – 11/05 10/28 – 11/05	31 5 5 5 5 10 5 5 5 5 5 8	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Any bull Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Any elk	Modern firearm elk permit hunts (EF, EM)
	336, 346 Peaches R. B (9) 340, 342 Obser. B (9) 352, 356 Goose P. C (18) 360 Bethel C (11) 364 Rimrock C (12) 368 Cowiche C (4)	10/01 – 10/10	10	Any bull	Muzzleloader bull permit hunt (EM)
	342 Umtanum B (250) 368 Cowiche D (100) 371 Alkali B (100)	10/07 – 10/13	7	Antlerless only	Muzzleloader elk permit hunt (EM)
	336, 346 Peaches R. C (54) 340, 342 Obser. C (34) 352, 356 Goose P. D (170) 360 Bethel D (78) 364 Rimrock D (65) 368 Cowiche E (22) 371 Alkali C (50)	09/01 – 09/14 09/01 – 09/14	14 14	Any bull Any elk	Archery bull permit hunt (EA)
	340, 342 Obser. D (3) 346 L. Naches C (3) 346 L. Naches D (4)	10/24 – 11/07 10/01 – 10/10 10/30 – 11/07	14 10 8	Any elk Any elk Antlerless only	Persons of disability special permit hunt (EF, EM) (EF, EM or EA) (EF, EM or EA)
2001	336, 340, 352, 356, 364 334	09/01 – 09/14 09/01 – 09/14	14 14	Spike or antlerless Any elk	Early archery general elk season (EA)
	336, 346, 352, 364, 368	11/21 – 12/08	18	Spike or antlerless	Late archer general elk season (EA)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	342, 356, 368 ML area 911 368 (part of unit as described)	10/06 – 10/12 08/15 – 09/15 10/06 – 10/12	7 31 7	Spike bull only Spike or antlerless Spike or antlerless	Early muzzleloader general elk season (EM)
	346, 368 (part of unit as described) & ML area 944	11/10 – 11/14	5	Spike or antlerless	Late muzzleloader general elk season (EM)
	336, 340, 342, 346, 352, 356, 360, 364, 368	10/27 – 11/04	9	Spike bull only	Modern firearm general elk season (EF)
	372, 382	09/01 – 09/15 10/01 – 10/05 10/06 – 10/15 10/27 – 11/04	15 5 10 9	Antlerless only Antlerless only Any elk Any elk	Modern firearm general elk season (Any Yakima tag)
	336,346 Peaches R. A (86) 352, 356 Goose Pr. A (176) 360 Bethel A (120) 364 Rimrock A (103) 368 Cowiche A (26)	10/22 – 11/04	14	Any bull	Modern firearm bull permit hunts (EF)
	Area 031 Shushuskin A (75) 336 Taneum (200) 340, 342, 371 Obser. A (48) 340 Manastash (400) 342 Umtanum A (400) 346 L. Naches A (250) ML area 944 Cleman (75) 346 L. Naches A (250) 346 L. Naches B (25) 352 Nile (300) 356 Bumping (530) 360 Bethel B (275) 364 Rimrock B (275) 368 Cowiche B (180)	12/01 – 12/31 10/31 – 11/04 10/22 – 11/04 10/31 – 11/04 10/31 – 11/04 10/01 – 10/10 12/09 – 12/31 10/31 – 11/04 10/01 – 10/10 10/31 – 11/04 10/31 – 11/04 10/31 – 11/04 10/31 – 11/04 10/31 – 11/04	31 5 14 5 5 10 23 5 10 5 5 5 5 5 5	Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only Any bull Antlerless only Antlerless only Any bull Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (EF, EM)
	336, 346 Peaches R. B (11) 352, 356 Goose P. C (22) 360 Bethel C (17) 364 Rimrock C (13) 368 Cowiche C (6)	10/01 – 10/12	12	Any bull	Muzzleloader bull permit hunt (EM)
	340,342,371 Obser. B (9) 342 Umtanum B (350)	10/01 – 10/12 10/06 – 10/12	12 7	Any elk Antlerless only	Muzzleloader elk permit hunt (EM)
	336, 346 Peaches R. C (88) 340, 342, 371 Obser. C (40) 352, 356 Goose P. C (267) 360 Bethel D (100) 364 Rimrock D (87) 368 Cowiche D (20)	09/01 – 09/14	14	Any bull Any elk Any bull Any bull Any bull Any bull	Archery bull permit hunt (EA)
	340, 342 Obser. D (5) 346 L. Naches C (5) 346 L. Naches D (10)	10/24 – 11/07 10/01 – 10/10 10/30 – 11/07	14 10 8	Any elk Any elk Antlerless only	Persons of disability special permit hunt (EF, EM) (EF, EM or EA) (EF, EM or EA)
2002	336, 340, 352, 356, 364 334	09/01 – 09/14 09/01 – 09/14	14 14	Spike or antlerless Any elk	Early archery general elk season (EA)
	336, 346, 352, 364, 368 372 352, 356 as described	11/20 – 12/08 11/20 – 12/08 11/20 – 01/31	19 19 73	Spike or antlerless Any elk Antlerless only	Late archer general elk season (EA)

Year	GMU # & Permit (#S)	Dates	Days	Legal Animal	Hunt Description and Tag Type
	342, 356, 368 368 (part of unit as described)	10/05 – 10/11 10/05 – 10/11	7 7	Spike bull only Spike or antlerless	Early muzzleloader general elk season (EM)
	346, 368 (part of unit as described)	11/09 – 11/13	5	Spike or antlerless	Late muzzleloader general elk season (EM)
	336, 340, 342, 346, 352, 356, 360, 364, 368 382	10/26 – 11/03 10/26 – 11/03	9 9	Spike bull only Any elk	Modern firearm general elk season (EF)
	372, 382	08/31 – 09/13 09/14 – 09/15 10/06 – 10/07 10/08 – 10/11 10/26 – 11/03	14 5 2 4 9	Antlerless only Any elk Antlerless only Any elk Any elk	Modern firearm general elk season (EF)
	336,346 Peaches R. A (103) 352, 356 Goose Pr. A (114) 360 Bethel A (64) 364 Rimrock A (112) 368 Cowiche A (28)	10/21 – 11/03	14	Any bull	Modern firearm bull permit hunts (EF)
	Area 031 Shushuskin A (75) 336 Taneum (200) 340, 342, 371 Obser. A (62) 340 Manastash (400) 342 Umtanum A (400) ML area 944 Cleman (100) 346 L. Naches A (250) 346 L. Naches B (25) 352 Nile (300) 356 Bumping (215) 360 Bethel B (105) 364 Rimrock B (100) 368 Cowiche B (180)	12/01 – 12/31 10/30 – 11/03 10/21 – 11/03 10/30 – 11/03 10/30 – 11/03 12/09 – 12/31 10/30 – 11/04 10/00 – 10/10 10/30 – 11/03 10/30 – 11/03 10/30 – 11/03 10/30 – 11/03 10/30 – 11/03	31 5 14 5 5 23 5 10 5 5 5 5 5 5	Antlerless only Antlerless only Any elk Antlerless only Antlerless only Antlerless only Antlerless only Any bull Antlerless only Antlerless only Antlerless only Antlerless only Antlerless only	Modern firearm elk permit hunts (EF, EM)
	336, 346 Peaches R. B (15) 352, 356 Goose P. C (17) 360 Bethel C (11) 364 Rimrock C (16) 368 Cowiche C (10)	10/01 – 10/11	11	Any bull	Muzzleloader bull permit hunt (EM)
	340,342,371 Obser. B (14) 342 Umtanum B (350)	10/01 – 10/11 10/06 – 10/11	11 6	Any elk Antlerless only	Muzzleloader elk permit hunt (EM)
	336, 346 Peaches R. C (126) 340, 342, 371 Obser. C (71) 352, 356 Goose P. C (267) 360 Bethel D (62) 364 Rimrock D (117) 368 Cowiche D (27)	09/01 – 09/14	14	Any bull Any elk Any bull Any bull Any bull Any bull	Archery bull permit hunt (EA)
	340, 342 Obser. D (6) 346 L. Naches C (6) 346 L. Naches D (10)	10/24 – 11/07 10/01 – 10/10 10/30 – 11/07	14 10 8	Any elk Any elk Antlerless only	Persons of disability special permit hunt (EF, EM) (EF, EM or EA) (EF, EM or EA)

APPENDIX C. Amendments to Wildlife Damage Rules - HB 1752.

RCW 77.36.005

Findings. (*Expires June 30, 2004.*)

The legislature finds that:

(1) As the number of people in the state grows and wildlife habitat is altered, people will encounter wildlife more frequently. As a result, conflicts between humans and wildlife will also increase. Wildlife is a public resource of significant value to the people of the state and the responsibility to minimize and resolve these conflicts is shared by all citizens of the state.

(2) In particular, the state recognizes the importance of commercial agricultural and horticultural crop production, rangeland suitable for grazing or browsing of domestic livestock, and the value of healthy deer and elk populations, which can damage such crops. The legislature further finds that damage prevention is key to maintaining healthy deer and elk populations, wildlife-related recreational opportunities, commercially productive agricultural and horticultural crops, and rangeland suitable for grazing or browsing of domestic livestock, and that the state, participants in wildlife recreation, and private landowners and tenants share the responsibility for damage prevention. Toward this end, the legislature encourages landowners and tenants to contribute through their land management practices to healthy wildlife populations and to provide access for related recreation. It is in the best interests of the state for the department of fish and wildlife to respond quickly to wildlife damage complaints and to work with these landowners and tenants to minimize and/or prevent damages and conflicts while maintaining deer and elk populations for enjoyment by all citizens of the state.

(3) A timely and simplified process for resolving claims for damages caused by deer and elk for commercial agricultural or horticultural products, and rangeland used for grazing or browsing of domestic livestock is beneficial to the claimant and the state.

[2001 c 274 § 1; 1996 c 54 § 1.]

NOTES:

Expiration date -- 2001 c 274 §§ 1-3: "The following expire June 30, 2004:

- (1) Section 1, chapter 274, Laws of 2001;
- (2) Section 2, chapter 274, Laws of 2001; and
- (3) Section 3, chapter 274, Laws of 2001." [2001 c 274 § 5.]

Effective date -- 2001 c 274: "This act is necessary for the immediate preservation of the public peace, health, or safety, or support of the state government and its existing public institutions, and takes effect July 1, 2001." [2001 c 274 § 6.]

RCW 77.36.005

Findings. (*Effective June 30, 2004.*)

The legislature finds that:

(1) As the number of people in the state grows and wildlife habitat is altered, people will encounter wildlife more frequently. As a result, conflicts between humans and wildlife will also increase. Wildlife is a public resource of significant value to the people of the state and the responsibility to minimize and resolve these conflicts is shared by all citizens of the state.

(2) In particular, the state recognizes the importance of commercial agricultural and horticultural crop production and the value of healthy deer and elk populations, which can damage such crops. The legislature further finds that damage prevention is key to maintaining healthy deer and elk populations, wildlife-related recreational

opportunities, and commercially productive agricultural and horticultural crops, and that the state, participants in wildlife recreation, and private landowners and tenants share the responsibility for damage prevention. Toward this end, the legislature encourages landowners and tenants to contribute through their land management practices to healthy wildlife populations and to provide access for related recreation. It is in the best interests of the state for the department of fish and wildlife to respond quickly to wildlife damage complaints and to work with these landowners and tenants to minimize and/or prevent damages and conflicts while maintaining deer and elk populations for enjoyment by all citizens of the state.

(3) A timely and simplified process for resolving claims for damages caused by deer and elk for commercial agricultural or horticultural products is beneficial to the claimant and the state.

[1996 c 54 § 1.]

RCW 77.36.010

Definitions. (Expires June 30, 2004.)

The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

(1) "Crop" means (a) a growing or harvested horticultural and/or agricultural product for commercial purposes; or (b) rangeland forage on privately owned land used for grazing or browsing of domestic livestock for at least a portion of the year for commercial purposes. For the purposes of this chapter all parts of horticultural trees shall be considered a crop and shall be eligible for claims.

(2) "Emergency" means an unforeseen circumstance beyond the control of the landowner or tenant that presents a real and immediate threat to crops, domestic animals, or fowl.

(3) "Immediate family member" means spouse, brother, sister, grandparent, parent, child, or grandchild.

[2001 c 274 § 2; 1996 c 54 § 2.]

NOTES:

Expiration date -- 2001 c 274 §§ 1-3: See note following RCW [77.36.005](#).

Effective date -- 2001 c 274: See note following RCW [77.36.005](#).

RCW 77.36.010

Definitions. (Effective June 30, 2004.)

Unless otherwise specified, the following definitions

RCW 77.36.020

Game damage control -- Special hunt.

The department shall work closely with landowners and tenants suffering game damage problems to control damage without killing the animals when practical, to increase the harvest of damage-causing animals in hunting seasons, and to kill the animals when no other practical means of damage control is feasible.

If the department receives recurring complaints regarding property being damaged as described in this section or RCW [77.36.030](#) from the owner or tenant of real property, or receives such complaints from several such owners or tenants in a locale, the commission shall consider conducting a special hunt or special hunts to reduce the potential for such damage.

[1996 c 54 § 3.]

RCW 77.36.030

Trapping or killing wildlife causing damage -- Emergency situations.

(1) Subject to the following limitations and conditions, the owner, the owner's immediate family member, the owner's documented employee, or a tenant of real property may trap or kill on that property, without the licenses required under RCW [77.32.010](#) or authorization from the director under RCW [77.12.240](#), wild animals or wild birds that are damaging crops, domestic animals, or fowl:

- (a) Threatened or endangered species shall not be hunted, trapped, or killed;
- (b) Except in an emergency situation, deer, elk, and protected wildlife shall not be killed without a permit issued and conditioned by the director or the director's designee. In an emergency, the department may give verbal permission followed by written permission to trap or kill any deer, elk, or protected wildlife that is damaging crops, domestic animals, or fowl; and
- (c) On privately owned cattle ranching lands, the land owner or lessee may declare an emergency only when the department has not responded within forty-eight hours after having been contacted by the land owner or lessee regarding damage caused by wild animals or wild birds. In such an emergency, the owner or lessee may trap or kill any deer, elk, or other protected wildlife that is causing the damage but deer and elk may only be killed if such lands were open to public hunting during the previous hunting season, or the closure to public hunting was coordinated with the department to protect property and livestock.

(2) Except for coyotes and Columbian ground squirrels, wildlife trapped or killed under this section remain the property of the state, and the person trapping or killing the wildlife shall notify the department immediately. The department shall dispose of wildlife so taken within three days of receiving such a notification and in a manner determined by the director to be in the best interest of the state.

[1996 c 54 § 4.]

RCW 77.36.040

Payment of claims for damages -- Procedure -- Limitations.

(1) Pursuant to this section, the director or the director's designee may distribute money appropriated to pay claims for damages to crops caused by wild deer or elk in an amount of up to ten thousand dollars per claim. Damages payable under this section are limited to the value of such commercially raised horticultural or agricultural crops, whether growing or harvested, and shall be paid only to the owner of the crop at the time of damage, without assignment. Damages shall not include damage to other real or personal property including other vegetation or animals, damages caused by animals other than wild deer or elk, lost profits, consequential damages, or any other damages whatsoever. These damages shall comprise the exclusive remedy for claims against the state for damages caused by wildlife.

(2) The director may adopt rules for the form of affidavits or proof to be provided in claims under this section. The director may adopt rules to specify the time and method of assessing damage. The burden of proving damages shall be on the claimant. Payment of claims shall remain subject to the other conditions and limits of this chapter.

(3) If funds are limited, payments of claims shall be prioritized in the order that the claims are received. No claim may be processed if:

(a) The claimant did not notify the department within ten days of discovery of the damage. If the claimant intends to take steps that prevent determination of damages, such as harvest of damaged crops, then the claimant shall notify the department as soon as reasonably possible after discovery so that the department has an opportunity to document the damage and take steps to prevent additional damage; or

(b) The claimant did not present a complete, written claim within sixty days after the damage, or the last day of damaging if the damage was of a continuing nature.

(4) The director or the director's designee may examine and assess the damage upon notice. The department and claimant may agree to an assessment of damages by a neutral person or persons knowledgeable in horticultural or agricultural practices. The department and claimant shall share equally in the costs of such third party examination and assessment of damage.

(5) There shall be no payment for damages if:

(a) The crops are on lands leased from any public agency;

(b) The landowner or claimant failed to use or maintain applicable damage prevention materials or methods furnished by the department, or failed to comply with a wildlife damage prevention agreement under RCW [77.12.260](#);

- (c) The director has expended all funds appropriated for payment of such claims for the current fiscal year; or
 - (d) The damages are covered by insurance. The claimant shall notify the department at the time of claim of insurance coverage in the manner required by the director. Insurance coverage shall cover all damages prior to any payment under this chapter.
- (6) When there is a determination of claim by the director or the director's designee pursuant to this section, the claimant has sixty days to accept the claim or it is deemed rejected.

[1996 c 54 § 5.]

RCW 77.36.050

Claimant refusal -- Excessive claims.

If the claimant does not accept the director's decision under RCW [77.36.040](#), or if the claim exceeds ten thousand dollars, then the claim may be filed with the office of risk management under RCW [4.92.040](#)(5). The office of risk management shall recommend to the legislature whether the claim should be paid. If the legislature approves the claim, the director shall pay it from moneys appropriated for that purpose. No funds shall be expended for damages under this chapter except as appropriated by the legislature.

[1996 c 54 § 6.]

RCW 77.36.060

Claim refused -- Posted property.

The director may refuse to consider and pay claims of persons who have posted the property against hunting or who have not allowed public hunting during the season prior to the occurrence of the damages.

[1996 c 54 § 7.]

RCW 77.36.070

Limit on total claims from wildlife fund per fiscal year.

The department may pay no more than one hundred twenty thousand dollars per fiscal year from the wildlife fund for claims under RCW [77.36.040](#) and for assessment costs and compromise of claims. Such money shall be used to pay animal damage claims only if the claim meets the conditions of RCW [77.36.040](#) and the damage occurred in a place where the opportunity to hunt was not restricted or prohibited by a county, municipality, or other public entity during the season prior to the occurrence of the damage.

[1996 c 54 § 8.]

RCW 77.36.080

Limit on total claims from general fund per fiscal year -- Emergency exceptions. (*Expires June 30, 2004.*)

(1) The department may pay no more than thirty thousand dollars per fiscal year from the general fund for claims under RCW [77.36.040](#) and for assessment costs and compromise of claims unless the legislature declares an emergency. Such money shall be used to pay animal damage claims only if the claim meets the conditions of RCW [77.36.040](#) and the damage occurred in a place where the opportunity to hunt was restricted or prohibited by a county, municipality, or other public entity during the season prior to the occurrence of the damage.

(2) The legislature may declare an emergency, defined for the purposes of this section as any happening arising from weather, other natural conditions, or fire that causes unusually great damage by deer or elk to commercially raised agricultural or horticultural crops, or rangeland forage on privately owned land used for grazing or browsing of domestic livestock for at least a portion of the year. In an emergency, the department may pay as much as may be subsequently appropriated, in addition to the funds authorized under subsection (1) of this section, for claims under RCW [77.36.040](#) and for assessment and compromise of claims. Such money shall be used to pay animal damage claims only if the claim meets the conditions of RCW [77.36.040](#) and the department has expended all funds authorized under RCW [77.36.070](#) or subsection (1) of this section.

(3) Of the total funds available each fiscal year under subsection (1) of this section and RCW [77.36.070](#), no more than one-third of this total may be used to pay animal damage claims for rangeland forage on privately owned land.

(4) Of the total funds available each fiscal year under subsection (1) of this section and RCW [77.36.070](#) that remain unspent at the end of the fiscal year, fifty percent shall be utilized as matching grants to enhance habitat for deer and elk on public lands.

[2001 c 274 § 3; 1996 c 54 § 9.]

NOTES:

Expiration date -- 2001 c 274 §§ 1-3: See note following RCW [77.36.005](#).

Effective date -- 2001 c 274: See note following RCW [77.36.005](#).

RCW 77.36.080

Limit on total claims from general fund per fiscal year -- Emergency exceptions. (*Effective June 30, 2004.*)

(1) The department may pay no more than thirty thousand dollars per fiscal year from the general fund for claims under RCW [77.36.040](#) and for assessment costs and compromise of claims unless the legislature declares an emergency. Such money shall be used to pay animal damage claims only if the claim meets the conditions of RCW [77.36.040](#) and the damage occurred in a place where the opportunity to hunt was restricted or prohibited by a county, municipality, or other public entity during the season prior to the occurrence of the damage.

(2) The legislature may declare an emergency, defined for the purposes of this section as any happening arising from weather, other natural conditions, or fire that causes unusually great damage to commercially raised agricultural or horticultural crops by deer or elk. In an emergency, the department may pay as much as may be subsequently appropriated, in addition to the funds authorized under subsection (1) of this section, for claims under RCW [77.36.040](#) and for assessment and compromise of claims. Such money shall be used to pay animal damage claims only if the claim meets the conditions of RCW [77.36.040](#) and the department has expended all funds authorized under RCW [77.36.070](#) or subsection (1) of this section.

[1996 c 54 § 9.]

APPENDIX D. Rocky Mountain Elk Foundation Projects - Yakima Elk Herd

Year	Road Management	RMEF Funding	Cooperator	Project Funding
1990	Oak Creek Wildlife Area Access Management	\$7,100	WDFW	\$13,600
1992	L.T. Murray Road Rehabilitation	\$7,957	WDFW, Plum Cr.	\$18,957
1992	Ahtanum/Cowichee Access Mgmt	\$8,000	DNR	\$12,450
1994	Ahtanum/Cowichee Resource Mgmt Signage	\$0	DNResources	\$1,000
1996	Wenas Drainage Signage	\$200	Back County Horseman, Mt. Clemen Archers	\$200
1998	Little Naches Green Dot	\$500	WDFW, USFS	\$2,000
1998	Oak Creek Road Closure and Seeding	\$3,000	WDFW	\$6,500
1999	L.T. Murray Access Mgmt.	\$3,500	WDFW, Plum Cr.	\$7,000
	SubTotal	\$30,257		\$61,707
Year	Elk Habitat Improvement	RMEF Funding	Cooperator	Project Funding
1992	Deer Feeder Prescribed Burn	\$1,036	DNR	\$1,161
1997	Cowichee Wildlife Area Catch Basin & Seeding	\$6,630	WDFW	\$6,630
1997	L.T. Murray Water Development	\$2,300	WDFW	\$5,450
1998	North Fork Ahtanum Creek Seeding	\$3,000	WDFW	\$6,200
1999	Oak Creek Forage Enhancement	\$5,000	WDFW, Boise Cascade	\$10,500
1999	North Fork Ahtanum Seeding #2	\$3,000	WDFW	\$6,000
1999	Oak Creek/Wenas Seeding	\$2,000	WDFW	\$4,000
	SubTotal	\$22,966		\$39,941
Year	Native Habitat Restoration	RMEF Funding	Cooperator	Project Funding
1994	McCabe Place Habitat Enhancement	\$4,473	WDFW	\$7,473
1998	Wenas Wildlife Mgmt Area Enhancement	\$31,890	WDFW, BPA	\$31,890
1998	McCabe Ranch Habitat Enhancement #2	\$26,174	WDFW	\$26,174
	SubTotal	\$62,537		\$65,537
Year	Elk Studies	RMEF Funding	Cooperator	Project Funding
1992	Satus/Klickitat Elk Study	\$9,000	BIA, WDFW, YIN	\$182,300
1995	Winter Elk Disease Surveillance Year 1	\$2,799	WDFW	\$9,799
1996	Winter Elk Disease Surveillance Year 2	\$0	WDFW	\$7,000
1999	Colockum & Yakima Habitat Assessment	\$20,000	WDFW, USFS	\$40,000
	SubTotal	\$31,799		\$239,099
Year	Information and Education	RMEF Funding	Cooperator	Project Funding
1990	Oak Creek Wildlife Area Information Booth	\$1,500	WDFW	\$3,000
1996	Interpretive Project	\$220	WDFW	\$220
1998	Oak Creek Habitat Interpretive Sign	\$1,800	WDFW, SCI, NW Chap. Citizens for WA Wildlife	\$3,700
1998	Rattlesnake Ridge Education Display	\$1,296	Batelle	\$2,596
	SubTotal	\$4,816		\$9,516
Total		\$152,375		\$415,800

Washington State Elk Herd Plan

YAKIMA ELK HERD

Washington Department of Fish and Wildlife
Wildlife Program
600 Capitol Way North
Olympia, WA 98501-1091

STATE OF WASHINGTON
GARY LOCKE, GOVERNOR

DEPARTMENT OF FISH AND WILDLIFE
JEFF KOENINGS, Ph. D., DIRECTOR

WILDLIFE PROGRAM
DAVE BRITTELL, ASSISTANT DIRECTOR

GAME DIVISION
DAVE WARE, MANAGER

This Program Receives Federal Aid in Wildlife Restoration funds.
Project W-96-R-11

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Washington Department of Fish and Wildlife. 2002. Yakima Elk Herd Plan. Wildlife Program,
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