



Revising the Way Idaho's Elk are Managed

Elk once roamed across much of North America from northern British Columbia to South Carolina; from New York to southern California.

By the late 19th century they were mostly wiped out across their range by agriculture, development, overharvest and introduced diseases. They were essentially gone east of the Mississippi. Most of the elk left – about 100,000 – were in Yellowstone.

Beginning in 1915, elk transplanted from Yellowstone helped rebuild Idaho's elk herds.

Wildlife experts recognize 22 subspecies of elk – *Cervus elaphus* – across the world; four are found in North America. Rocky Mountain elk is the sub-species found in Idaho.

Today, Idaho Fish and Game estimates the statewide elk population totals, based on winter surveys, are about 70,000 cows, 20,500 calves and 17,100 bulls. They are managed in 29 zones, made up of game management units based on habitat similarity, management similarity or distinct populations.

Fish and Game is revising how it manages those animals. The previous elk management plan, developed in the 1990s, emphasized the need to manage hunter density and distribution and changes in elk populations.

The revision will focus on hunter preferences and elk numbers. The new management plan would establish objectives for each zone based on habitat potential, harvest opportunity, depredation concerns, inter-species issues, population performance issues and winter feeding issues.

Managing elk is about meeting the demand for hunting opportunities and experiences while also reducing damage

to agricultural crops and the potential for spreading disease to livestock. The goals are to balance public interest with available elk, to consider the local social tolerance for elk, the available habitat for elk, and the consumptive use of elk.

Hunting is one of the tools managers use to respond to trends and changes in elk populations. For example, increasing

cow harvest helps reduce a population, while stopping cow harvest helps slow a decrease, or create an increase.

In some areas cow hunts are used to reduce populations that are too high for the habitat capacity or because of unacceptable crop damages by grazing elk.

Bull harvests can reduce the bull to cow ratios, to maintain healthy bull to cow ratios and a quality hunting opportunity. In places where bull numbers are



Elk transplanted from Yellowstone in the early 20th century helped to rebuild Idaho's elk herds.

low, tag numbers can be capped.

In some areas, controlled hunts limit the numbers of hunters to maintain low harvest. That favors a higher bull to cow ratio, and younger bulls grow to be older. Some controlled hunts limit the number of hunters where elk numbers are low.

Other ways of adjusting the harvest are lengthening or shortening the season or adjusting season timing.

To develop new objectives for elk management, Fish and Game must understand the biology of elk as well as public attitudes toward elk and elk management.

Fish and Game biologists are working on a proposed elk plan to present to the Idaho Fish and Game Commission in July. If approved, the plan would be made available for public review and comment.

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Many Factors Influence Elk Numbers and How Elk are Managed

The number of elk that can be supported in any given elk zone is influenced by factors, including weather, predation, hunter harvest, habitat quality and the need to minimize crop and property damage by elk.

One or more of these factors can often be identified as the most severe “limiting” factor that prevents an elk herd from growing further or limits the ability of wildlife managers to maintain current elk herd numbers.

Fish and Game biologists have determined the most likely limiting factor in each of Idaho’s proposed 28 elk zones. They are based on flight surveys, elk population trends over 10 or more years, changes to available habitat, reported agricultural crop and property damage, known or suspected causes of elk mortality, and other data and elk management experience. The severity of each limiting factor has been calculated and classified as low, moderate or high.

The most common limiting factors for Idaho’s elk populations are predation, habitat, and crop and property damage. Severity of these limiting factors varies across Idaho and within zones.

Predation:

In north-central Idaho, the two major predators of elk calves less than six months old are mountain lions and black bears – especially during short periods in the spring and early summer when bears prey on newborn elk and deer.

In some areas wolf predation has been the primary cause of death of female elk and calves older than six months.

To evaluate the effect of predation on elk recruitment one must also consider calf health and condition. Poor condition



Fish and Game biologists radio-collar an elk calf.

IDFG photo

may essentially predispose calves to die from predation or other means. Under these conditions, causes of calf mortality may be limited by habitat, and managing predation pressure may do little to improve elk calf survival.

Studies in Idaho and eastern Oregon show that half or more of elk calves died from predation by black bears and mountain lions.

Habitat:

Habitat can set the limit on elk numbers or density of elk. In areas where habitat conditions are poor, even moderate or low elk densities may be too high for the habitat and can lead to unsatisfactory population numbers.

In contrast, if elk density is high enough to influence habitat condition and elk nutrition, this can lead to poor calf condition and higher rates of starvation, disease and predation.

A decline in habitat quality also can influence calf birth weight and growth rate regardless of elk density.

Elk favor semi-

open forests and mountain meadows and sheltered valleys in the winter. They find shelter from the weather and places to hide from predators in heavy stands of timber and among tall shrubs in old clearings. They eat grasses and small leafy plants, seedlings and twigs, and when times are tough, dried grass and even bark. From late May to mid-June, pregnant females find some cover in brush fields, old clearcuts and open timber as they go off by themselves to give birth.

Fish and Game uses satellite imagery, collected since 2000, to help identify habitat trends that affect populations.

Habitat managers consider good elk summer habitat to be about 60 percent open areas and 40 percent canopy cover.

Agricultural depredation:

Idaho Fish and Game is required by state law to compensate farmers for wildlife damage to agricultural crops or property.

Elk in some areas damage crops on private lands. In response to such damage, Fish and Game conducts “depredation hunts,” or helps provide preventive measures, such as improved fencing and protective coverings for haystacks.

(See article on Page 4)

Idaho Fish and Game News

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Volume 25, Number 7



Summary of Public Involvement in Proposed Elk Plan Revision

Idaho Fish and Game sought public comments on proposed elk plan revisions through an online chat, a random mailed survey, public open-house meetings and an online website poll.

The online chat was designed to inform and answer questions about the proposed statewide elk management directions and objectives, as well as specific questions about zone level population objectives, limiting factors, and strategies.

Highlights included:

- More than 1,400 people participated in the two, two-hour sessions.
- Fish and Game biologists answered nearly 500 questions, during the first evening.
- Hunters from most states were represented, along with a few foreign countries.

Public meetings provided direct interaction with the public. Comments were collected using the same questions and format provided with the online survey – 243 people attended

14 public open-house meetings.

The online poll, open to anyone, on the Fish and Game website included information about statewide management directions, and spaces to comment on each zone’s objectives and strategies and on expanding hunter opportunities to include being able to hunt in two or more zones.

A survey was mailed to a random sample of 3,187 hunters to determine specific interest in expanding elk hunting opportunity into two or more zones. Of those, 1,487 people returned surveys – a 47 percent response rate.

Among the key responses, most favored a proposed option to hunt in more than one elk zone as a way to expand elk hunter opportunity

About half favored an option that would allow hunters to hunt in any zone included in a list of zones. But nearly three-fourth opposed expanding hunting opportunities into two or more zones if that would result in future restriction in those zones, such as tag quotas or shortened seasons.

More than half said they would be more likely to participate in a two-zone option. And a similar number favored Fish and Game pursuing the options to hunt in multiple zones.



Fish and Game officials interact with callers during a live chat about proposed revisions to how elk are managed in Idaho. *IDFG photo*

Fast Facts About Elk:

- Elk is the second largest member of the deer family.
- Bulls average about 800 pounds and cows about 600 pounds.
- Calves weigh 30 to 50 pounds at birth.
- The breeding season peaks in mid to late September.
- Mature males gather harems of females. Generally, the male with the largest antlers is dominant and mates most often.
- Most calving occurs from late May to early June.
- Primary causes of death are hunting and predation. Severe winter weather can result in high mortality, especially in calves.
- The highest cause of calf annual calf mortality is predation.
- Top predators include gray wolves, black bears and mountain lions.
- Elk eat the flowers, stalks, seeds and pods of grasses and forbs; the stems, leaves, and bark of trees and shrubs. They also eat lichens, mosses and have been known to dig up the roots of perennials.
- Elk are adaptable and inhabit a wide variety of habitats, including open grasslands, shrublands, and open- and closed-canopy conifer, hardwood and mixed hardwood/conifer forests from valley bottoms up mountain slopes to alpine areas.

Proposed Elk Management Direction

Fish and Game biologists have developed statewide objectives based on elk hunter survey results, recent aerial surveys, current elk population status and the potential for herd growth in some areas.

Proposed statewide elk management objectives would:

- Continue to offer general season elk hunting opportunities by managing elk populations, predator populations, and improving habitat.
- Enhance mature bull hunting opportunity.
- Aid hunters in aligning hunting areas with their desired hunting experience.
- Maintain the A/B tag structure, while adjusting it to meet the needs and interests of today’s hunters.
- Implement measures to reduce elk-caused crop and property damage.
- Improve public involvement in elk management decision-making.
- Reduce disease impacts on elk and livestock.
- Increase public knowledge and understanding of elk biology, elk management and elk hunting.



Landowner Relationships are Key to Elk Management

About 70 percent of Idaho is public land managed by federal and state agencies, and about 30 percent is privately owned.

The private land is important to elk management. A good portion of it is in crops, pasture or timber. That land often provides cover, food and water for elk; especially when elk are forced by winter weather to the valley bottoms.

Elk and livestock also share public rangelands in the spring and summer. Some elk herds thrive on both private and public land throughout the year.

Sometimes elk management can strain the relationship with private landowners, most of whom are conservationists and also like to see elk.

Elk can cause a loss of crop production when they feed and bed down in fields. They can also damage hay stacks, fences and other private landowner property.

Preventing crop and property damage is a management priority for Fish and Game, and the response to crop and property damage is required by law.

To assist with landowners' needs and to ensure good relationships between landowners and hunters, Fish and Game has an employee in each of its seven regions who assists landowners in reducing or eliminating depredations. Strategies include hazing, fencing, depredation hunts, kill permits, continued use agreements, targeted general or controlled hunts, and easements.

Depredation problems are increasingly complex, involving ecology and species management as well as socio-economics and human population dynamics. Efforts to provide permanent solutions have proven successful and, in many areas, chronic problems have been resolved.

Though elk populations have declined in some areas over the past decade, animals in other areas increasingly have moved into the more developed areas and into agricultural areas on the edge of the sagebrush-steppe where conflicts occur.

Factors influencing these conflicts include growth in agriculture and human populations, habitat suitability, wildfires, changes in landowner tolerance and predator-prey relationships.

As prices fluctuate for agricultural crops, so too does the cost of damage caused by elk. Prices also influence the number of acres planted to profitable crops. Adding to the conflict is that many of these crops are palatable to elk.

All of these factors are evident in the history of damage claim payments.

Depredation claim payments for elk crop damage have ranged between a low of \$31,003 for 13 claims in 1994 and a high of 36 claims of \$475,946 in 2008.

Fish and Game mitigation measures aimed at increasing landowners' tolerance for elk might include incentive payments, incentive tags, or an expanded use of depredation release agreements.

As Idaho's population continues to grow, development continues to affect elk habitat – perhaps, most prevalent on elk winter ranges. The increasing complexity of ownership can affect the options to reduce crop and property damage.

Demands on private land to produce housing, crops, pasture, timber and recreation will grow with the population, as will the interest of hunters who would like to see space, cover and water for elk. Landowners and hunters must work together for effective elk management.

Elk Planning Timeline

Idaho Fish and Game has received public comments on statewide management directions, zone objectives and strategies, and expanded elk hunting in two or more zones (see Page 3); Fish and Game will seek further comments in late summer.

Timeline for completing the plan:

June/July – Incorporate public input into draft Elk Management Plan.

July 11 – Fish and Game staff report on public input, and provide an executive summary of the draft elk plan to Idaho Fish and Game Commission

July 19 - August 19 – Commission reviews the draft elk plan.

August 19 – Fish and Game request Commission approval to release draft elk plan for public comment.

August 19 - September 19 – Draft elk plan out for public comment.

September 19 - November – Incorporate public input into elk plan. Present plan to Commission for approval.

January - February, 2014 – Develop elk season proposals; gather public input and begin implementing new elk plan.

March, 2014 – Commission meeting on proposed changes to 2014 elk seasons.

For updates go to: <http://fishandgame.idaho.gov/public/wildlife/?getPage=324>



Bull elk in velvet

IDFG photo by Mike Demick