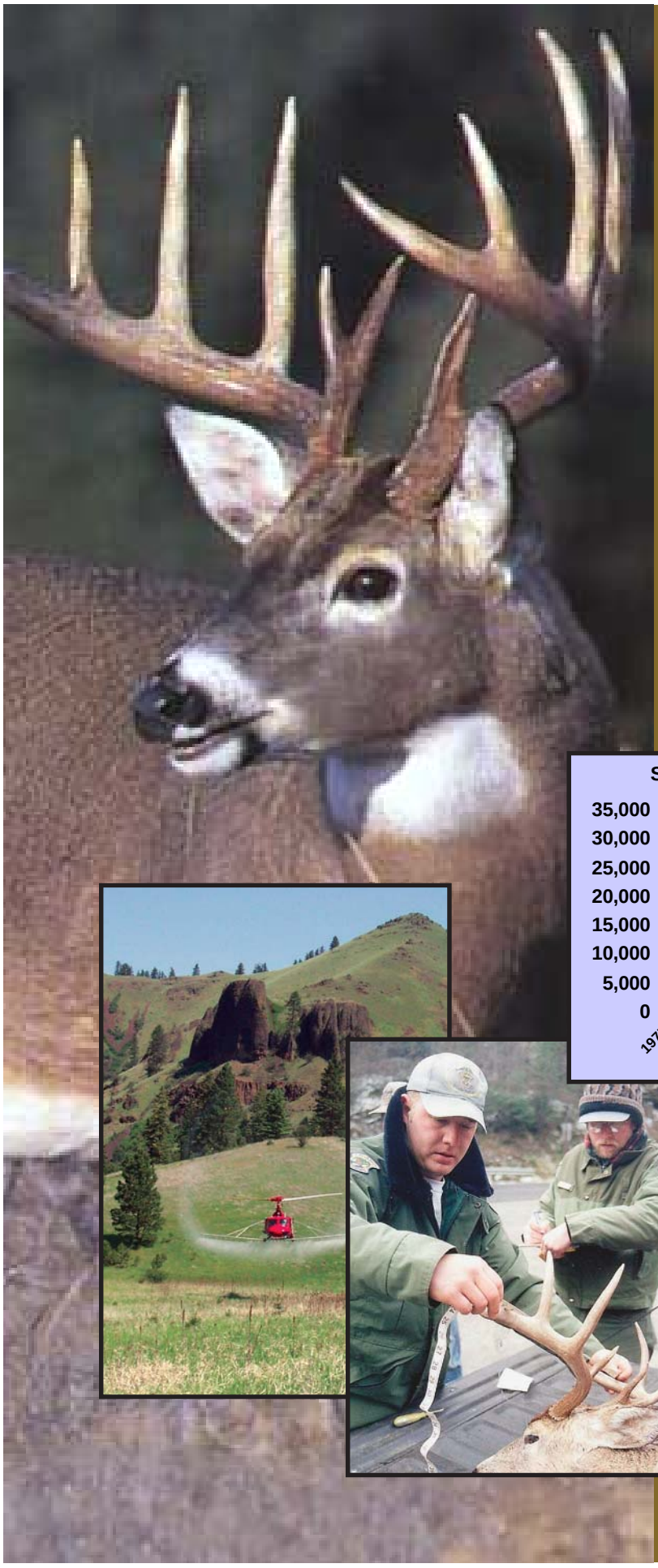
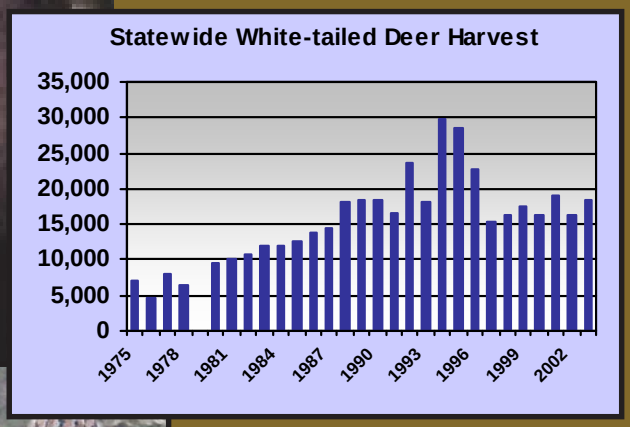


Idaho Department of Fish & Game

White-Tailed Deer Management Plan 2005-2014



600 S. Walnut Street
PO Box 25
Boise, ID 83707
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How To Use This Document

- The 2005-2014 White-tailed Deer Plan is divided into an executive summary, 4 chapters, a literature cited section, and three appendices:

- The EXECUTIVE SUMMARY is a concise summary of the plan: why and how it was developed, management direction, major issues identified, and strategies to address those issues.

- Chapter 1, INTRODUCTION, identifies the Department mission, authority and direction to write a White-tailed Deer Management Plan, the process under which the plan is developed, and how the plan will be used.

- Chapter 2, BACKGROUND, summarizes previous planning efforts, reviews the natural history of white-tailed deer in Idaho, and identifies the current status of white-tailed deer management in the state.

- Chapter 3, STATUS AND MANAGEMENT, summarizes the status and management objectives for white-tailed deer populations in Idaho and discusses management direction and area-specific issues and strategies for each Data Analysis Unit (DAU) - groups of existing game management units with similar management or ecological characteristics.

- Chapter 4, ISSUES AND STRATEGIES, outlines the challenges facing white-tailed deer management in Idaho, identifies strategies to be taken to address the issues, and provides management objectives to help guide management towards achieving management goals.

- The LITERATURE CITED section is the list of papers, articles, and other references made in the plan.

- Appendix I, PUBLIC OPINION SURVEY, contains the questions and responses for the survey conducted prior to this planning effort used to help formulate this plan.

- Appendix II, QUESTIONNAIRES, contains the questions and responses for public input on the draft plan.

- Appendix III, HABITAT MANAGEMENT GUIDELINES, is a list of guidelines to provide land-use managers with an easy reference for understanding and considering the needs of white-tailed deer in project development.

Executive Summary

The Department's strategic plan, The Compass, includes broad goals and objectives for the management of wildlife in Idaho. The White-tailed Deer Plan is a more specific document that provides Commission direction to the Department on how to carry out those goals and objectives for white-tailed deer management. This plan is scheduled for revision in 2015, but will remain in effect until modified.

The Commission requested revision of the existing 1998 white-tailed deer plan in April, 2003. The task of plan revision was assigned to a planning team comprised of wildlife biologists from each region of the state, to identify broad-scale issues and provide perspectives from all parts of the state. An opinion survey was then conducted of northern Idaho hunters, of southern Idaho hunters, and of landowners statewide to gauge satisfaction with the existing program, and to identify issues. Team members investigated white-tailed deer management programs in other states across the country, reviewed white-tailed deer literature, and summarized Idaho data, providing further basis for development of this plan.

Sounding boards, made up of invited white-tailed deer hunters, were used in each region to discuss management issues and alternatives prior to drafting the plan during late summer 2004. Prior to Commission action, the plan was made available on the Department web site from mid-October to mid-November 2004, and presented to the public at open meetings in each region during October and early November. A brief follow-up survey was made of hunters and landowners during October and November 2004 to further gauge public acceptance of management actions proposed in the plan.

The early opinion surveys indicated hunters had high satisfaction levels for the number of days of hunting opportunity offered, the chance to harvest a white-tailed deer, and the opportunity to harvest a mature white-tailed deer buck. Use of the Clearwater Deer Tag to address trespass issues in the Clearwater Region had good acceptance.

A substantial amount of background on white-tailed deer is given in the plan. The major issues identified and addressed include habitat management, white-tailed deer hunting opportunity, management data needs, agricultural and urban damage by deer, hunting access, availability of mature bucks, use of motorized vehicles during hunting, feeding deer, and diseases affecting deer.

Overall management direction is to provide minimums of 35,000 hunters with 207,000 days of recreation and the opportunity to harvest at least 8,700 white-tailed deer bucks, of which at least 15% have 5 points or more on the right antler. Stakeholder opinion surveys will be used to assess the public's support for the white-tailed deer management program. Strategies proposed to address various issues include:

- More focus on management of white-tailed deer habitat including habitat mapping and working with both private and public landowners to improve white-tailed deer habitat.
- Creation of a new White-tailed Deer Tag, good only for that species but in all general hunt units, including those after November 3.
- A new emphasis on using hunter and landowner satisfaction as measures of program success. A standard opinion survey will be conducted prior to 2010 and periodically

thereafter to assess satisfaction of hunters and landowners regarding the state's white-tailed deer management program.

- Improvements to data collection, including more specific white-tailed deer harvest data, and development of non-harvest methods to track whitetail populations.
- More flexibility in addressing deer over-population and damage problems.
- Continued efforts to gain hunting access to private land, and through private land to public land.
- Maintenance of mature bucks in the population, with a minimum of 15% of the buck harvest with 5 or more points on the right antler.
- A commitment to provide a diversity of motorized and non-motorized hunting opportunities for white-tailed deer.
- Discourage supplemental feeding of white-tailed deer, except in accordance with the Department's Emergency Winter Feeding policy.
- Additional monitoring of white-tailed deer for chronic wasting disease and other diseases and parasites.

Chapter 1: Introduction

Intent

The intent of the 2005–2014 White-tailed Deer Plan is to,

- Convey the Department's goals, and strategies employed to achieve those goals.
- Assist the Fish and Game Commission in developing policies, priorities, and direction for white-tailed deer management in Idaho.
- Provide overall direction to Department staff in developing and implementing the state's white-tailed deer management program.
- Assist others in developing plans and implementing programs that support or are compatible with white-tailed deer conservation and management.
- Encourage a cooperative approach to addressing white-tailed deer issues in Idaho.

This plan will remain in effect until revised. The next plan revision is scheduled to be completed by 2015.

Authority

This white-tailed deer plan provides the basis for Idaho's management of white-tailed deer as mandated by the Wildlife Policy of Idaho and Mission Statement for the Department, contained in Idaho Code, Section 36-103, which states,

All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, and managed. It shall only be captured or taken at such times or places, under such conditions, or by such means, or in such a manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing, and trapping.

Consistency with Strategic Planning

This plan is consistent with the Fish and Game Department's Strategic Plan, The Compass, including the following goals:

1. Sustain Idaho's fish and wildlife and the habitats upon which they depend.

Objectives

- ✔ Maintain or improve populations of game species to meet the demand for hunting.
- ✔ Ensure the long-term persistence of native fish, wildlife, and plants.
- ✔ Increase the capacity of habitat to support fish and wildlife.
- ✔ Eliminate the impacts of disease on fish and wildlife populations, livestock, and humans.

2. Meet the demand for fish and wildlife recreation.

Objectives

- ✔ Maintain a diversity of fishing, hunting, and trapping recreation.
- ✔ Sustain fish and wildlife recreation on public lands.
- ✔ Increase the opportunity for wildlife viewing and appreciation.
- ✔ Increase the variety and distribution of access to private land for fish and wildlife recreation.
- ✔ Maintain broad public support for fish and wildlife recreation and management.

3. Improve public understanding of and involvement in fish and wildlife management.

Objectives

- ✔ Improve citizen involvement in the decision-making process.
- ✔ Increase public involvement and understanding of Idaho's fish and wildlife and their management.

How the Plan was Developed

Revision of the 1998 White-tailed Deer Plan was initiated by request of the Idaho Fish and Game Commission in April 2003. During May 2003, a White-tailed Deer Planning Team was formed, including biologists from each region in the state. This group identified issues in the management of white-tailed deer in Idaho, and formed a set of questions to gain the public's perspective on the issues.

During August 2003, a survey was mailed to 2,000 Idaho deer hunters, and 578 rural landowners to assess opinions on a variety of issues associated with white-tailed deer management. Results were analyzed within 3 groups: 1.) hunters from the Panhandle and Clearwater Regions, 2.) hunters from the remaining 5 regions, and 3.) rural landowners from throughout the state. Results of the survey are contained in Appendix I.

In addition to the survey, public opinion on issues for plan development was sought through the Department's web site, at regional scoping meetings December 2003, and big game season-setting meetings during February 2004. Background information was then summarized from the literature and from analysis of Idaho data; and general management options and strategies were developed. During June 2004, management options and strategies were presented to sounding boards made up of white-tailed deer hunters.

The draft plan and questionnaire were completed during early September 2004 and made available on the Department web site beginning mid-September. Public opinion on the draft plan (see Appendix II) was then solicited in three manners: a random survey of 2,100 deer hunters, an open web-site questionnaire, and at public meetings during October and November 2004. The Fish and Game Commission approved this plan on January 20, 2005.

Statewide White-tailed Deer Management Goals

1. White-tailed deer will be managed for their unique characteristics and important significance as one of Idaho's wildlife resources.
2. White-tailed deer populations will be maintained under natural conditions in suitable habitat.
3. White-tailed deer populations will be managed to minimize depredation problems and disease occurrence.
4. IDFG will not actively encourage expansion of white-tailed deer in southern Idaho. However, whitetails will be managed in suitable habitats in southern Idaho where substantial overlap with mule deer does not occur.
5. IDFG will strive to provide a diversity of hunting opportunity including: long seasons, concurrent deer and elk hunting, either-sex hunting, and maintaining a reasonable opportunity for mature bucks.
6. IDFG will explore opportunities to implement management for higher percentages of mature bucks in some areas.
7. IDFG will work with landowners to improve general public hunting access to private land.
8. General white-tailed deer hunting seasons will be managed to minimize hunter crowding and maintain flexibility in available hunting locations.
9. Private landowners and land management agencies will be encouraged to accommodate habitat requirements for white-tailed deer.
10. IDFG will develop a better understanding of white-tailed deer populations throughout Idaho.
11. IDFG will improve monitoring for disease in white-tailed deer.

Chapter 2: Background

Economic Importance

White-tailed deer hunting is economically important in Idaho. Deer hunting, including both white-tailed and mule deer hunting, provided 840,000 hunter days and generated $109 million in retail sales in 2001 (IAFWA 2002). Approximately 2,000 jobs were tied directly to deer hunting in 2001 and resulted in $1.3 million in State Income Tax. Approximately 42% of the state's deer hunter use days were expended in units where the majority of deer harvest was white-tailed deer (IDFG unpubl. data).

Previous Planning

Management of big game animals in Idaho has been guided by various management plans, the first being the Cassia Deer Herd Management Plan developed in the early 1930s. Various other local management plans were developed until the 1980s when the Department adopted the current model for statewide species management plans.

The 1981-1985 white-tailed deer management plan listed 3 primary goals for the management of white-tailed deer in Idaho: 1) increase Idaho's white-tailed deer population, 2) increase harvest, and 3) provide more recreational opportunity. To achieve these goals the plan identified numerous issues including poaching, federal land use practices, competition with livestock or other ungulates, restricted hunting access to private land, depredations, motorized access routes, and development. Additionally, the 1981-1985 plan identified numerous information needs including better harvest information and additional research to better understand whitetail population dynamics. This plan recommended establishing separate seasons for white-tailed deer and establishing white-tailed deer only tags to focus harvest.

The next planning period, 1986-1990, also identified 3 goals: 1) maintain white-tailed deer populations at existing levels in northern Idaho, 2) increase harvest and hunting opportunity in major white-tailed deer units, and 3) increase populations in southern Idaho through trapping and translocating. Population status was estimated and objectives established for each area of the state. In addition to the issues identified in the 1981-1985 plan, the 1986-1990 plan identified road-kills and domestic dogs as important factors. This plan recommended that fire be used to manage habitats and that the eastern portion of the Clearwater Region to be managed for elk as a priority and that southern Idaho deer management be directed toward mule deer.

The 1991-1995 planning process was the first plan to use a random statewide hunter survey to identify preferences to establish management direction. The 1987-1988 Idaho Rifle Deer Hunting Survey (Sanyal et al. 1989) identified 9 general types of deer hunters based on 4 broad categories: nature, hunting skills, harvest, and social reasons. White-tailed deer management units were grouped according to white-tailed deer population and physiographic similarities. The intent of these groupings was to offer hunting opportunities consistent with hunter desires identified in the deer hunter survey. Eight statewide goals were established: 1) maintain populations at current levels in north and north-central Idaho; 2) maintain harvest and increase hunting opportunity in major white-tailed deer units; 3) manage all units north of the

Salmon River (except Unit 14) with hunting season frameworks designed for white-tailed deer; 4) manage all units south of the Salmon River (except Unit 14) with hunting season frameworks designed for mule deer; 5) maintain at least 40% of the buck harvest in the 4+ point category; 6) continue to offer November antlered-only seasons in the Clearwater Region; 7) initiate research in the Clearwater Region to determine seasonal habitat use, survival, and cause-specific mortality; and 8) continue research in the Panhandle Region evaluating cause-specific mortality and winter habitat use. The 1991-1995 plan also evaluated the need for species-specific deer tags to refine management for both species. A significant focus of this plan was to simplify and standardize hunting season frameworks statewide.

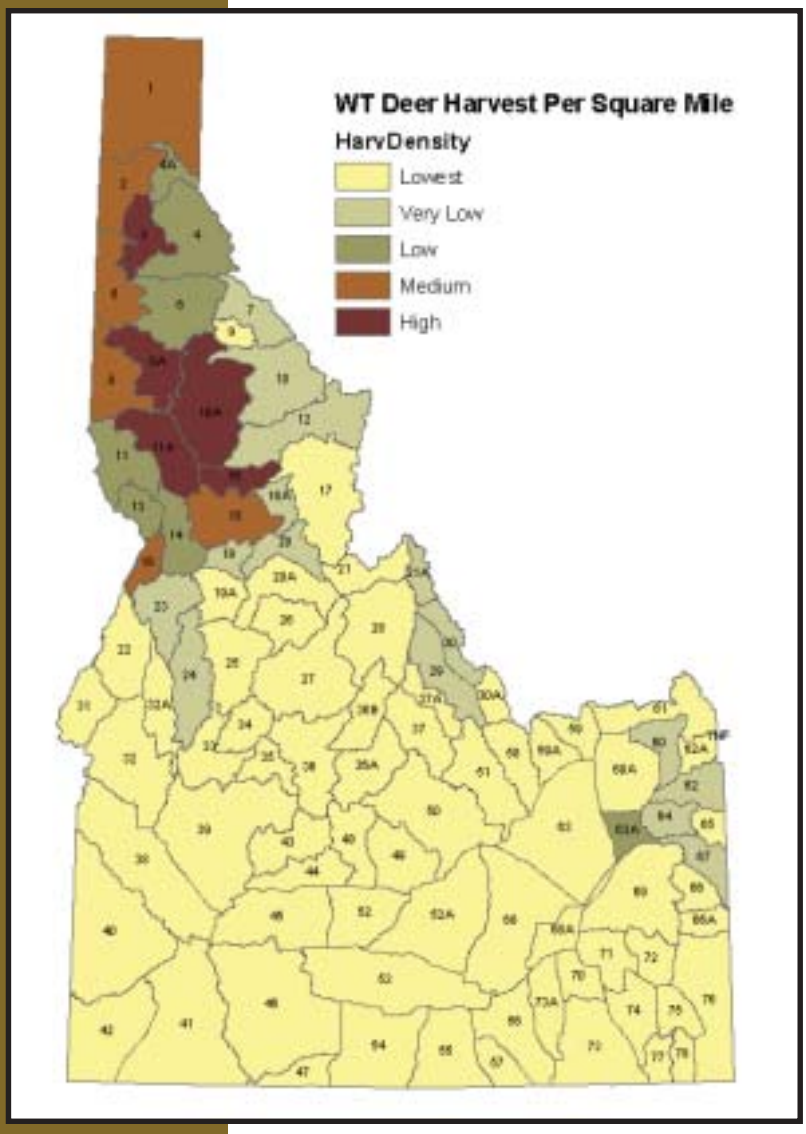


Figure 1. Number of white-tailed deer killed per square mile, 2001 – 2003.

The 1998 plan revision was primarily an effort to document the current status of white-tailed deer in Idaho and establish harvest objectives. GMUs north of the Salmon River were grouped into 7 "DAUs" for data management purposes based on population and physiographic similarities. Objectives were established for %4+ and %5+ point antlers in the harvest. Like previous plans, the 1998 revision also included both white-tailed deer management and mule deer management under a combined management system.

Distribution

White-tailed deer are found from northern South America, northward through Central America, to southern Canada. In the contiguous United States, they are present in all states, although rare in Utah, Nevada, and California. They are generally more abundant in the eastern half of the continent than the west.

The subspecies of white-tailed deer found in Idaho is *Odocoileus virginianus ochrourus*, the northwest white-tailed deer. Within the state, they are abundant north of the Salmon River. The number of white-tailed deer killed per square mile provides a rough map of relative abundance of white-tailed deer in Idaho (Figure 1). The highest densities in the state probably occur in the lower Clearwater and Salmon River drainages. In the southern part of the state, they can be found along major riparian areas, including the Boise, Weiser, Payette, Snake, and Lemhi River drainages.

Historically white-tailed deer may have been more abundant in southern Idaho than they are now. Records from trappers during the mid 1800s suggest whitetails were abundant along most of the river systems in southern Idaho. By the early 1900s, white-tailed deer distribution apparently had been reduced to portions of eastern and northern Idaho (Seton 1909).

Translocations of white-tailed deer to southern Idaho occurred periodically: 1940s in the Payette River drainage, 1950s in the Payette River and Henry's Fork and South

Fork of the Snake River drainages, and 1980s in the Boise, Payette, and Snake River drainages.

Habitat

Winter Ecology and Habitat Use

Winter habitat use of white-tailed deer in Idaho has been described in several studies (Pengelly 1961, Owens 1981, Pauley 1990, Secord 1994). White-tailed deer are very adaptable and some differences in habitat use patterns occurred among these studies. However, synthesis of information from these studies reveals general habitat use patterns that can be used to confirm and extend existing white-tailed deer habitat management guidelines (Jageman 1984). Weather has a strong influence on winter habitat use patterns of white-tailed deer. Mild open winters reduce environmental stress on deer and habitat use may be more variable under these conditions. In the most severe winters availability of key winter range habitat elements becomes critical to white-tailed deer survival.

Habitat selection can generally be related to maintenance of the animal's energy budget (Armleder et al. 1986). All deer at northern latitudes experience winter conditions in which energy losses from movement, cold temperatures, and wind chill exceed energy gains from food intake. When winter range quality is high or winter conditions are mild energy losses only moderately exceed gains and most deer survive the winter. However, when winter ranges are in poor condition or winter conditions are severe, energy losses greatly exceed energy gains and can lead to starvation, increased vulnerability to predation, and substantial winter loss from the deer population. Deer use both topographic and vegetative habitat features to minimize energy losses and maximize energy gains during winter by selecting areas with shallow snow, adequate food, and sufficient shelter.

White-tailed deer movement from summer to winter habitat may involve actual migration from geographically distinct seasonal home ranges or shifts in use patterns within overlapping seasonal home ranges (Pauley 1990, Secord 1994). Snow is the most influential environmental factor during winter and has a significant effect on the energy cost of locomotion. Energy cost of locomotion increases exponentially with increasing snow depth (Mattfeld 1974, Parker et al. 1984). Compared to snow-free conditions, snow accumulations of as little as 5 cm (2 inches) can increase energy expenditures by 10%. When snow accumulation reaches 50 cm (20 inches) energy cost of locomotion may increase to 5 times that of snow-free condition expenditures.

In winter deer move to lower elevations, usually less than 3,000 feet. Low elevation areas generally experience less snow accumulation and milder temperatures than high elevation areas and thus help deer minimize thermoregulation and movement energy costs. Deer select southeast to southwest or west aspects in winter. These aspects receive greater solar exposure than other aspects. This allows deer to minimize energy loss from heat loss. Increased sunshine and associated warmer temperatures also leads to shallower snow depths, consequently reducing energy expenditures for both locomotion and thermoregulation. Further, snow depths are less on slopes than they are on level areas because the same amount of snow is distributed over a larger area on slopes relative to flat areas. When slopes become too steep, energy gains from reduced snow depths are offset by the increase in energy expenditures to climb slopes; deer generally select slopes <50% (Parker et al. 1984, Pauley 1990).

Vegetative characteristics of habitat provide deer 2 broad categories of resources: forage and shelter. Site conditions

on southerly aspects with moderate slopes as described above often result in forest stands that are more open than other sites. This allows greater sunlight to reach the forest floor and greater development of forage species in the shrub layer. In winter whitetails subsist almost entirely on browse. White-tailed deer will consume a wide variety of deciduous browse species but some of the more important species include red osier dogwood (*Cornus stolonifera*), redstem ceanothus (*Ceanothus sanguineus*), serviceberry (*Amelanchier alnifolia*), maple (*Acer glabrum*), pachistima (*Pachistima myrsinites*), willow (*Salix spp.*), and chokecherry (*Prunus virginiana*) (Pengelly 1961). As winter progresses deer also make increasing use of coniferous browse, principally Douglas-fir (*Pseudotsuga menziesii*) and western redcedar (*Thuja plicata*) (Jageman 1984). Pauley (1990) found white-tailed deer making extensive use of these areas in both early and late winter.

Conversely, these open stands have lower snow interception properties than dense stands on more level or more northerly aspects. During mid-winter when snow cover is deepest deer often move to dense mature coniferous forest stands with canopy closure >70% even though the shrub layer is depauperate and forage availability is low on these sites (Peek 1984, Pauley 1990, Secord 1994). White-tailed deer winter habitat selection that optimizes security and thermal cover at the expense of forage availability is well documented (Ozaga 1968, Wetzel et al. 1975, Moen 1976, Boer 1978, Owens 1981). Microclimate studies of closed canopy coniferous stands have demonstrated that these stands have the narrowest thermal ranges, least wind flow, less radiant and convective heat loss, and most favorable snow conditions (Verme 1965; Ozaga 1968; Moen 1968, 1976). Availability of such closed forest stands within white-tailed deer winter ranges is an important winter habitat feature. Ideal winter range will be characterized by a high degree of horizontal diversity with both shrub and open forest habitats with high forage densities in close proximity to dense, closed forest stands with superior shelter qualities. This habitat structure allows deer to minimize energy expenditures when moving between these areas to meet habitat resource needs in the face of changing winter snow and weather conditions.

Summer Ecology and Habitat Use

In contrast to winter habitat use, summer habitat use by white-tailed deer has not been as well studied (Pauley 1990). White-tailed deer are highly adaptable and, in the absence of the stress of deep snow and cold temperature, they can successfully exploit a wide variety of habitat conditions including forest, shrub, agricultural, riparian, and suburban settings. Because of this adaptability, characterizing habitat use during summer is more difficult.

However, habitat selection can again be related to the annual energy budget of white-tailed deer and some generalizations are possible. Whereas deer energy losses exceed energy gains through winter, summer energy gains must exceed energy losses so that deer can recover lost condition and replenish energy reserves for the upcoming winter. Although we typically think of winter range quality as the critical population "bottleneck" because this is when we observe mortality, some have suggested adequate accumulation of energy reserves during summer is at least as critical to winter survival because condition of deer entering winter strongly influences their ability to survive (Ozoga and Verme 1970). Summer range quality has also been linked to productivity, recruitment, and growth rate in deer (Cheatum and Morton 1946, Cheatum and Severinghaus 1950, Julander et al. 1961, and Verme 1963). Winter habitat selection emphasizes minimizing energy losses whereas summer habitat selection emphasizes maximizing energy gains.

At winter's end deer energy reserves are at their annual low point and fetal devel-

opment in the final trimester is placing high nutritional demands on does (Verme 1969, Moen 1973). Consequently, deer select spring/summer/fall habitats with the most nutritious forages available. Open canopy, low elevation, southerly exposed habitats are the first to be snow free and support new nutritious green forage in the spring and whitetails demonstrate a decided shift from forested to open habitats in the spring (Garrott et al. 1987, Pauley 1990, Secord 1994). White-tailed deer use of grass, forbs, and agricultural crop forages is higher in spring and early summer than at any other time of year (Peek 1984). Low-elevation burned areas, riparian habitats, clear cuts, warm well-drained slopes with minimal canopy closure, and agricultural areas can all fulfill this habitat requirement. Deer often select forest ecotones adjacent to foraging areas and may limit their use to edges of these openings while avoiding interiors of large openings (Gladfelter 1966, Telfer 1974, Keay and Peek 1980). Several studies have suggested forest cutting units and prescribed burns should be restricted to not more than 20 acres in size to provide maximum benefits to white-tailed deer (Peek 1984).

As summer progresses deer initially follow spring green-up to higher elevations, make extensive use of clearcuts, burns, and open forest areas, but eventually shift to more mesic northerly aspects and forested habitats in late summer and fall. Whitetail use of older timber stands and mesic sites, and diminished use of clearcuts and open areas in late summer and fall is related to plant phenology. Dry, hot weather during July and August dries deciduous species in open areas. Freezing temperatures in October and November further diminish forage in open habitats whereas dense forest canopies maintain moist conditions and moderate temperatures resulting in greater availability nutritious forage in these habitats (Pauley 1990). This late summer/fall shift to northerly aspects and mesic sites has been described in several studies (Shaw 1962, Owens 1981, Pauley 1990). The shift to denser forest stands may also be related to hot weather. Canopy cover reflects solar radiation and provides cooler, more comfortable temperatures than open areas in summer (Moen 1968, 1976). However, white-tailed deer are also frequently observed bedding in open areas during summer (Pauley 1990).

Security Habitat

Habitat used by deer to avoid detection and minimize disturbance by man, his machines, or by other animals is called hiding or security cover. Security cover cuts energy expenditures by reducing both the need to flee and distance to flee. This cover component may also prevent direct mortality from predation or hunting by allowing deer to avoid detection. Security cover is typically provided by screening vegetation, screening topography, and distance from potential sources of disturbance. Hiding cover is considered to be vegetation capable of hiding 90% of a standing adult deer from view of a human at a distance of 200 feet during all seasons in which deer normally use the area (Jageman 1984). During fall hunting seasons, deer may use the heaviest cover available to avoid detection (Sparrowe and Springer 1970). In contrast to elk, effects of secondary roads on white-tailed deer are not well documented. Because of their more secretive nature and smaller home ranges, white-tailed deer may be less subject to functional loss of habitat due to behavioral displacement than elk (Lyon 1979), especially where cover is dense. In contrast, road density, which was an important influence on elk vulnerability to hunting season mortality (Leptich and Zager 1991, Unsworth et al. 1993, Hayes et al. 2002), likely increases white-tailed deer vulnerability to hunting season mortality by affecting hunter distribution and deer-hunter encounter rates, and eliminating refugia. Additional research is needed to illuminate importance of secondary roads on deer habitat use and survival.

Arid Southern Idaho Habitats

White-tailed deer habitat use in southern Idaho has not been well studied. Structurally, southern Idaho white-tailed deer habitat most closely resembles habitats of the

central and southern plains regions of the United States. There, white-tailed deer habitats are characterized by low precipitation, extreme seasonal temperature fluctuations, low to moderate topographical relief, plant communities dominated by herbaceous vegetation and low shrubs with tall woody vegetation largely restricted to riparian corridors, and large areas of native plant communities converted to agricultural crops.

Tall woody vegetation associated with stream courses and river corridors are the primary white-tailed deer habitat in this environmental setting. Quantity, quality, and connectivity of these habitats normally are limiting factors for white-tailed deer abundance and distribution. Deer will use large shelterbelts or other tree plantings to some extent depending on distance from core riparian habitat areas. Although like northern Idaho deer they are predominantly browsers throughout the year, some evidence indicates that, where white-tailed deer in these environments live in close proximity to agricultural crops, farm crops can constitute up to 50% of the diet in some seasons (Hill and Harris 1943, Menzel 1984). White-tailed deer are probably more vulnerable to hunter harvest in southern Idaho than in other areas of the state where cover is denser and more widely distributed.

Additional research on white-tailed deer habitat needs in southern Idaho are needed to gain a better understanding of whitetail ecology in this environmental setting and provide a scientific basis for habitat management recommendations. Based on available information, destruction and fragmentation of riparian habitats and competition with livestock within the riparian corridor are probably the most pressing habitat issues for managers of southern Idaho white-tailed deer habitat.

Abundance

Unregulated harvest by miners, loggers, and other settlers during the late 1800s and early 1900s apparently resulted in very low numbers of ungulates in Idaho, including white-tailed deer. Conservative hunting seasons and high-quality habitat produced by large fires and heavy logging in the first third of the 20th century resulted in increasing white-tailed deer populations (Pengelly 1961).

Deer populations continued to increase until the late 1940s, when 2 consecutive severe winters reduced deer numbers throughout the state. Conservative seasons, high quality habitat, a pronounced predator control program combined to allow deer herds to recover quickly. Whitetail numbers appear to have reached a peak in the 1960s, when game managers became concerned about over-browsing of winter ranges and established long hunting seasons in order to reduce deer numbers and improve winter range quality.

White-tailed deer populations declined during the 1970s, likely as a consequence of heavy harvest and declining quality of aging stands of habitat. Populations increased again during the 1980s and early 1990s in north-central and northern Idaho. The winter of 1996/97 was one of the most severe on record and white-tailed deer in portions of the Panhandle and Clearwater regions declined substantially. White-tailed deer populations have apparently increased moderately since the 1996-1997 winter. Roughly 200,000 white-tailed deer currently exist in Idaho, and populations may be approaching levels of the 1950s and 1960s in some areas.

Population Dynamics

Reproduction

The peak of breeding of whitetails in Idaho is middle to late November, with fawns born from late May through late June. Pregnancy and fetal rates of adult does are similar to those found elsewhere, but fawn pregnancy rates in Idaho are low. Generally, reproductive rates for white-tailed deer in Idaho are not dramatically different from those of mule deer.

Survival

The survival of fawns is a primary influence on population size of whitetails the

following year. Survival of fawns in Idaho is influenced heavily by energetic demands from the prior winter on the dam, by summer nutrition, by predation, and by energetic demands of their first winter. Late summer composition surveys averaged 58 fawns per 100 does during September 2001 - 2004. By comparison, fall fawn ratios in mid-western states often exceed 100 fawns per 100 does.

In contrast to populations over much of the United States, natural causes, not hunting, are the primary sources of mortality of white-tailed deer in Idaho. Even with long hunting seasons, annual survival of bucks is relatively high, allowing substantial numbers to reach older age classes, and producing high buck:doe ratios.

Deep winter snows are a major influence on population dynamics of white-tailed deer in the northernmost portion of their distribution, including most of Idaho. During the severe 1996-1997 winter, Sime (pers. commun. 1997) estimated 70% of the white-tailed deer died on her study area in northwestern Montana, including over 90% of fawns. In northern Idaho, natural mortality, including both predation and winterkill, averaged 10% annually for does, and 23% for bucks from 1986 through 1995 (IDFG unpubl. data).

Predation is an important influence on population dynamics of white-tailed deer in Idaho. The most common predators on white-tailed deer include coyotes, bobcats, black bears, mountain lions, domestic dogs, and humans. These predators also prey upon other ungulates such as mule deer, elk, antelope, bighorn sheep, and mountain goats, as well as rabbits, hares, mice, etc.

Coyotes are the most abundant predator on deer in Idaho. In most areas coyotes feed on a wide variety of items. Deer are a part of their diet in at least part of the year. Seasons of greatest concern are during spring fawning and winter. Coyotes have been noted to be efficient predators of neonate fawns where habitat is poor. During winter, coyotes may take a number of fawns due to snow conditions and poor animal condition. Studies have shown that coyotes can cause up to 80 percent of fawn mortality. Because fawns often die of many causes, coyote predation on fawns could be largely compensatory. Most fawns taken by coyotes in winter are in very poor physical condition and likely to die of malnutrition.

Mountain lions are likely the second most abundant predator of deer in Idaho. Their primary prey are deer, elk, and smaller mammals such as lagomorphs (rabbits). Mountain lions feed on deer year round, being most efficient during winter months in deep snow conditions. At the present time harvest data indicate mountain lion populations have decreased in Idaho since the mid-1990s. Mountain lion predation on white-tailed deer changes continuously, and remains an important influence on white-tailed deer numbers statewide.

Black bears have a very diverse diet. Little is known about black bear predation on white-tailed deer in Idaho. Black bears have been shown to be significant predators of elk calves in spring. Predation on deer by black bears is probably highest during a fawn's first 4 weeks, during late spring/early summer. Bears are most effective when habitat is patchy and insufficient to hide fawns.

Wolves are present, but not abundant across white-tailed deer range in Idaho. Elk are the primary prey of wolves in Idaho, but, as evidenced by the reliance of wolves on white-tailed deer in the Midwest, wolves can subsist primarily on white-tailed deer. Currently, the impact of wolves on white-tailed deer in Idaho is likely negligible. As wolf populations continue to increase, their impact on white-tailed deer and other ungulate populations will increase as well.

White-tailed deer populations in Idaho cannot be expected to exhibit the same high

growth rates observed elsewhere in their range, where predation is a minor influence. Although general predator-prey relationships are evident, no single predator species can be expected to track white-tailed deer populations closely. The influence of predation on white-tailed deer is complex, including effects of one predator species on other predators, effects from the presence of alternate prey species, and effects of changing ungulate populations on forage. It is this entire mix that determines the degree to which predators limit white-tailed deer.

White-tailed deer have a relatively high intrinsic rate of increase. When deer populations are at, or near, carrying capacity, predation is most likely compensatory and reducing predation will not increase deer numbers. In this case another agent such as winter mortality or disease will replace predation mortality if predation is reduced. When deer populations are below carrying capacity predator mortality is more likely to be additive. It is often difficult to predict or even know what the current carrying capacity of a deer range is due to ever-changing habitat factors.

Disease

Disease and parasite issues in white-tailed deer are multifaceted and can be very complex. In general, white-tailed deer are the most studied free-roaming ruminant in the United States. Extensive disease investigations and documentation have been done in most parts of the country where white-tailed deer reside.

Historically, the Idaho Department of Fish and Game has not actively conducted targeted surveillance for disease or parasites in white-tailed deer. Disease information is therefore limited and obtained opportunistically. Foreyt and Compton (1991) found no evidence of meningeal worm (*Parelaphostrongylus tenuis*, also known as "brainworm") in northern Idaho. A small number of samples from Idaho were evaluated for bluetongue virus with positive results (MacLachlan et al. 1992). Fluoride toxicosis may be a problem with mineral and hot springs in ungulates in Idaho as it is in Yellowstone National Park (Shupe et al. 1984).

At this time, the primary disease of concern in white-tailed deer in Idaho is epizootic hemorrhagic disease (EHD). EHD is present at a low level within some white-tailed deer populations in Idaho. Serological data from mule deer and elk indicated EHD exposure in 10-20% of animals tested. White-tailed deer, as a primary host of the virus, are likely exposed at a higher rate. Several small and 1 large outbreak of EHD have been documented in white-tailed deer in the Clearwater Region of Idaho. The most recent and largest outbreak (5,000-10,000 deer died) occurred in late summer and fall of 2003. This outbreak centered in the Kamiah area, but occurred in deer ranging from Kendrick south to Riggins and from Lapwai east to Clearwater.

Chronic Wasting Disease (CWD), although not identified in Idaho, may pose problems in the future and warrants continued surveillance. Meningeal worm is not known to be present in Idaho but a large scale survey for this parasite is warranted to better define the current status of this parasite in the state. Other disease or parasite issues may be present or of concern and should be addressed when they become apparent or problematic.

Niche Overlap with Other Ungulates

Whitetails are sympatric in various parts of the state with elk, moose, mule deer, bighorn sheep, mountain goat, pronghorn, and domestic livestock. The degree of competitive influences among these species is unknown, but it is likely that either direct competition for resources, or indirect exclusionary processes occur under some circumstances.

Baty (1995), working on winter range in northwestern Montana, observed spatial separation between white-tailed deer and elk. White-tailed deer used small herd home ranges with abundant over story canopy, whereas elk used large areas with sparse overhead canopy. Baty also found little

overlap in food habits, with elk selecting largely for grasses, and deer selecting for browse. Food habits were similar between white-tailed and mule deer, but there was also a significant difference in preferred habitat, with mule deer occupying drier and more open sites than did whitetails. In Idaho, sites preferred by mule deer are often at higher elevations than those preferred by whitetails during all seasons.

Moose and white-tailed deer distribution overlap substantially in North America. In western United States and Canada, there appears to be enough niche separation that neither species detrimentally affects populations of the other to any large degree. Moose appear to select habitat largely on the basis of forage quality and abundance, while cover is more of a primary factor for whitetails. In eastern United States and Canada, white-tailed deer tend to replace moose not due to competition, but due to the effects of meningeal worm.

Wild sheep and goats select strongly for steep, rocky, open terrain not preferred by whitetails. Pronghorn select for xeric habitat also not preferred by whitetails. Competition for space or forage is considered minimal between white-tailed deer and these 3 ungulates in Idaho.

It is sometimes hypothesized that interbreeding between white-tailed deer bucks and mule deer does could contribute to declines in mule deer populations. Examination of deer at check stations in Idaho has revealed very few obvious hybrid deer, but genetic examination would be required to test the validity of this hypothesis.

Livestock and white-tailed deer use sympatric ranges in many portions of Idaho. Domestic grazing, depending upon the situation, can either enhance or degrade white-tailed deer habitat (Matschke et al. 1984). Extensive grazing of riparian areas generally reduces available habitat for white-tailed deer (Dusek et al. 1989).

Population Regulation

White-tailed deer populations are dependent on habitat quality and quantity. Simply stated, when high quality habitat is abundant, reproductive rates are high, survival is high, and deer numbers will increase. As the number of deer increases, there is less and less forage for each individual, until eventually, reproduction slows, and survival decreases, and the herd decreases. After the population declines, there is again adequate nutrition for remaining animals, and reproduction and survival increase once again. One role of hunting in this model is to keep deer numbers sufficiently low such that reproduction and survival is high, resulting in a more stable population and a harvestable surplus of deer each year.

The forage competition model above provides a useful overall framework for a general understanding of how ungulates interact with the vegetative component of their environment. However, other factors, both density-independent and density-dependent, may influence a population more than forage competition. The 2 most prominent factors affecting white-tailed deer in Idaho are winter weather and predation.

Various populations of white-tailed deer are regulated by different combinations of factors. A single population may be regulated primarily by forage availability one year, a combination of forage availability and winter severity the next year, and forage and predation the third. The key to managing these populations is in understanding the importance of these influences, our ability to modify these influences, and our ability to adapt to those influences.

Hunting

Human beings have hunted white-tailed deer for at least 15,000 years in North America. Historical information on regulated harvest is available only for the past 140 years. In 1863 Idaho Territory was organized, including not only all of present-day Idaho, but all of Montana and much of Wyoming. The following year, the first known restrictions were placed on deer hunting, allowing no hunting between February 1 and June 30. The first bag limit of 4 deer was established in 1899, 9 years after Idaho's statehood. Hunting licenses were first required in 1903. Closure of hunting seasons by county occurred periodically during the early 1900s and numerous legislatively created "game preserves" were established to increase populations of game animals throughout the state. The first Game Management Unit (GMU) was established in 1942 to help regulate hunting, and by 1959 the entire state had been partitioned into the present day framework.

During the 1950s and 1960s wildlife managers were primarily concerned about the effects of burgeoning ungulate populations of the state, and their subsequent overbrowsing of winter ranges. Liberal harvest seasons were instituted in many parts of Idaho to reduce ungulate populations to maintain winter habitat in good condition. In response to declining mule deer numbers, more conservative deer hunting seasons were established in the mid-1970s. However, relatively long seasons were maintained where white-tailed deer dominated the harvest. The first species-specific deer season was established in 1974 in the Clearwater Region, when GMU 11 was closed to mule deer hunting, but remained open for general white-tailed deer hunting.

During the 1980s, deer hunting seasons were liberalized to take advantage of increasing populations and to help resolve increasing depredation concerns. In 1985, late season white-tailed deer opportunity, already available in 7 Clearwater and 9 Panhandle units, was expanded to include 7 additional Clearwater units.

By the mid-1990s, drought had forced short, buck-only seasons for mule deer in much of southern Idaho. This contrasted with long either-sex seasons in northern Idaho, leading to Clearwater Region concerns for trespass and high buck mortality. In 1998 the Idaho Fish & Game Commission established the Clearwater Deer Tag to address these local concerns caused by displacement of hunters from southern Idaho.

Harvest Monitoring

Deer harvest data (both species combined) in Idaho has been collected since the early 1930s. Various techniques have been used to estimate harvest including check stations, tag returns, voluntary hunter reports, random telephone surveys, and, currently, a mandatory harvest report. Although not used to estimate harvest, check stations are operated to provide immediate feedback to wildlife managers about the hunting season, serve as an enforcement tool, provide an opportunity for Department personnel and sportsmen to interact, and allow for collection of biological data. Estimates derived from the random telephone survey (1982-1998) and mandatory harvest reports (1998-present) have produced the most reliable results. Information collected includes total hunter numbers, success, species, sex, antler points, GMU, weapon type, and days of effort.

Trends in harvest roughly correspond with trends in deer populations. The highest recorded harvest occurred in 1989 with an estimated 95,200 deer harvested of which 18,300 were white-tailed deer. Peak white-tailed deer harvest of 29,800 occurred in 1994.

Presumably, total statewide deer harvest during the mid to late 1900s was

dominated by mule deer. In 1975 the Department began differentiating mule deer and white-tailed deer harvest. In 1994 white-tailed deer harvest exceeded mule deer harvest, probably for the first time in recent history. From 1994 through 2003, white-tailed deer have averaged 43% of the total statewide deer harvest.

Estimates of total number of deer hunters (both species) since 1982 indicate no general trend, varying between 107,300 and 154,500 hunters annually. Shifts in distribution of hunters across the state have occurred during the past decade, primarily in response to reduced mule deer hunting opportunity in southern Idaho. Particularly during the mid-1990s, deer hunter numbers increased in the Clearwater and Panhandle regions while numbers declined in southern Idaho, following significant mule deer mortality during the winter of 1992/93. The tag system prior to this plan did not allow the Department to distinguish between mule deer or white-tailed deer hunters, allowing only an estimate of all "deer" hunters.

Population Monitoring

Numerous techniques have been used throughout white-tailed deer range to estimate population size, including mark/recapture, change-in-ratio, change-in-hunter-success, catch-per-unit-effort, population reconstruction, and aerial surveys (Lancia et al. 1996).

In much of North America, white-tailed deer are managed using harvest-based, deterministic modeling. This approach functions best when recruitment rates are relatively constant, where hunting is the overwhelming source of mortality, and where harvest information is detailed, usually through some form of mandatory registration combined with extensive check stations or locker checks of deer ages. In some areas, winter severity influences are modeled to correct for variation in recruitment and survival, and limited aerial surveys, road-kill indices, success rates, and other measures are used to adjust the final population estimate. Infrequently used techniques include aerial and spotlight surveys, capture/mark/recapture techniques, pellet-count indices, and catch-per-effort techniques.

Neither accounting-type models nor population reconstructions are appropriate for use in managing white-tailed deer in Idaho due to prominent influences of winter severity and predation, the relatively minor role of hunting in overall mortality, and lack of detailed age information of harvested animals.

Wildlife managers in Idaho have primarily used total harvest and changes in distribution to monitor population trends. Percentage of antlers with 4 or more points on the right side has been used in Idaho as an index to male survival for monitoring total survival. Recent analysis indicates that the percentage of antlered bucks in the harvest with at least 4 points on 1 antler is relatively insensitive to changes in harvest or hunting season structure, a consequence of the relatively narrow range of hunting mortality rates observed in Idaho whitetails (IDFG unpubl. data). Williamson (2003) recommended against use of age ratios from harvested animals in monitoring white-tailed deer populations. By extension, management based simply on antler point criteria may be weak as well.

Hunter success has also been used to infer trend in Idaho, but this index is of limited usefulness in those units with both white-tailed and mule deer because biologists cannot distinguish which species the hunters are pursuing. Changes in hunting regulations further hinder this technique in the analysis and long-term monitoring of white-tailed deer populations in the state. Helicopter surveys of winter range are periodically being used in a few locations to monitor population trends. In Idaho's Panhandle Region, spotlight surveys are used to evaluate survival of fawns through summer.

It can be reasonably argued that white-tailed deer management in Idaho does not require close monitoring because population change is not integrally tied to changes in hunting regulations. However, a solid monitoring program is needed to give managers the ability to understand when whitetail

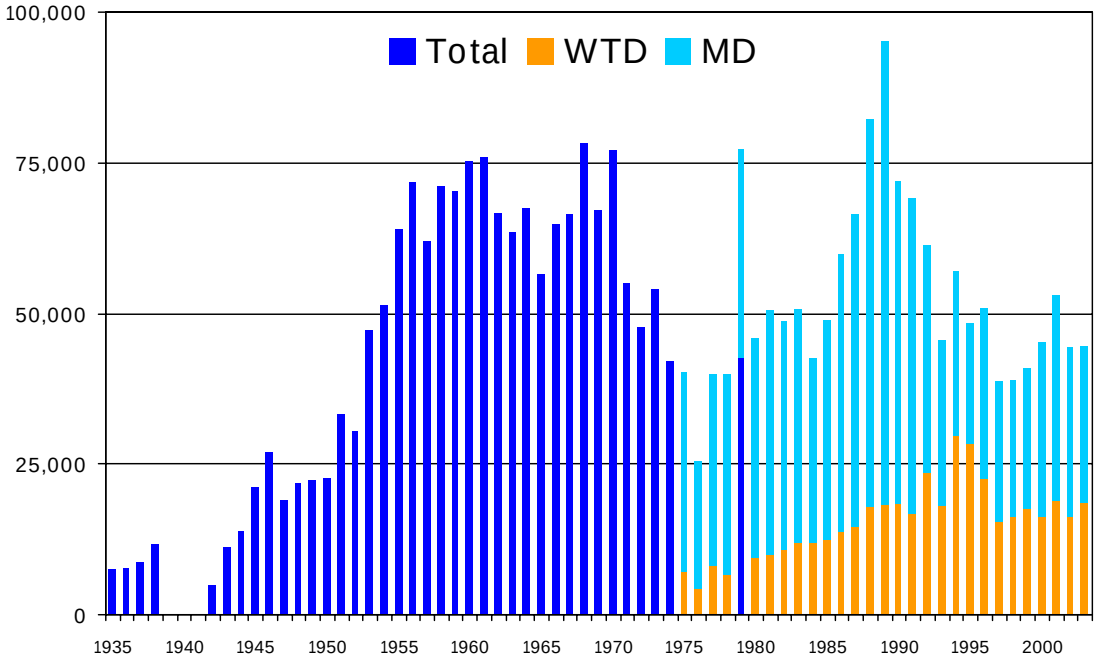
populations have changed, to adapt management to those changes, and to explain circumstances to the public.

White-tailed Deer Research

Mule deer and elk have historically received research emphasis in Idaho. Research on whitetails has occurred sporadically and been primarily focused on habitat use, food habits, and migration patterns (Thilenius 1960, Pengelly 1961, Thilenius and Hungerford 1967, Will 1972, Keay and Peek 1980, Owens 1981, Pauley 1990, Baumeister 1993, Secord et al. 1993). Additional work has been completed to evaluate survival and cause-specific mortality (IDFG unpubl. data). Studies have also been conducted to determine behavior patterns of white-tailed deer in Idaho (see Gladfelter 1966, Howard 1969).

Although some research has been conducted, the need still exists for basic population ecology data for white-tailed deer in Idaho. Habitat use/relationship, survival, mortality, and productivity information do not exist for most of Idaho's whitetail populations. Additionally, managers need a cost-effective, reliable method to either enumerate or index populations. The EHD outbreak in 2003 adds another series of questions about long-term ramifications of the disease on population dynamics.

Statewide Estimate Deer Harvest, 1935-2003



Chapter 3: Status and Management

Deer hunter numbers (including both species) average a sparse 1.5 per square mile, although individual GMUs can range to 8 hunters per square mile. Currently, about 17,000 white-tailed deer are harvested annually in Idaho, almost entirely in the northern third of the state. Bucks comprise 64% of the harvest with mature bucks being common. Currently, 23% of the antlered harvest has at least 5 antler points on the right antler,

For data analysis purposes, Idaho was grouped into 7 Data Analysis Units based on population characteristics, ecological issues, and local management considerations. Overall, Idaho can be generalized as predominantly public-owned, with a wide range of terrain, land uses, habitat types, and road densities (see Table 1; Figures 2, 3, 4, and 5).

Most white-tailed deer populations are found in DAUs 1-3, located in the northern part of the state. DAUs 4-7 encompass habitat with sparse white-tailed deer populations.

Table 1. Characteristics of Data Analysis Units (DAUs), 2004.

	Data Analysis Unit						
	1	2	3	4	5	6	7
Private Ownership	36%	17%	74%	<1%	26%	25%	34%
Major Land Use	Forest	Forest	Agric.	Forest	Range	Forest	Range
Potential Forest	94%	93%	49%	96%	20%	61%	4%
Roadless	4%	24%	3%	86%	35%	31%	12%
Hunter Density	3.2	1.5	3.1	0.6	1.3	2.2	0.8
Harvest Density	0.8	0.4	1.3	0.0	0.0	0.0	0.0
WT Success Rate	26%	23%	43%	5%	2%	1%	1%
Days per harvested white-tailed deer	23	20	13	123	219	555	748
Antlered: % with 5+ antler points	24%	17%	25%	21%	19%	5%	14%

Statewide Management Direction

Based on the opinion survey (see Appendix I), hunter satisfaction is high for the number of days of white-tailed deer hunting opportunity offered under existing hunting seasons, the opportunity to harvest a white-tailed deer, and the opportunity to harvest a mature white-tailed deer buck. The intent of this plan is to continue management that results in high hunter satisfaction. Another survey will be conducted prior to 2010 to reassess hunter satisfaction. Management direction is to provide minimums of 35,000 hunters with 207,000 days of recreation and the opportunity to harvest at least 8,700 white-tailed deer bucks, of which at least 15% have 5 or more points on either antler.

Objectives and Status

Criterion	Minimum	3-Year Average
Hunters	35,000	43,944
Hunter-days of recreation	207,000	259,052
Buck harvest	8,700	10,900
% 5+ points	15%	23%

Figure 2. Topography of white-tailed deer Data Analysis Units in Idaho.

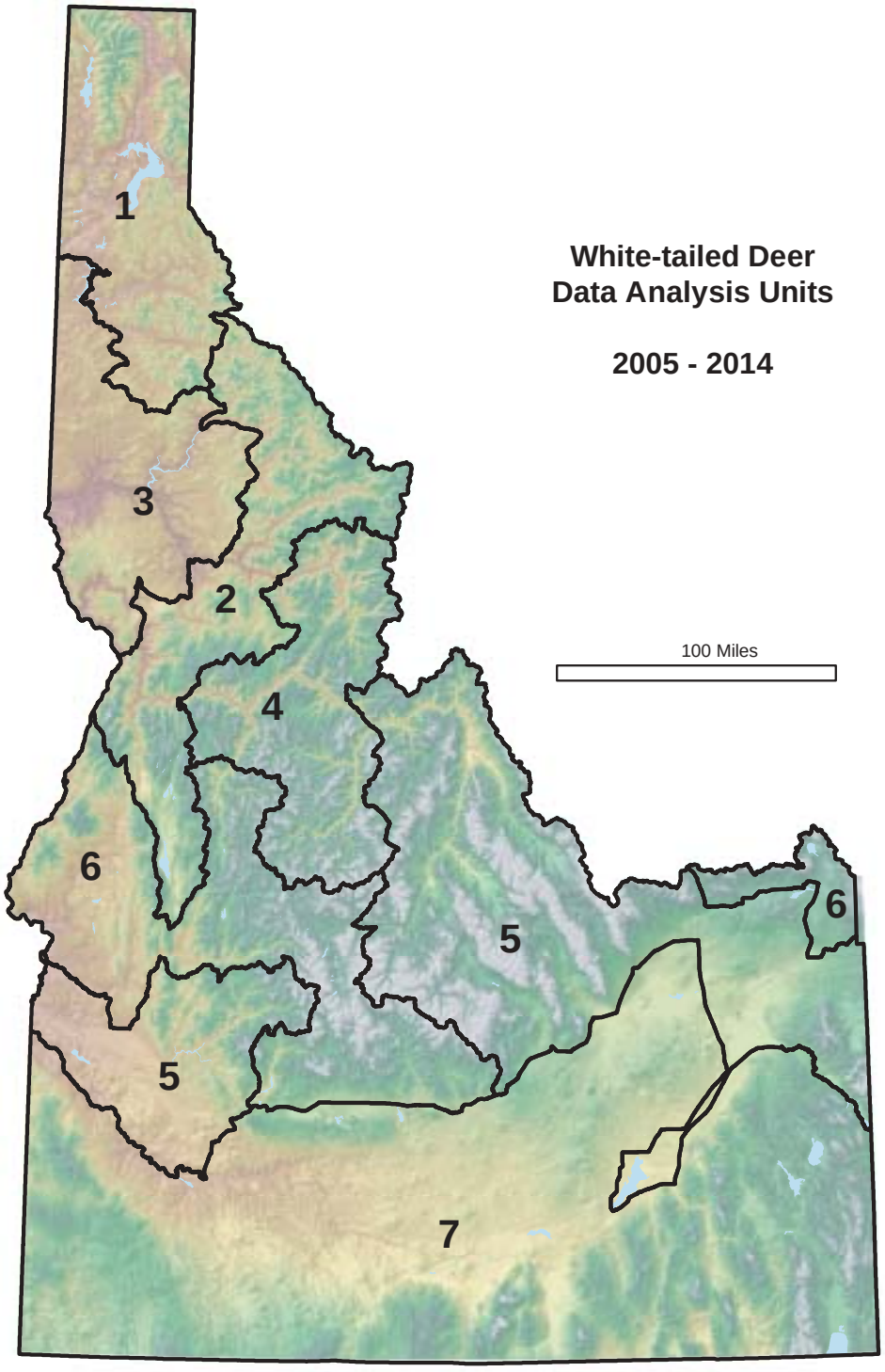


Figure 3. Land ownership patterns of white-tailed deer DAUs in Idaho.

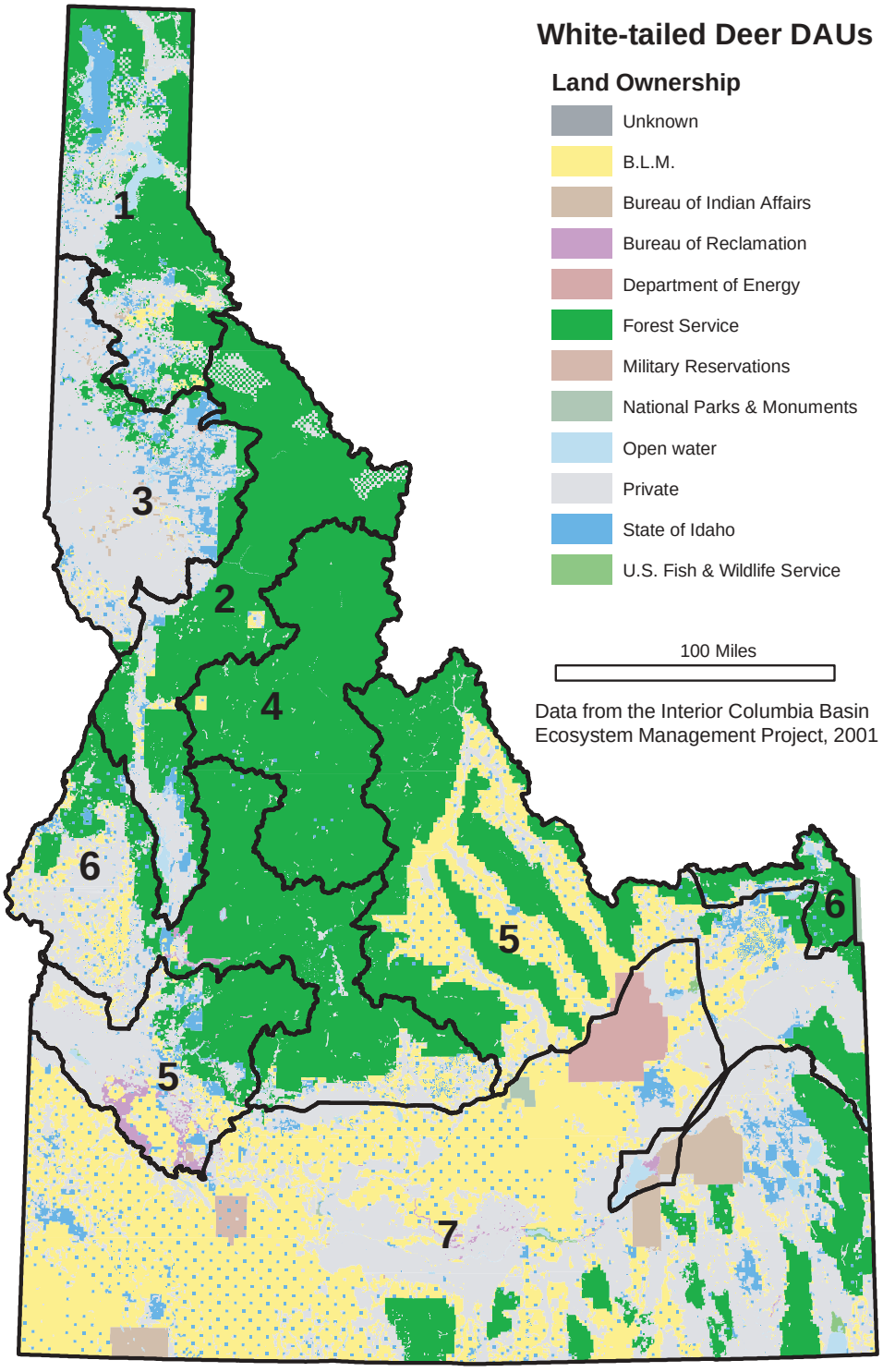


Figure 4. Land use patterns of white-tailed deer DAUs in Idaho.

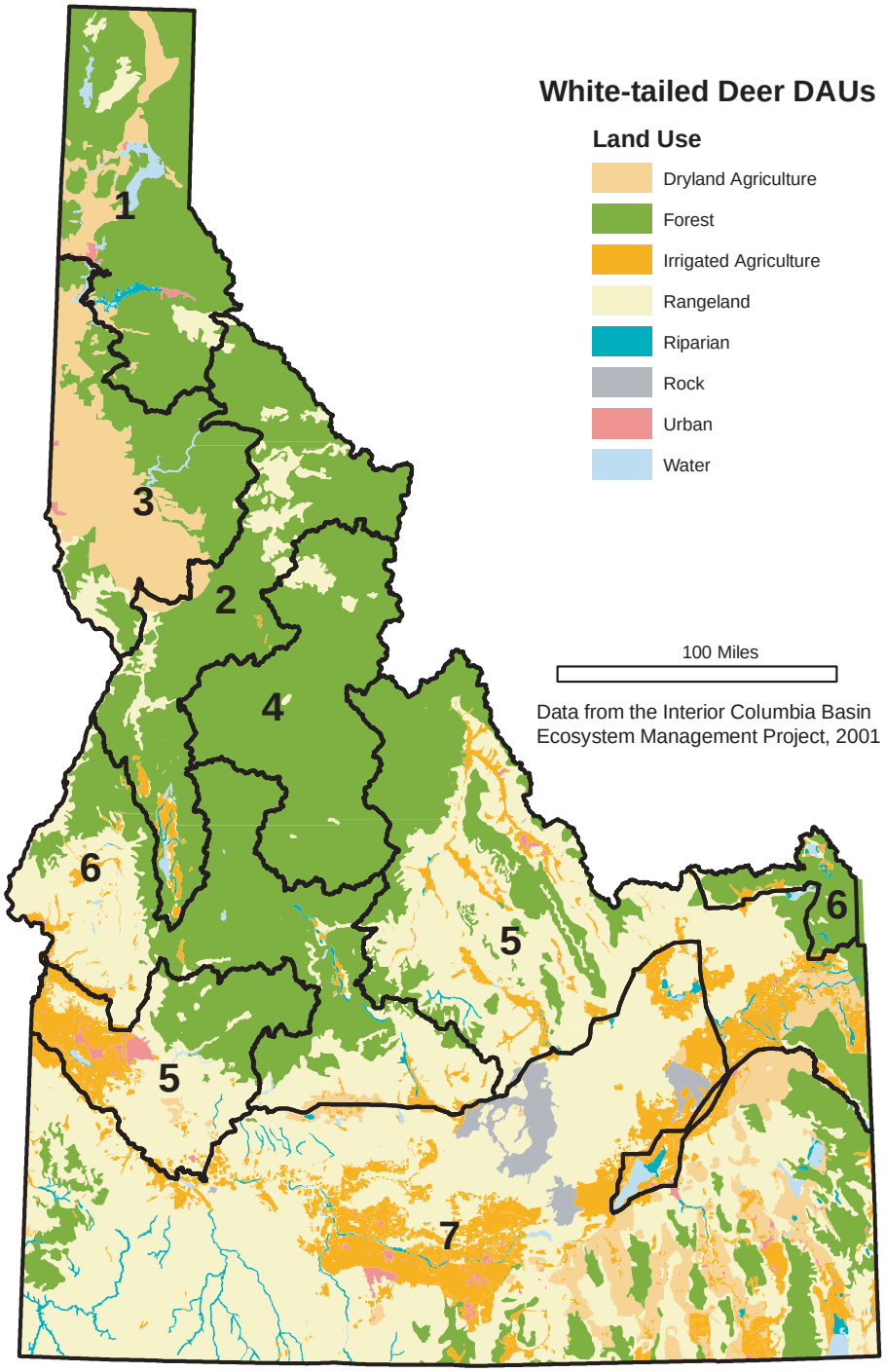
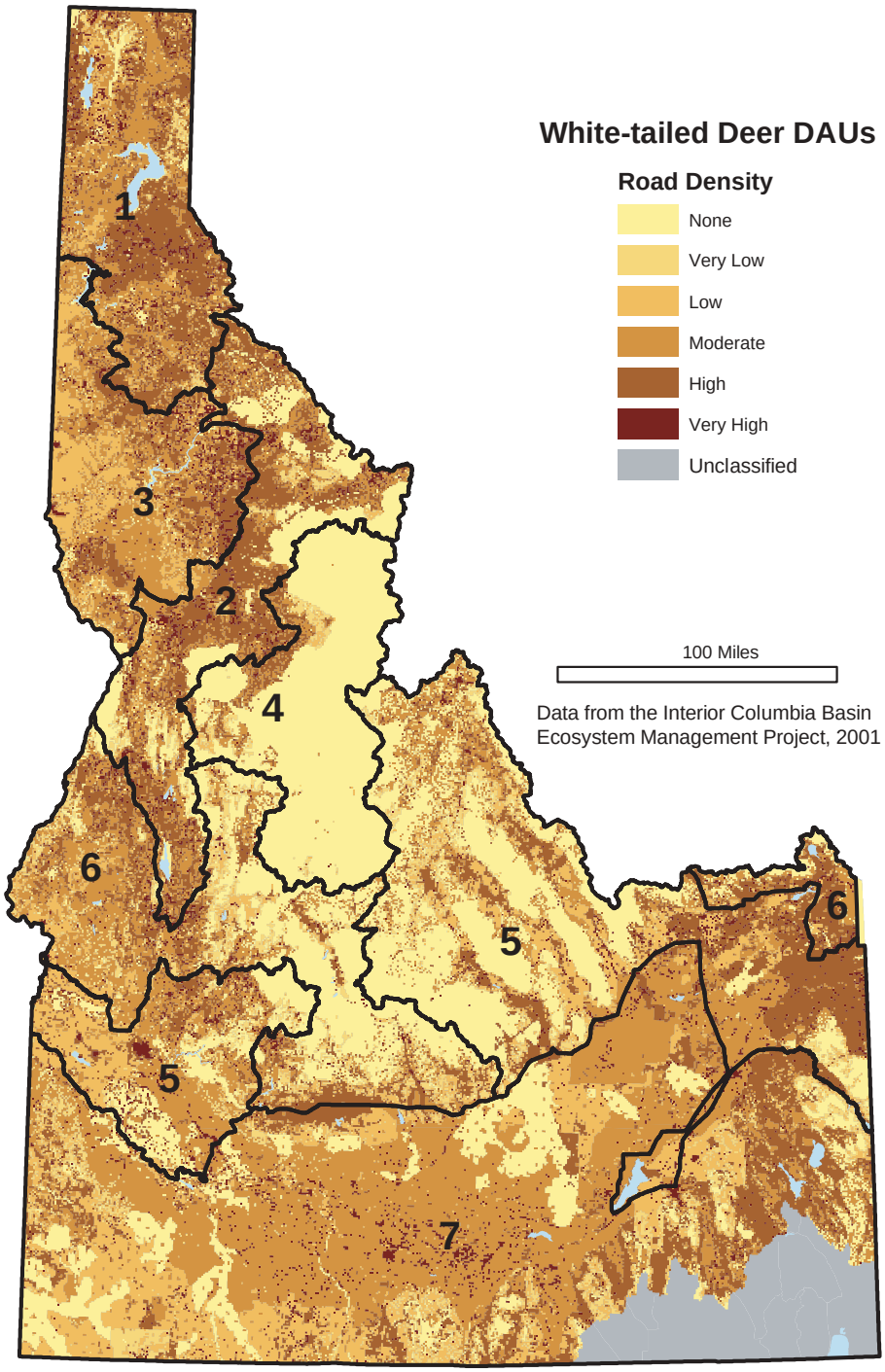


Figure 5. Road density patterns of white-tailed deer DAUs in Idaho.



DAU 1: Northern Forest

Description

This DAU includes GMUs 1, 2, 3, 4, 4A, 5, and 6. The majority of the DAU is coniferous forest habitat with high road densities in public ownership. Hunter densities are relatively high, success rates are moderate, and the opportunity to harvest a mature buck white-tailed deer is high. Current hunting seasons for white-tailed deer are 26 to 31 days in length, with hunters able to harvest either-sex, season-long.

Historical Perspective

Prior to the 1900s, deer were apparently relatively scarce, existing along the rivers and edges of mature conifer stands and within younger stands created by fire, disease, and insects. As mining, logging, and the railroads entered the picture around the turn of the century, deer habitat began to change slowly. The period from 1910 to 1931 included five major fires, each creating hundreds of thousands of acres of younger forests beneficial to white-tailed deer. The newly-created habitat and a major predator control program allowed deer numbers to continue this growth, even through five major die-offs: 1927, 1932, 1946, 1948, and 1949.

Concern about "over-browsed winter ranges" and "too many deer" prompted liberal hunting seasons in an effort to reduce deer numbers in the early 1950s. Long seasons were the rule from 1954 through 1974.

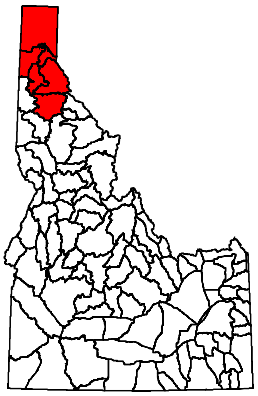
By the early 1970s, deer numbers had come down substantially from the peak numbers in the 1950s and 1960s. Hunting seasons were shortened, but no major habitat-creating fires had occurred for over 40 years. Since shorter seasons began in the mid-1970s, the number of whitetails killed by hunters in the Panhandle have increased from 3,000 per year to 10,000 per year.

Management Direction

White-tailed deer are more abundant than mule deer in this DAU. Management emphasis will be to maintain white-tailed deer populations that support hunting recreation and hunter satisfaction at recent or higher levels.

Objectives and Status

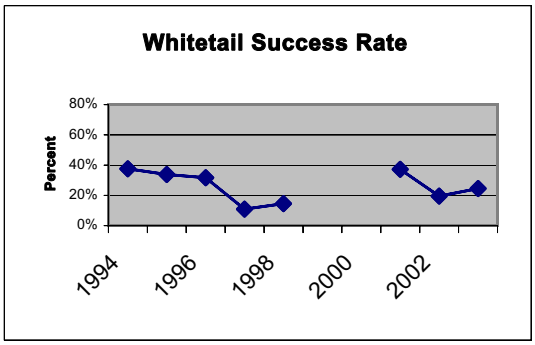
Criterion	Minimum	3-Year Average
Hunters	14,000	17,333
Hunter-days of recreation	85,000	106,600
Buck harvest	2,700	3,400
% 5+ points	17%	24%

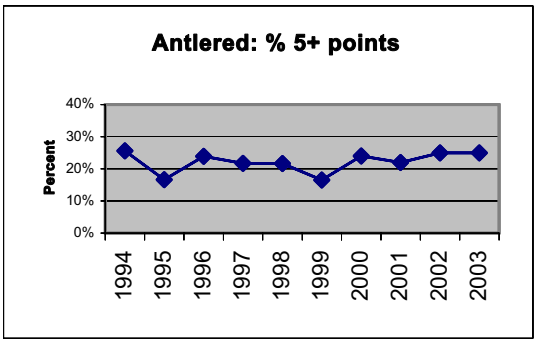


DAU 1: Northern Forest

Units 1, 2, 3, 4, 4A, 6

3-Year Averages			
		Hunters per square mile:	3.2
		Harvest per square mile:	0.8
Square Miles:	**6,299**	Success Rate:	26%
		Hunter-days/Whitetail	23
		Antlered: % 5+ points	24%



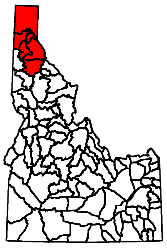


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		28834	31364	26544	32137	27299	NA	NA	16028	22989	20906
Hunter Days		296900	341936	218983	190208	160019	NA	NA	93040	146394	121217
White-tailed Deer Harvest	Total	10832	10590	8398	3504	3977	4174	4778	5961	4478	5123
	Male	6668	7117	3812	2324	2993	2697	3074	3779	3057	3419
	Female	4164	3473	4586	1180	984	1477	1704	2182	1421	1704
Whitetail Success Rate		38%	34%	32%	11%	15%	NA	NA	37%	19%	25%
Antlered: % 5+ points		26%	17%	24%	22%	22%	17%	24%	22%	25%	25%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits								31	35	50	21
Hunter Days									144	407	178
Harvest	Total							9	13	18	7
	Male							8	13	18	7
	Female							1	0	0	0
Success Rate								29%	37%	36%	33%
Antlered: % 5+ points								0%	0%	0%	0%

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		28834	31364	26544	32137	27299	NA	NA	16063	23039	20927
Hunter Days		296900	341936	218983	190208	160019	NA	NA	93184	146801	121395
White-tailed Deer Harvest	Total	10832	10590	8398	3504	3977	4174	4787	5974	4496	5130
	Male	6668	7117	3812	2324	2993	2697	3082	3792	3075	3426
	Female	4164	3473	4586	1180	984	1477	1705	2182	1421	1704
Success Rate		38%	34%	32%	11%	15%			37%	20%	25%
Antlered: % 5+ points		26%	17%	24%	22%	22%	17%	24%	22%	25%	25%

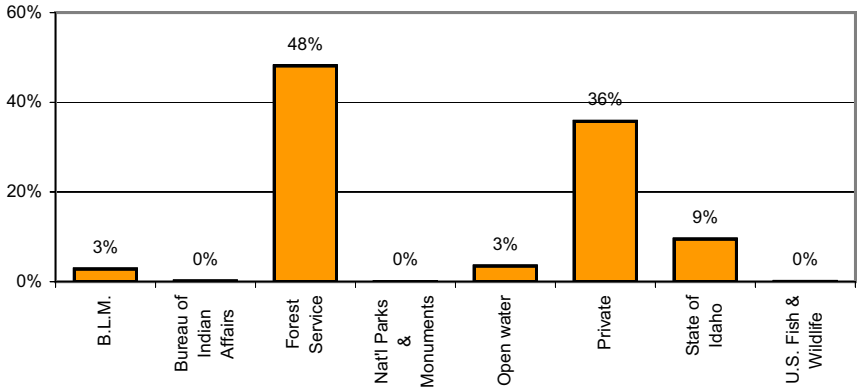


DAU 1: Northern Forest

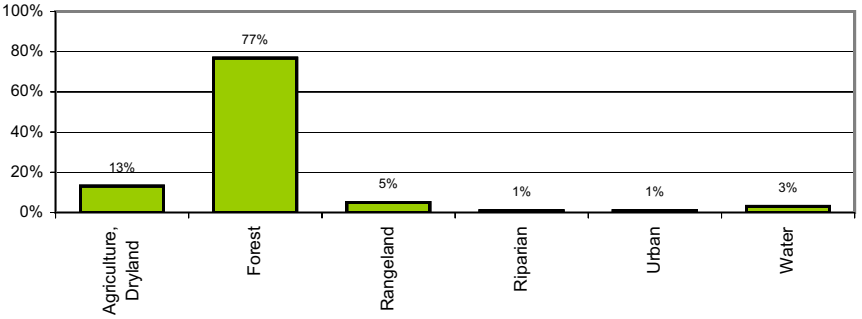
Units 1, 2, 3, 4, 4A, 6

Private ownership	**36%**
Major land use-	**Forest**
Potential Forest-	**94%**
Roadless Area -	**<1%**

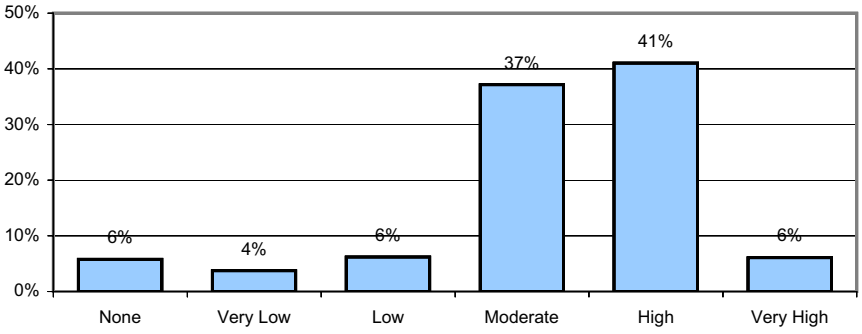
Land Owner	Acres
B.L.M.	114,201
Bureau of Indian Affairs	7,094
Forest Service	1,939,716
Nat'l Parks & Monuments	991
Open water	141,051
Private	1,442,719
State of Idaho	382,886
U.S. Fish & Wildlife	2,685



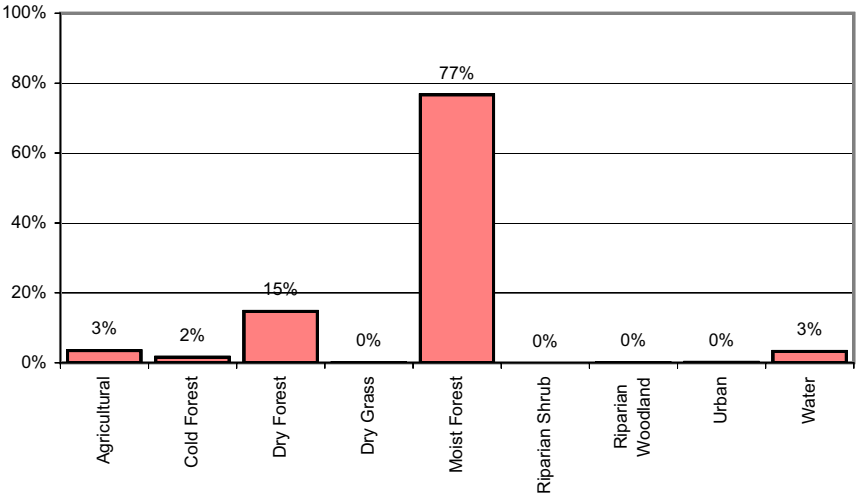
Land Use	Acres
Agriculture, Dryland	530,814
Forest	3,099,378
Rangeland	200,292
Riparian	38,204
Urban	38,764
Water	123,711



Road Density	Acres
None (< 0.2 mi./sq. mi.)	233,762
Very Low (0.02 to 0.1 mi./sq. mi.)	150,487
Low (0.1 to 0.7 mi./sq. mi.)	250,071
Moderate (0.7 to 1.7 mi./sq. mi.)	1,496,223
High (1.7 to 4.7 mi./sq. mi.)	1,653,629
Very High (>= 4.7 mi./sq. mi.)	244,387



Potential Vegetation	Acres
Agricultural	140,603
Cold Forest	64,000
Dry Forest	592,806
Dry Grass	1,483
Moist Forest	3,088,323
Riparian Shrub	494
Riparian Woodland	2,965
Urban	6,178
Water	131,707



DAU 2: Central Forest

Description

This DAU includes GMUs 7, 9, 10, 12, 14, 15, 16, 18, 23, and 24. The majority of this DAU consists of coniferous forest habitat with moderate to high road densities. A high percentage of the land in this DAU is under public (USFS) ownership. Hunter densities, success rates, and the opportunity to harvest a mature buck white-tailed deer are all moderate. Current general any-weapon deer hunting seasons for whitetails run from October 10 to November 20 (42 days) for most of the units in this DAU (10, 12, 14, 15, 16, and 18) and are open for either-sex, season-long. Units 7 and 9 have a 25 day (October 10 to November 3) either-sex season. The season in Units 23 and 24 runs from October 5 to October 31 (27 days) for antlered deer. Antlerless deer can be taken during these same dates, but only by youth hunters (hunters 12 – 17 years of age). Additionally, an extra antlerless controlled hunt is held in portions of Units 15 and 16 to address depredations on private property.

Historical Perspective

White-tailed deer populations in this DAU were historically low. Accounts from Lewis and Clark during the 1800s suggested that very few animals were found throughout the Clearwater River country. Populations probably did not change much until the early 1900s when fires converted large expanses of dense coniferous forest into a mosaic of vegetation succession types. Logging also contributed to creating a mosaic of brush fields and uneven-aged forest stands. Populations probably peaked around the 1940s-1950s, followed by a slight decline. Currently, populations are high.

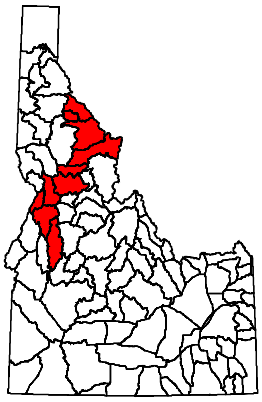
Historically, white-tailed deer and mule deer were managed as a "single species:" a single general season harvest framework was established for both species. In 1973 the Department began to offer species-specific seasons in the Clearwater Region.
These units have either-sex hunting seasons in October. During the mid-1980s the white-tailed deer hunting season was extended into mid-November. In 1990 most November white-tailed deer seasons became either-sex hunts. In 1997 an extra doe tag was established in Unit 16 south of the Selway River. In 1998 the Clearwater Deer Tag was established.

Management Direction

White-tailed deer are more abundant than mule deer in this DAU. Management emphasis will be to maintain white-tailed deer populations that support hunting recreation and hunter satisfaction at recent or higher levels.

Objectives and Status

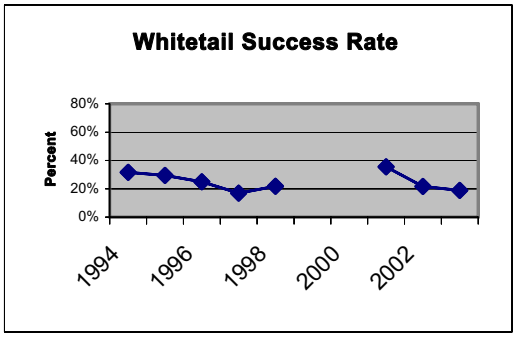
Criterion	Minimum	3-Year Average
Hunters	5,200	6,491
Hunter-days of recreation	25,500	31,835
Buck harvest	1,500	1,900
% 5+ points	10%	17%

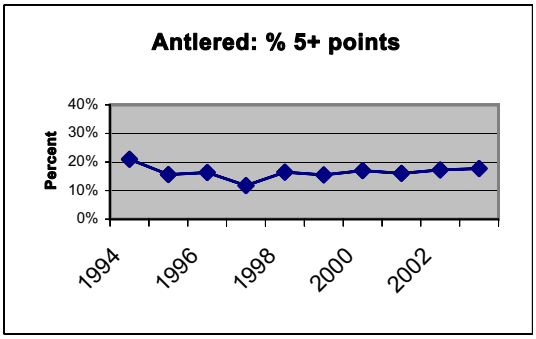


DAU 2: Central Forest

Units 7, 9, 10, 12, 14, 15, 16, 18, 23, 24

3-Year Averages			
		Hunters per square mile:	1.6
		Harvest per square mile:	0.4
Square Miles:	**6,879**	Success Rate:	24%
		Hunter-days/Whitetail	20
		Antlered: % 5+ points	17%



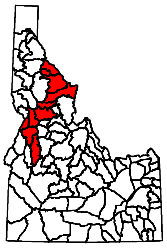


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		14850	15775	12031	18202	13172	NA	NA	8446	12263	10860
Hunter Days		120664	126367	77925	87399	72227	NA	NA	40746	65091	53927
White-tailed Deer Harvest	Total	4718	4600	2999	3004	2828	1910	2505	2858	2494	1954
	Male	3207	3651	2085	2128	1926	1393	1846	2023	1759	1401
	Female	1511	949	914	876	902	517	659	835	735	553
Whitetail Success Rate		32%	29%	25%	17%	21%	NA	NA	34%	20%	18%
Antlered: % 5+ points		21%	16%	16%	12%	16%	15%	17%	16%	17%	18%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits		100	79	0	225	100	100	325	472	761	241
Hunter Days									1706	1910	1026
Harvest	Total	14	63	0	104	55	58	267	306	329	144
	Male	14	63		0	0	0	172	196	211	20
	Female	0	0		104	55	58	95	110	118	124
Success Rate		14%	80%		46%	55%	58%	82%	65%	43%	60%
Antlered: % 5+ points		0%	0%		0%	0%	0%	0%	0%	0%	0%

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		14950	15854	12031	18427	13272	NA	NA	8918	13024	11101
Hunter Days		120664	126367	77925	87399	72227	NA	NA	42452	67001	54953
White-tailed Deer Harvest	Total	4732	4663	2999	3108	2883	1968	2772	3164	2823	2098
	Male	3221	3714	2085	2128	1926	1393	2018	2219	1970	1421
	Female	1511	949	914	980	957	575	754	945	853	677
Success Rate		32%	29%	25%	17%	22%			35%	22%	19%
Antlered: % 5+ points		21%	16%	16%	12%	16%	15%	17%	16%	17%	18%

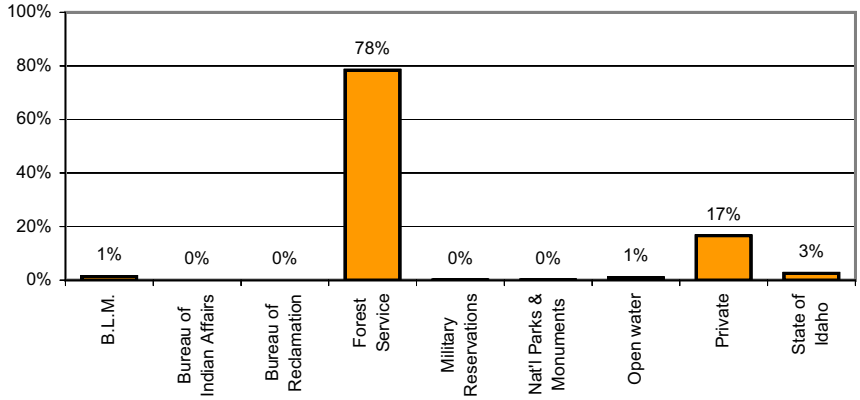


DAU 2: Central Forest

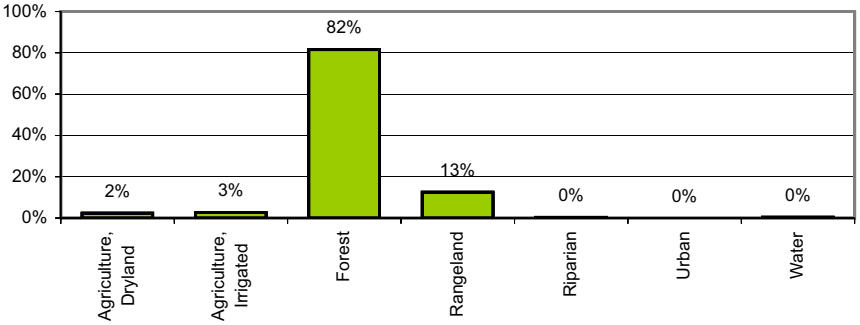
Units 7, 9, 10, 12, 14, 15, 16, 18, 23, 24

Private ownership	**17%**
Major land use-	**Forest**
Potential Forest-	**93%**
Roadless Area -	**24%**

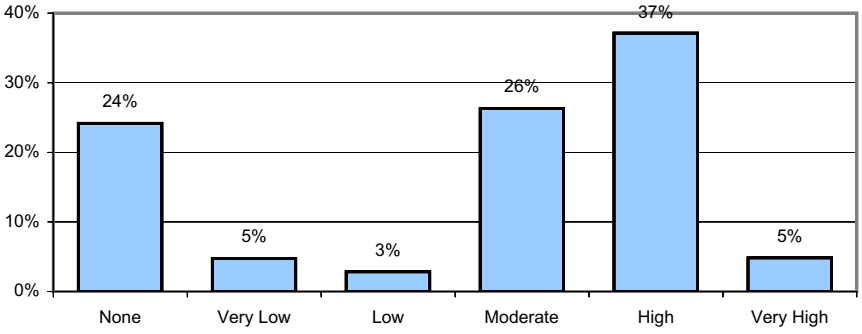
Land Owner	Acres
B.L.M.	60,193
Bureau of Indian Affairs	607
Bureau of Reclamation	423
Forest Service	3,451,909
Military Reservations	2,540
Nat'l Parks & Monuments	1,915
Open water	40,809
Private	731,792
State of Idaho	112,680



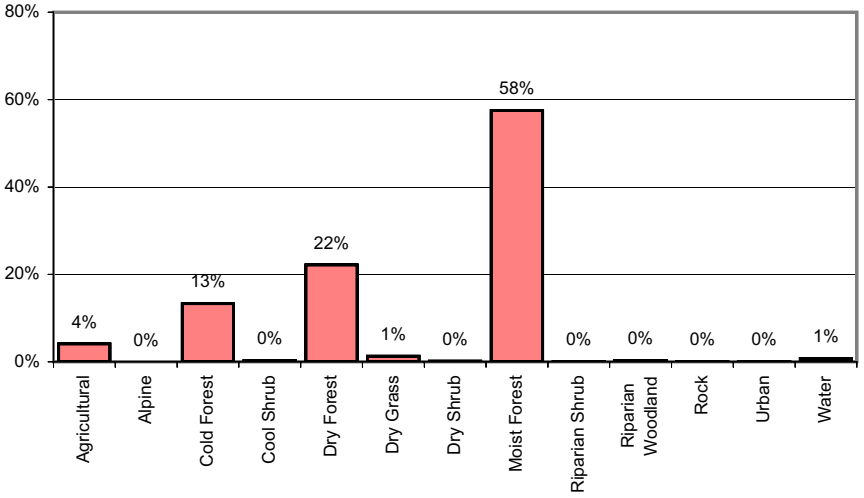
Land Use	Acres
Agriculture, Dryland	103,720
Agriculture, Irrigated	117,403
Forest	3,592,270
Rangeland	552,322
Riparian	16,636
Urban	485
Water	20,028



Road Density	Acres
None (< 0.2 mi./sq. mi.)	1,064,530
Very Low (0.02 to 0.1 mi./sq. mi.)	208,310
Low (0.1 to 0.7 mi./sq. mi.)	124,541
Moderate (0.7 to 1.7 mi./sq. mi.)	1,158,183
High (1.7 to 4.7 mi./sq. mi.)	1,636,085
Very High (>= 4.7 mi./sq. mi.)	212,758



Potential Vegetation	Acres
Agricultural	181,128
Alpine	247
Cold Forest	585,640
Cool Shrub	11,861
Dry Forest	976,808
Dry Grass	56,340
Dry Shrub	7,907
Moist Forest	2,532,830
Riparian Shrub	1,730
Riparian Woodland	13,838
Rock	988
Urban	1,236
Water	33,853



DAU 3: Northern Agriculture

Description

This DAU includes GMUs 5, 8, 8A, 10A, 11, 11A, and 13. The majority of this DAU consists of private property and is nearly equally split between dryland agriculture and coniferous forest habitats. Road densities are moderate. Hunter densities, success rates, and the opportunity to harvest a mature buck white-tailed deer are amongst the highest in the state. The relatively large private property component of this DAU has led to a number of management challenges including: depredations on agricultural crops, achieving adequate antlerless harvest, and tensions between landowners and sportsmen over access/trespass issues. Current hunting seasons for white-tailed deer range from a 53-day either-sex season in Units 8 and 8A down to a 25-day season for antlered deer with a 7-day antlerless season in Unit 13. All seasons open on October 10, except for Unit 5 which has a November 1 opener. Additionally, controlled hunts for extra antlerless deer are held in Units 8, 8A, 10A, and 11A as a population control measure.

Historical Perspective

White-tailed deer populations in this DAU were historically low. Accounts from Lewis and Clark during the 1800s suggested that very few animals were found throughout the Clearwater River country. Populations probably did not change much until the early 1900s when large fires and settlement by humans, including grazing of domestic livestock and clearing of land for agricultural purposes, changed the landscape. Logging also converted dense coniferous forests into a mosaic of vegetation-succession types and intensified throughout the late 20th century. Currently, populations are at historic highs.

Historically, white-tailed deer and mule deer were managed as a "single species:" a single general season harvest framework was established for both species. In 1973 the Department began to offer species-specific seasons in the Clearwater Region.

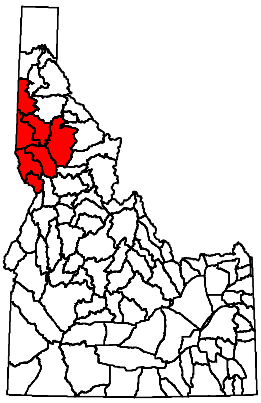
These units have either-sex hunting seasons in October. During the mid-1980s buck seasons in most units were into mid-November. In 1990 most November white-tailed deer seasons were changed to either-sex hunts. In 1997 an extra doe tag was established in the southern portion of Unit 10A and the southeastern portion of 11A. The 11A hunt was expanded to include the entire unit in 2000 and to include antlerless mule deer. In 1998 the Clearwater Deer Tag was established.

Management Direction

White-tailed deer are more abundant than mule deer in this DAU. Management emphasis will be to maintain hunting recreation and hunter satisfaction at or near recent levels. Additionally, management actions designed to maintain adequate harvest pressure on antlerless whitetails will be a priority in order to address depredation concerns.

Objectives and Status

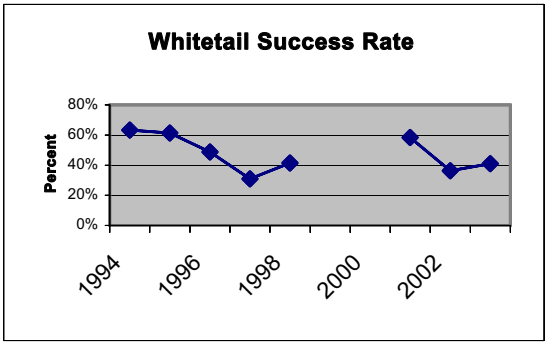
Criterion	Minimum	3-Year Average
Hunters	12,700	15,861
Hunter-days of recreation	81,000	101,135
Buck harvest	4,300	5,400
% 5+ points	17%	25%

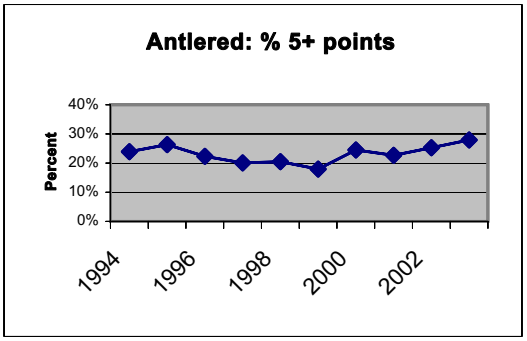


DAU 3: Northern Agriculture

Units 5, 8, 8A, 10A, 11, 11A, 13

3-Year Averages			
		Hunters per square mile:	3.4
		Harvest per square mile:	1.5
Square Miles:	**5,698**	Success Rate:	44%
		Hunter-days/Whitetail	13
		Antlered: % 5+ points	25%



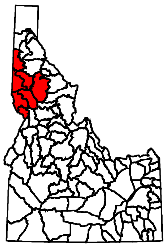


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		19925	16600	18266	24019	19754	NA	NA	14252	20727	18240
Hunter Days		185528	153467	148048	155040	131659	NA	NA	82442	128448	106058
White-tailed Deer Harvest	Total	12614	10186	8915	7307	8160	6404	7212	8265	7377	7176
	Male	8491	7099	5916	5104	5580	4360	5066	5421	4896	5067
	Female	4123	3087	2999	2203	2580	2044	2146	2844	2481	2109
Whitetail Success Rate		63%	61%	49%	30%	41%	NA	NA	58%	36%	39%
Antlered: % 5+ points		24%	26%	22%	20%	20%	18%	25%	23%	25%	28%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits					550	350	350	638	884	2229	1265.5
Hunter Days									3673	6218	7020
Harvest	Total				284	173	135	501	577	946	825
	Male				0	0	0	311	253	335	124
	Female				284	173	135	190	324	611	701
Success Rate					52%	49%	39%	79%	65%	42%	65%
Antlered: % 5+ points					0%	0%	0%	0%	0%	0%	0%

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		19925	16600	18266	24569	20104	NA	NA	15136	22956	19506
Hunter Days		185528	153467	148048	155040	131659	NA	NA	86115	134666	113078
White-tailed Deer Harvest	Total	12614	10186	8915	7591	8333	6539	7713	8842	8323	8001
	Male	8491	7099	5916	5104	5580	4360	5377	5674	5231	5191
	Female	4123	3087	2999	2487	2753	2179	2336	3168	3092	2810
Success Rate		63%	61%	49%	31%	41%			58%	36%	41%
Antlered: % 5+ points		24%	26%	22%	20%	20%	18%	25%	23%	25%	28%

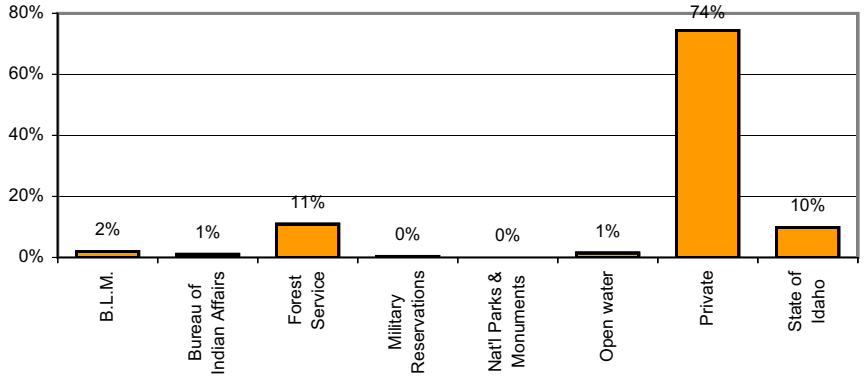


DAU 3: Northern Agriculture

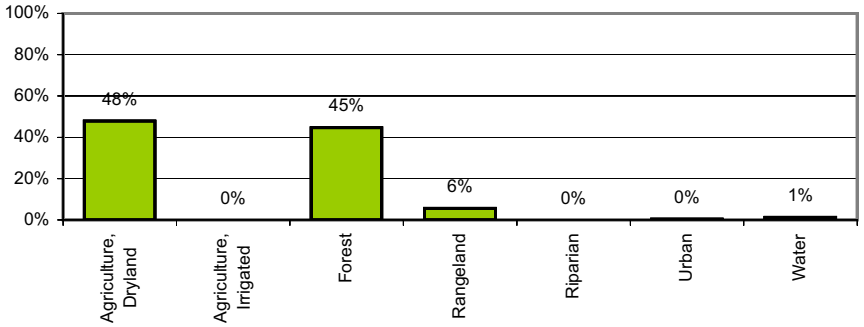
Units 5, 8, 8A, 10A, 11, 11A, 13

Private ownership-	**74%**
Major land use-	**Agriculture**
Potential Forest-	**49%**
Roadless Area -	**3%**

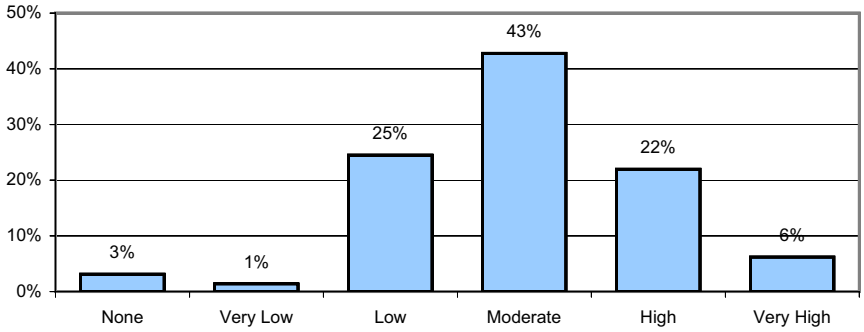
Land Owner	Acres
B.L.M.	72,588
Bureau of Indian Affairs	36,932
Forest Service	397,642
Military Reservations	13,354
Nat'l Parks & Monuments	149
Open water	53,450
Private	2,714,378
State of Idaho	358,053



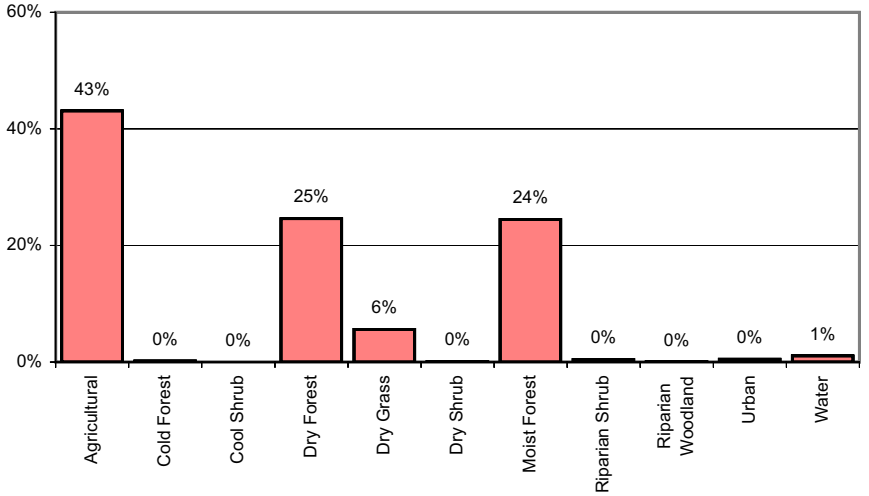
Land Use	Acres
Agriculture, Dryland	1,748,873
Agriculture, Irrigated	31
Forest	1,629,067
Rangeland	205,109
Riparian	625
Urban	15,761
Water	47,829



Road Density	Acres
None (< 0.2 mi./sq. mi.)	114,123
Very Low (0.02 to 0.1 mi./sq. mi.)	51,362
Low (0.1 to 0.7 mi./sq. mi.)	893,833
Moderate (0.7 to 1.7 mi./sq. mi.)	1,561,008
High (1.7 to 4.7 mi./sq. mi.)	801,434
Very High (>= 4.7 mi./sq. mi.)	226,074



Potential Vegetation	Acres
Agricultural	1,571,513
Cold Forest	6,522
Cool Shrub	494
Dry Forest	897,824
Dry Grass	203,759
Dry Shrub	3,859
Moist Forest	891,410
Riparian Shrub	15,816
Riparian Woodland	741
Urban	17,627
Water	38,269



DAU 4: Backcountry

Description

This DAU includes GMUs 16A, 17, 19, 19A, 20, 20A, 26, and 27. The majority of this DAU is classified as wilderness. Land ownership is over 99% USFS. Road densities are extremely low, with most roads acting as peripheral access to the Selway-Bitterroot, Gospel Hump, and Frank Church River of No Return wilderness areas. This low road density contributes to relatively low deer vulnerability in the area. Habitat varies from mesic forest conditions in the Selway River drainage to dry, open pine/grassland habitat in the Salmon River drainage. Hunter densities are low and any-weapon seasons are long in this DAU.

Historical Perspective

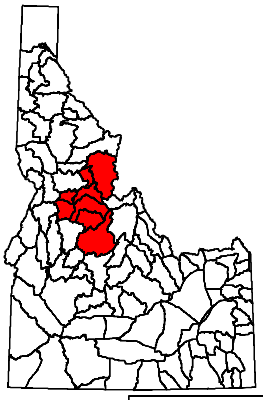
Little quantifiable information exists on present or historic white-tailed deer populations in this DAU. In the late 1980s and early 1990s, white-tailed deer and mule deer were managed as a "single species" with a single, general, either-sex season framework that ran from 15 September to 18 November. In 1997, the bag limit in this DAU south of the Salmon River was changed to bucks-only in response to deer herd (primarily mule deer) declines from the severe 1992-93 winter. The Clearwater deer tag was established in 1998 for hunting deer in the Clearwater Region, which affected lands in this DAU north of the Salmon River. Further management changes in 2000 included converting general seasons to controlled hunts for deer south of the Salmon River during the more vulnerable periods in late October and November. The rugged and remote nature of this area will continue to limit the impacts of humans on white-tailed deer and habitat.

Management Direction

Mule deer are more abundant than white-tailed deer in this DAU. Management emphasis will be to maintain the "single species" approach. White-tailed deer populations will be maintained to support hunting recreation and hunter satisfaction at recent or higher levels.

Objectives and Status

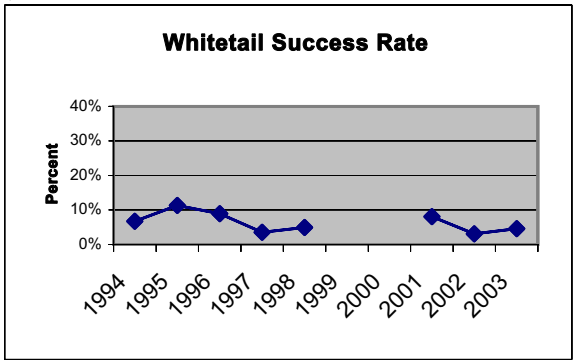
Criterion	Minimum	3-Year Average
Hunters	700	847
Hunter-days of recreation	3,500	4,410
% 5+ points	10%	21%

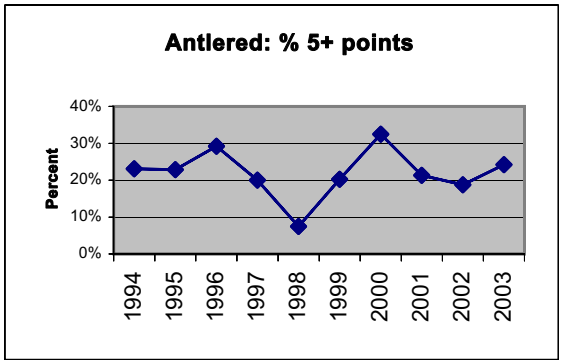


DAU 4: Backcountry

Units 16A, 17, 19, 19A, 20, 20A, 26, 27

3-Year Averages			
		Hunters per square mile:	0.6
		Harvest per square mile:	0.0
Square Miles:	**5,873**	Success Rate:	5%
		Hunter-days/Whitetail	123
		Antlered: % 5+ points	21%



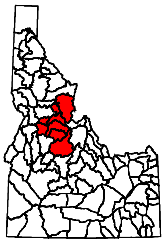


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		7197	10185	6911	7013	6491	NA	NA	2581	4671	3587
Hunter Days		48274	70601	43997	77700	37639	NA	NA	14188	29592	19483
White-tailed Deer Harvest	Total	485	1151	617	248	321	122	204	208	144	164
	Male	371	1015	477	230	280	98	158	156	107	125
	Female	114	136	140	18	41	24	46	52	37	39
Whitetail Success Rate		7%	11%	9%	4%	5%	NA	NA	8%	3%	5%
Antlered: % 5+ points		23%	23%	29%	20%	7%	20%	32%	21%	19%	24%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Success Rate											
Antlered: % 5+ points											

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		7197	10185	6911	7013	6491	NA	NA	2581.4	4671	3587
Hunter Days		48274	70601	43997	77700	37639	NA	NA	14188	29592	19483
White-tailed Deer Harvest	Total	485	1151	617	248	321	122	204	208	144	164
	Male	371	1015	477	230	280	98	158	156	107	125
	Female	114	136	140	18	41	24	46	52	37	39
Success Rate		7%	11%	9%	4%	5%			8%	3%	5%
Antlered: % 5+ points		23%	23%	29%	20%	7%	20%	32%	21%	19%	24%

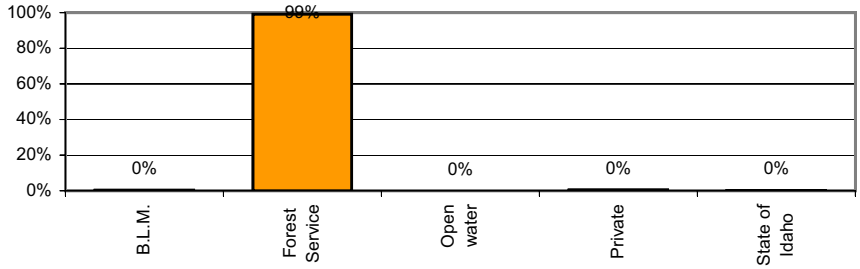


DAU 4: Backcountry

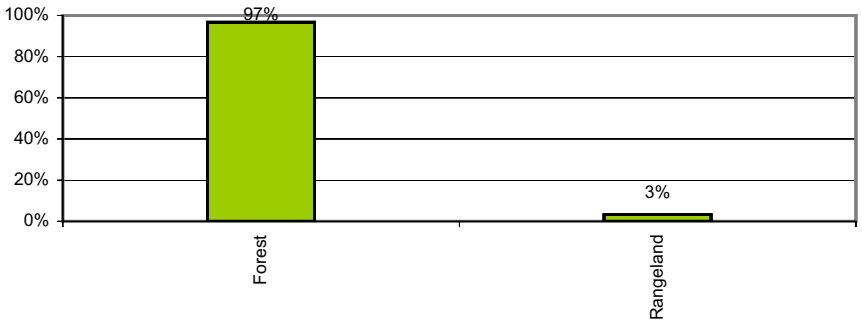
Units 16A, 17, 19, 19A, 20, 20A, 26, 27

Private ownership	**<1%**
Major land use-	**Forest**
Potential Forest-	**96%**
Roadless Area -	**86%**

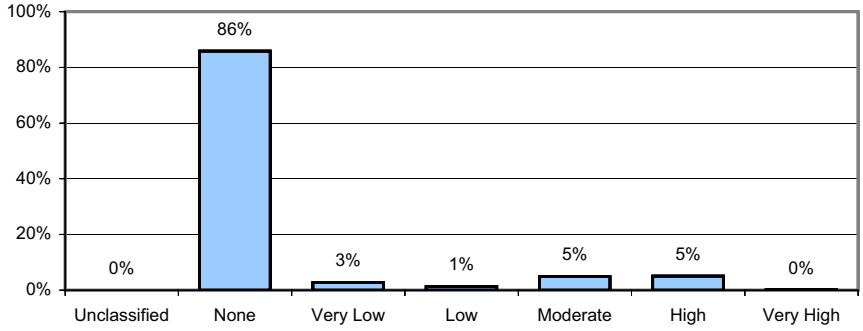
Land Owner	Acres
B.L.M.	11,935
Forest Service	3,723,438
Open water	1,567
Private	13,907
State of Idaho	7,598



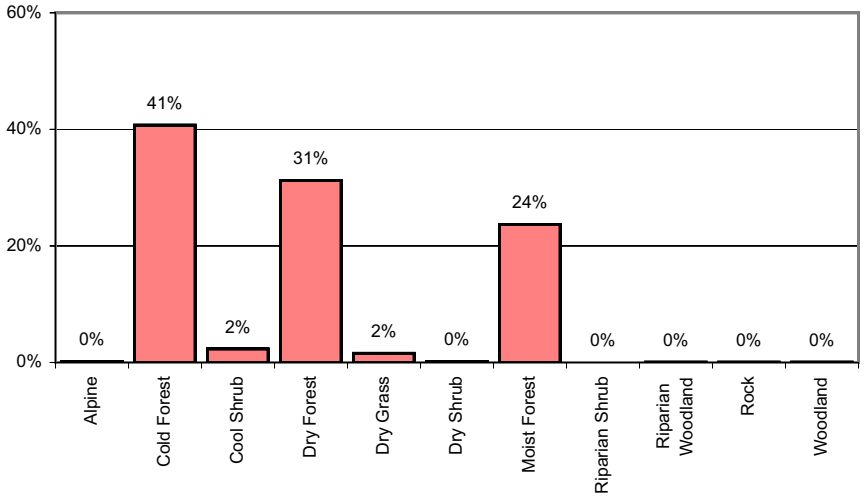
Land Use	Acres
Forest	3,636,536
Rangeland	121,909



Road Density	Acres
Not Classified	494
None (< 0.2 mi./sq. mi.)	3,228,312
Very Low (0.02 to 0.1 mi./sq. mi	102,993
Low (0.1 to 0.7 mi./sq. mi.)	48,119
Moderate (0.7 to 1.7 mi./sq. mi.)	182,184
High (1.7 to 4.7 mi./sq. mi.)	191,210
Very High (>= 4.7 mi./sq. mi.)	5,904



Potential Vegetation	Acres
Alpine	5,830
Cold Forest	1,531,323
Cool Shrub	87,049
Dry Forest	1,173,287
Dry Grass	59,624
Dry Shrub	5,679
Moist Forest	888,956
Riparian Shrub	368
Riparian Woodland	1,729
Rock	2,384
Woodland	2,495



DAU 5: Rangeland- Riparian Habitat

Description

This DAU includes GMUs 21, 21A, 28, 29, 30, 30A, 36A, 36B, 37, 37A, 38, 39, 50, 51, 58, 59, 59A, 60, 60A, 62, 63A, 64, 65, 67, and 68A. This DAU is a mix of several habitat types from coniferous forest to rangelands and riparian habitats. Most white-tailed deer habitat is on private lands. White-tailed deer hunter densities are relatively low, success rates are low, and the opportunity to harvest a mature buck white-tailed deer is moderate. Current general hunting seasons for white-tailed deer are structured mainly for mule deer.

Historical Perspective

Historical accounts indicate that white-tailed deer were native to the area. At the turn of the century, white-tailed deer were relatively scarce, most likely because of unregulated subsistence harvest by early settlers. At one point white-tailed deer were apparently reintroduced in the river bottoms of the South Fork and North Fork of the Snake River. No records of this translocation can be found, but it occurred in 1957. Since the early 1980s white-tailed deer have expanded and grown in number. They have moved farther up the South Fork and Henry's Fork of the Snake River. Currently they exist along rivers and creeks, and have spread into thick conifer and aspen stands in some areas. Within more northern units, whitetails are still limited to riparian corridors along major drainages and numbers appear relatively stable.

Area residents in southern units are reporting that more white-tailed deer inhabit the area. There are no survey data for white-tailed deer, and existing harvest data could be misleading due to inconsistent seasons and an increased popularity of white-tailed deer hunting. It does appear that populations have increased.

Local hunters were not traditionally white-tailed deer hunters. The sport is gaining popularity in the area though. This could be due to restricted mule deer seasons, decreased numbers of mule deer in some areas, increases in white-tailed deer populations, and attractive controlled hunting opportunities.

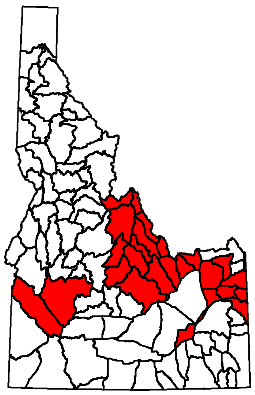
Other wild ungulates within the DAU include mule deer, elk, antelope, moose, bighorn sheep, and mountain goats. None are believed to be limiting white-tailed deer numbers. Moose and white-tailed deer use similar habitats and forage in the DAU but no problem is foreseen. There is concern that as white-tailed deer move out of the river bottoms, they could be in competition with mule deer for forage and space and may interfere with breeding.

Management Direction

White-tailed deer will be managed in appropriate habitats in this DAU. White-tailed deer populations will be maintained to support hunting recreation and hunter satisfaction at recent or higher levels.

Objectives and Status

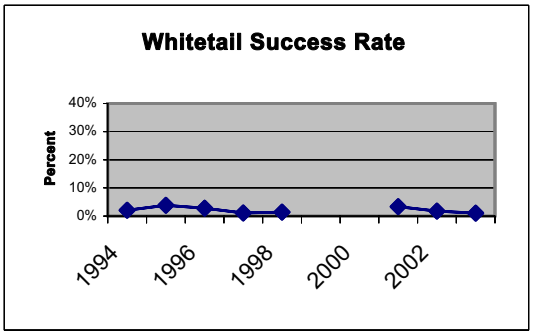
Criterion	Minimum	3-Year Average
Hunters	900	1,150
Hunter-days of recreation	4,700	5,900
% 5+ points	10%	19%

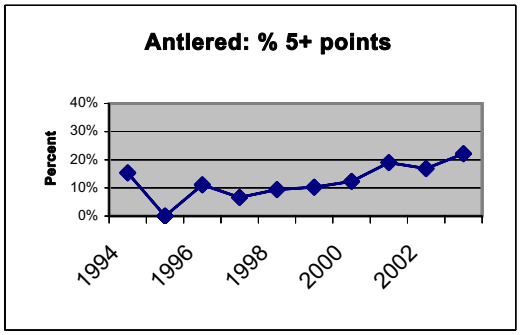


DAU 5: Rangeland-Riparian Habitat

Units 21, 21A, 28, 29, 30, 30A, 36A, 36B, 37, 37A, 38, 39, 50, 51, 58, 59, 59A, 60, 60A, 62, 63A, 64, 65, 67, 68A

3-Year Averages		
	Hunters per square mile:	1.3
	Harvest per square mile:	0.0
Square Miles: 17,859	Success Rate:	2%
	Hunter-days/Whitetail	219
	Antlered: % 5+ points	19%



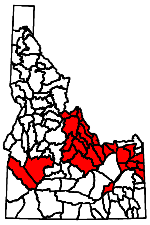


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		22278	21356	22080	29001	23815	NA	NA	18611	27004	21934
Hunter Days		128345	131379	125196	146993	126826	NA	NA	74340	123816	88165
White-tailed Deer Harvest	Total	454	815	618	318	339	283	351	618	469	223
	Male	285	577	458	273	293	197	272	383	358	182
	Female	169	238	160	45	46	86	79	235	111	41
Whitetail Success Rate		2%	4%	3%	1%	1%	NA	NA	3%	2%	1%
Antlered: % 5+ points		15%	0%	11%	7%	9%	10%	12%	19%	17%	22%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Success Rate											
Antlered: % 5+ points											

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		22278	21356	22080	29001	23815	NA	NA	18611	27004	21934
Hunter Days		128345	131379	125196	146993	126826	NA	NA	74340	123816	88165
White-tailed Deer Harvest	Total	454	815	618	318	339	283	351	618	469	223
	Male	285	577	458	273	293	197	272	383	358	182
	Female	169	238	160	45	46	86	79	235	111	41
Success Rate		2%	4%	3%	1%	1%			3%	2%	1%
Antlered: % 5+ points		15%	0%	11%	7%	9%	10%	12%	19%	17%	22%

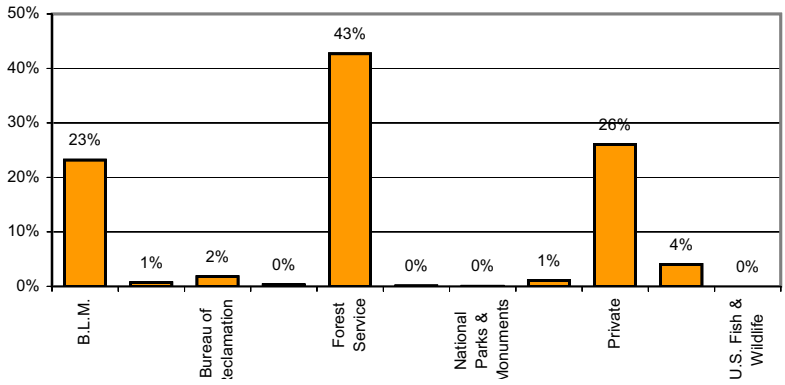


DAU 5: Rangeland-Riparian Habitat

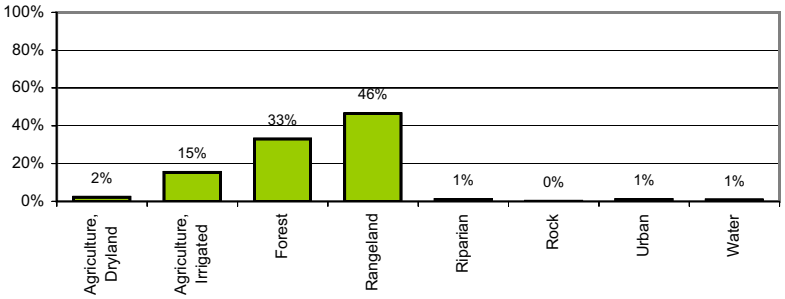
Units 21, 21A, 28, 29, 30, 30A, 36A, 36B, 37, 37A, 38, 39, 50, 51, 58, 59, 59A, 60, 60A, 62, 63A, 64, 65, 67, 68A

Private ownership-	**26%**
Major land use-	**Rangeland**
Potential Forest-	**20%**
Roadless Area -	**35%**

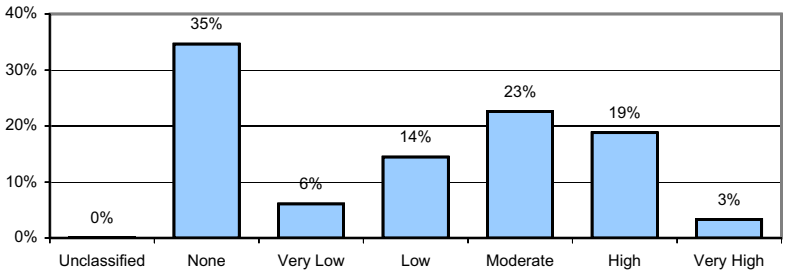
Land Owner	Acres
B.L.M.	2,651,153
Bureau of Indian Affairs	78,907
Bureau of Reclamation	206,869
Department of Energy	32,083
Forest Service	4,880,557
Military Reservations	9,274
National Parks & Monuments	3,971
Open water	120,537
Private	2,981,896
State of Idaho	462,937
U.S. Fish & Wildlife	1,498



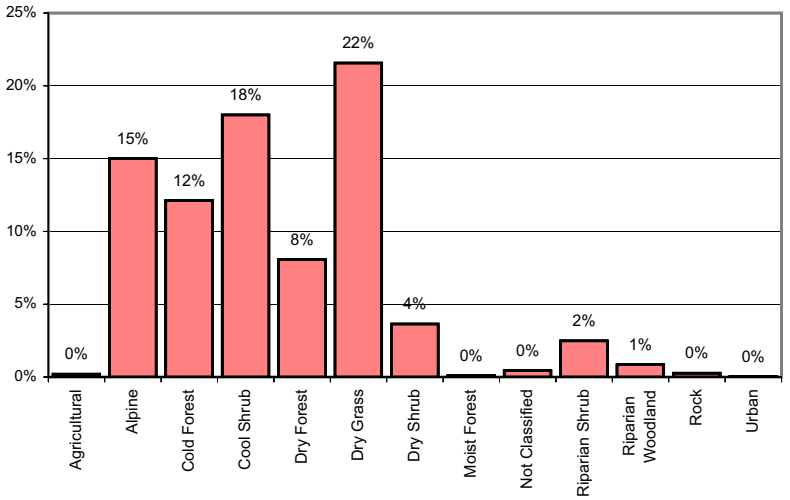
Land Use	Acres
Agriculture, Dryland	249,389
Agriculture, Irrigated	1,762,493
Forest	3,774,623
Rangeland	5,304,402
Riparian	121,458
Rock	14,263
Urban	117,842
Water	84,602



Road Density	Acres
Not Classified	9,431
None (< 0.2 mi./sq. mi.)	3,959,205
Very Low (0.02 to 0.1 mi./sq. mi	696,613
Low (0.1 to 0.7 mi./sq. mi.)	1,653,326
Moderate (0.7 to 1.7 mi./sq. mi.)	2,582,198
High (1.7 to 4.7 mi./sq. mi.)	2,149,180
Very High (>= 4.7 mi./sq. mi.)	379,319



Potential Vegetation	Acres
Agricultural	1,752,712
Alpine	22,444
Cold Forest	1,717,243
Cool Shrub	1,386,375
Dry Forest	2,058,422
Dry Grass	923,796
Dry Shrub	2,465,052
Moist Forest	416,070
Not Classified	11,653
Riparian Shrub	50,642
Riparian Woodland	283,659
Rock	97,157
Urban	30,207
Water	3,640
Woodland	212,423



DAU 6: Dryland Forest

Description

This DAU includes GMUs 22, 25, 31, 32, 32A, 33, 34, 35, 36, 43, 44, 48, 49, 61, and 62A. This DAU is generally described as having dryland forest habitat. These habitats vary from high elevation lodgepole pine forests (GMUs 62A and 36), mountainous terrain with Douglas fir communities primarily on north and east facing slopes (GMUs 43 and 48), to relatively open ponderosa pine forests with grass understories (GMUs 22 and 25). Road densities are moderate and approximately 75% of the DAU is in public ownership. White-tailed deer densities are low and the whitetail harvest comprises less than 1% of the statewide harvest. Current antlered deer hunting seasons are 20-27 days in length.

Historical Perspective

Historically, white-tailed deer numbers have remained low in this DAU. Habitats are generally better suited for mule deer. In GMUs 22 and 25, whitetails have increased slightly in recent years but densities remain low. In GMUs 61 and 62A, whitetails are generally associated with riparian habitats along the Henry's Fork, Camas Creek and tributaries and densities have remained low and stable. In GMUs 43, 44, 48, 49 and 35, whitetail observations are rare.

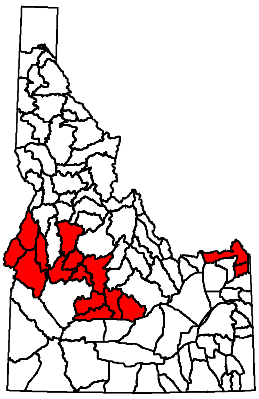
Historically, hunting seasons have considered white-tailed deer and mule deer together allowing that take of either species during the deer season.

Management Direction

Potential for increasing white-tailed deer populations in DAU 6 is limited because of habitat and elevational constraints. In most of the DAU, future increases in whitetail numbers will be associated with riparian habitats along major drainages. Mule deer will continue to receive primary management emphasis and whitetail densities and harvest are expected to remain low.

Objectives and Status

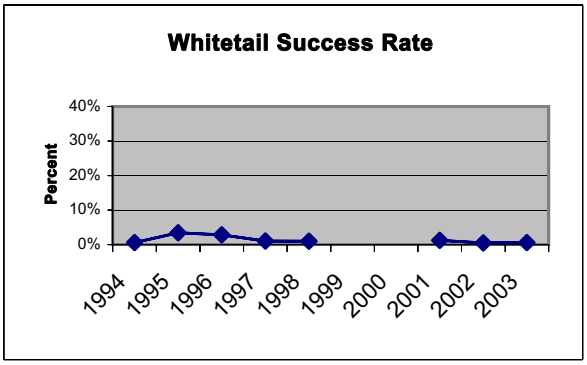
Criterion	Minimum	3-Year Average
Hunters	1,000	1,230
Hunter-days of recreation	2,100	2,627
% 5+ points	10%	5%

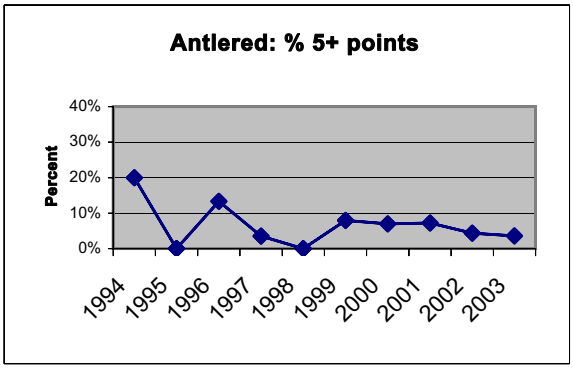


DAU 6: Dryland Forest

Units: 22, 25, 31, 32, 32A, 33, 34, 35, 36, 43, 44, 48, 49, 61, 62A

3-Year Averages		
	Hunters per square mile:	2.2
	Harvest per square mile:	0.0
Square Miles: 10,609	Success Rate:	1%
	Hunter-days/Whitetail	555
	Antlered: % 5+ points	5%



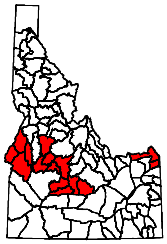


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		18828	22344	16876	26248	24791	NA	NA	18855	27569	22673
Hunter Days		105001	133693	87453	124126	134419	NA	NA	68894	123201	86755
White-tailed Deer Harvest	Total	115	764	479	274	246	235	131	239	133	130
	Male	115	662	319	256	226	171	106	165	99	91
	Female	0	102	160	18	20	64	25	74	34	39
Whitetail Success Rate		1%	3%	3%	1%	1%	NA	NA	1%	0%	1%
Antlered: % 5+ points		20%	0%	13%	4%	0%	8%	7%	7%	4%	4%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Success Rate											
Antlered: % 5+ points											

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		18828	22344	16876	26248	24791	NA	NA	18855	27569	22673
Hunter Days		105001	133693	87453	124126	134419	NA	NA	68894	123201	86755
White-tailed Deer Harvest	Total	115	764	479	274	246	235	131	239	133	130
	Male	115	662	319	256	226	171	106	165	99	91
	Female	0	102	160	18	20	64	25	74	34	39
Success Rate		1%	3%	3%	1%	1%			1%	0%	1%
Antlered: % 5+ points		20%	0%	13%	4%	0%	8%	7%	7%	4%	4%

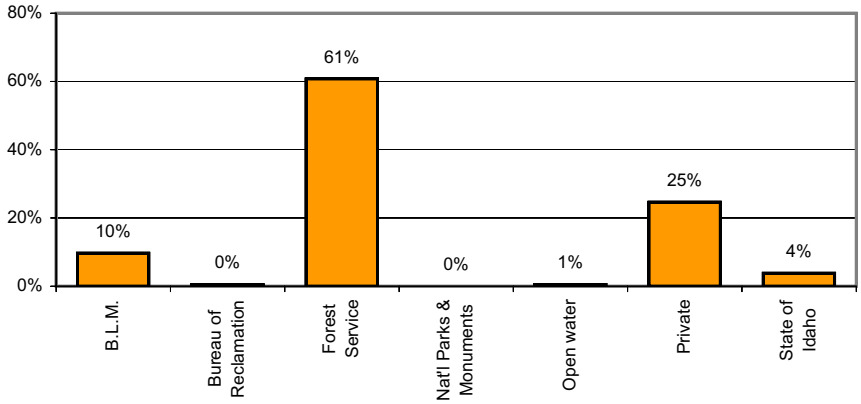


DAU 6: Dryland Forest

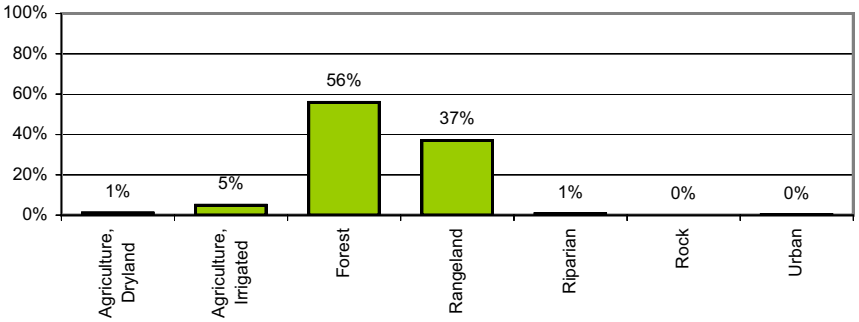
Units 22, 25, 31, 32, 32A, 33, 34, 35, 36, 43, 44, 48, 49, 61, 62A

Private ownership	**25%**
Major land use-	**Forest**
Potential Forest-	**61%**
Roadless Area -	**31%**

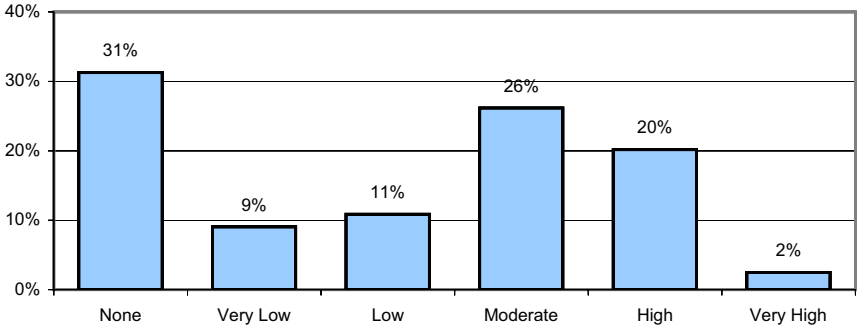
Land Owner	Acres
B.L.M.	659,429
Bureau of Reclamation	32,977
Forest Service	4,126,497
Nat'l Parks & Monuments	201
Open water	36,437
Private	1,674,024
State of Idaho	260,277



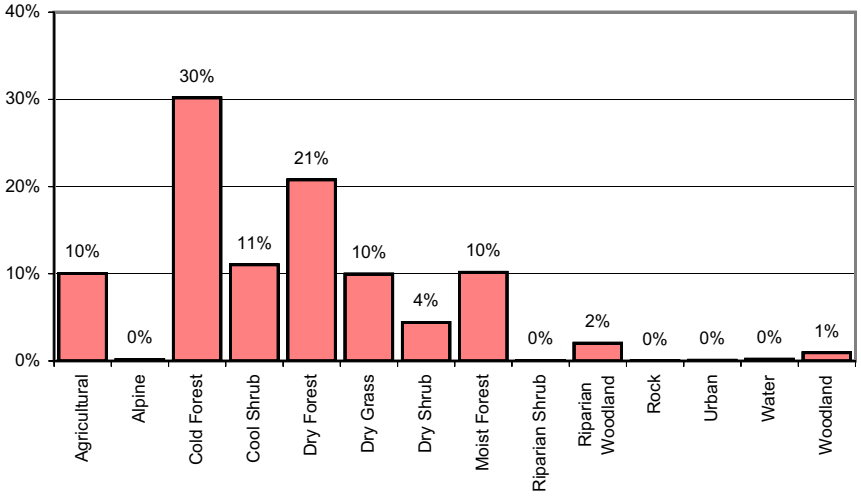
Land Use	Acres
Agriculture, Dryland	68,954
Agriculture, Irrigated	329,192
Forest	3,800,015
Rangeland	2,510,279
Riparian	48,272
Rock	1,160
Urban	9,797
Water	22,148



Road Density	Acres
None (< 0.2 mi./sq. mi.)	2,121,647
Very Low (0.02 to 0.1 mi./sq. mi.)	613,316
Low (0.1 to 0.7 mi./sq. mi.)	738,598
Moderate (0.7 to 1.7 mi./sq. mi.)	1,777,182
High (1.7 to 4.7 mi./sq. mi.)	1,368,964
Very High (>= 4.7 mi./sq. mi.)	168,773



Potential Vegetation	Acres
Agricultural	680,528
Alpine	11,614
Cold Forest	2,048,009
Cool Shrub	749,471
Dry Forest	1,409,736
Dry Grass	676,080
Dry Shrub	299,492
Moist Forest	689,918
Riparian Shrub	2,224
Riparian Woodland	138,379
Rock	741
Urban	5,436
Water	13,097
Woodland	63,753



DAU 7: Southern Idaho

Description

This DAU represents a wide spectrum of productivity. High productivity areas include major riparian areas such as the Snake River drainage, irrigated agricultural areas, and high elevation forested areas. Predominant vegetation types in this DAU include dry shrub, cool shrub, and agricultural types. Approximately 7% of the DAU is comprised of riparian woodland, riparian shrub, and cold forest vegetation types. Current vegetation communities are a result of agricultural practices, fire suppression, and urban development. Riparian areas have decreased and become fragmented due development and grazing practices.

Approximately 59% of the land in this DAU is publicly owned. The BLM administers a majority of the public land in this DAU. The USFS and IDL administer nearly equal amounts of the remaining public land. Other significant non-private ownership consists of Department of Energy land, primarily the INEEL site, and Bureau of Indian Affairs land, primarily the Fort Hall Indian Reservation. Approximately 34% of the DAU is composed of private land. Rangeland is the predominant land use comprising approximately 59% of the DAU. Other significant land uses include dryland agriculture, irrigated agriculture, and forested lands.

White-tailed deer distribution increased slowly in this DAU over the past several decades. Movement along riparian corridors has caused new accounts of white-tailed deer throughout the DAU. White-tailed deer population numbers have increased in some portions of the DAU, while they remain constant in other areas. White-tailed deer remain uncommon in this DAU and are secondary to mule deer in this DAU with regard to hunter preference.

There is some public concern regarding potential competition between the two deer species in the future.

Historical Perspective

White-tailed deer populations in this DAU have historically been low to non-existent. There are no accounts of white-tailed deer in Osborne Russell's "Journal of a Trapper" during the 1800's. White-tailed deer populations remained for the most part non-existent until human settlement, which brought grazing and land clearing for agricultural purposes. These practices provided water and forage suitable for white-tailed deer.

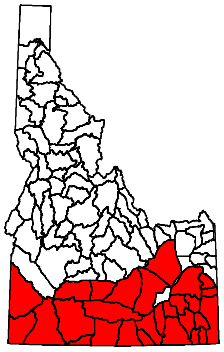
White-tailed deer and mule deer have historically been managed as a "single species." For the most part, this DAU continues to be managed this way, with the exception of some hunting opportunities specifically for white-tailed deer in the Upper Snake Region.

Management Direction

Mule deer are more abundant than white-tailed in this DAU. Management emphasis will be to maintain white-tailed deer populations that support hunting recreation and hunter satisfaction at recent or higher levels.

Objectives and Status

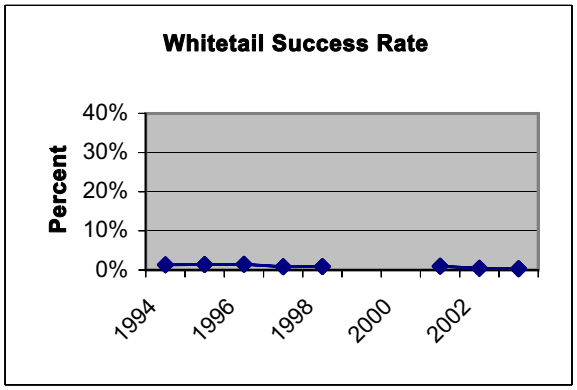
Criterion	Minimum	3-Year Average
Hunters	800	1,032
Hunter-days of recreation	1,600	1,987
% 5+ points	10%	14%

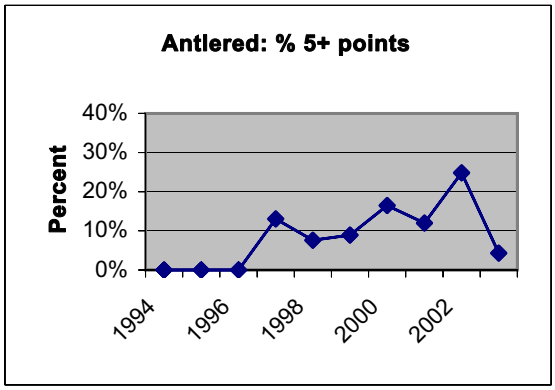


DAU 7: Southern Idaho

Units: 40, 41, 42, 45, 46, 47, 52, 52A, 53, 54, 55, 56, 57, 63, 66, 66A, 69, 70, 71, 72, 73, 73A, 74, 75, 76, 77, 78

3-Year Averages		
	Hunters per square mile:	0.8
	Harvest per square mile:	0.0
Square Miles: 30,255	Success Rate:	1%
	Hunter-days/Whitetail	748
	Antlered: % 5+ points	14%



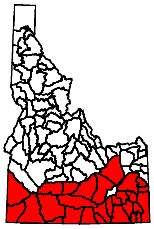


Regular Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		16204	12104	18067	26921	20928	NA	NA	20365	29270	22308
Hunter Days		82739	67891	93888	140013	140266	NA	NA	76088	136774	81205
White-tailed Deer Harvest	Total	212	170	260	229	187	135	115	197	129	67
	Male	112	102	160	211	180	105	93	120	83	49
	Female	100	68	100	18	7	30	22	77	46	18
Whitetail Success Rate		1%	1%	1%	1%	1%	NA	NA	1%	0%	0%
Antlered: % 5+ points		0%	0%	0%	13%	8%	9%	16%	12%	25%	4%

White-tailed Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Whitetail Success Rate											
Antlered: % 5+ points											

Controlled Hunt Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits		0	0	0	0	0	0	0	0	0	0
Hunter Days											
Harvest	Total	0	0	0	0	0	0	0	0	0	0
	Male										
	Female										
Success Rate											
Antlered: % 5+ points											

All Deer Tags		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hunters		16204	12104	18067	26921	20928	NA	NA	20365	29270	22308
Hunter Days		82739	67891	93888	140013	140266	NA	NA	76088	136774	81205
White-tailed Deer Harvest	Total	212	170	260	229	187	135	115	197	129	67
	Male	112	102	160	211	180	105	93	120	83	49
	Female	100	68	100	18	7	30	22	77	46	18
Success Rate		1%	1%	1%	1%	1%			1%	0%	0%
Antlered: % 5+ points		0%	0%	0%	13%	8%	9%	16%	12%	25%	4%

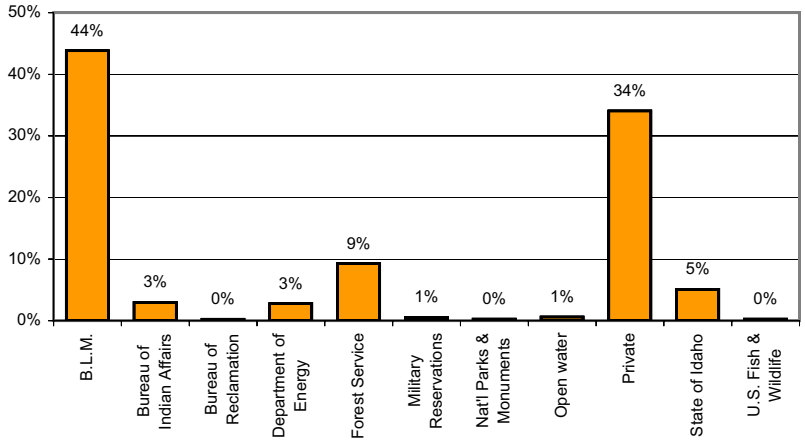


DAU 7: Southern Idaho

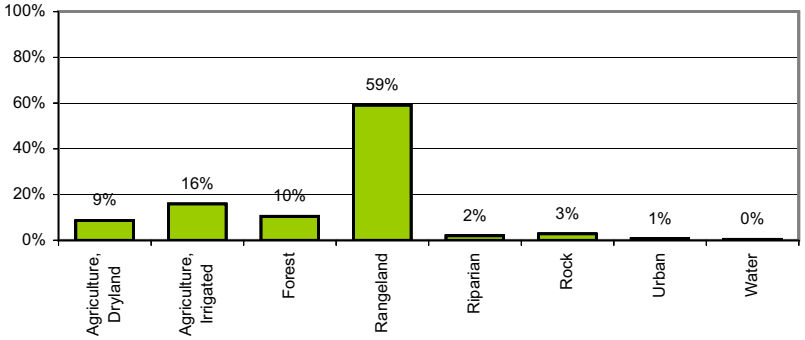
Units 40, 41, 42, 45, 46, 47, 52, 52A, 53, 54, 55, 56, 57, 63, 66, 66A, 69, 70, 71, 72, 73, 73A, 74, 75, 76, 77, 78

Private ownership	**34%**
Major land use-	**Rangeland**
Potential Forest-	**4%**
Roadless Area -	**12%**

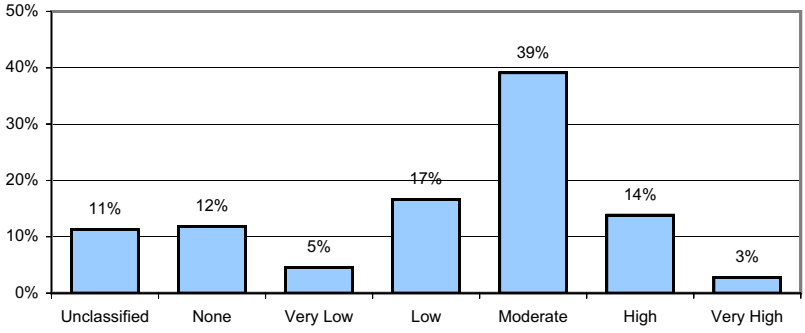
Land Owner	Acres
B.L.M.	8,490,352
Bureau of Indian Affairs	574,076
Bureau of Reclamation	48,550
Department of Energy	539,665
Forest Service	1,796,343
Military Reservations	104,823
Nat'l Parks & Monuments	52,940
Open water	116,985
Private	6,598,092
State of Idaho	988,197
U.S. Fish & Wildlife	53,015



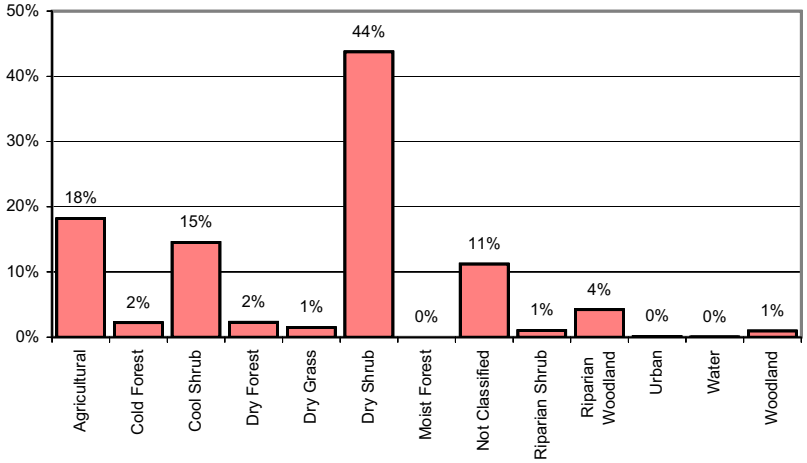
Land Use	Acres
Agriculture, Dryland	1,666,408
Agriculture, Irrigated	3,082,927
Forest	2,027,253
Rangeland	11,456,344
Riparian	371,263
Rock	545,507
Urban	129,953
Water	82,772



Road Density	Acres
Not Classified	2,187,379
None (< 0.2 mi./sq. mi.)	2,292,889
Very Low (0.02 to 0.1 mi./sq. mi	881,673
Low (0.1 to 0.7 mi./sq. mi.)	3,219,038
Moderate (0.7 to 1.7 mi./sq. mi.)	7,575,367
High (1.7 to 4.7 mi./sq. mi.)	2,677,724
Very High (>= 4.7 mi./sq. mi.)	543,444



Potential Vegetation	Acres
Agricultural	3,520,571
Cold Forest	427,510
Cool Shrub	2,811,241
Dry Forest	443,953
Dry Grass	287,144
Dry Shrub	8,472,628
Moist Forest	247
Not Classified	2,174,981
Riparian Shrub	196,040
Riparian Woodland	815,884
Urban	21,888
Water	6,427
Woodland	186,602



Chapter 4: Issues and Strategies

White-tailed Deer Habitat

Key to the health of Idaho's white-tailed deer populations is habitat. Humans have a profound influence on deer habitat, but land-use decisions often do not include provisions for maintaining or improving white-tailed deer habitat.

Strategies

- The Department will inventory and produce a GIS map overlay of the state's important white-tailed deer habitat, and distribute this information to the interested public and to appropriate federal, state, and county government offices by June 2006.
- The Department will seek conservation of important white-tailed deer habitat through discussions with landowners, title acquisition, or conservation easement.
- The Department will produce a popular brochure summarizing beneficial plantings and management practices for white-tailed deer habitat by June 2006.
- Interested private landowners and public land managers will be encouraged to consider white-tailed deer habitat guidelines (see Appendix II) in management.

White-tailed Deer Hunting Opportunity

Because white-tailed deer in Idaho occupy relatively dense forested or riparian habitats and harvest mortality rates are relatively low, hunting opportunity is liberal and can occur during the November rut period. In contrast, mule deer in Idaho generally occupy relatively open habitat types and are more vulnerable to harvest mortality, thus hunting opportunity is generally more restrictive and limited primarily to October.

Declines in mule deer populations in southern Idaho led to conservative deer hunting seasons in that part of the state beginning 1993. Declines were not experienced in northern white-tailed deer populations, and long deer hunting seasons were maintained. The disparity in opportunities led to some shift of southern Idaho mule deer hunters to northern Idaho at the conclusion of the southern Idaho deer seasons. Trespass complaints on private property increased to unacceptable levels in portions of northern Idaho. These complaints diminished substantially after 1998, when a zone tag for hunting deer in the Clearwater Region was implemented, and mule deer populations in southern Idaho began increasing from the lows experienced during the early-to-mid 1990s.

When asked in the 2003 Public Opinion Survey (Appendix I), the majority of Idaho hunters indicated it was "important to be able to hunt deer in more than one part of the state in any given year". The Department will balance the desires of hunters and landowners, and recognize the different hunting opportunities available between white-tailed and mule deer, without unduly complicating regulations.

Strategies

- The Department will implement a statewide White-tailed Deer Tag. Deer hunters could choose a statewide Regular Deer Tag, valid for either white-tailed or mule deer, or a White-tailed Deer tag valid only for white-tailed deer. This arrangement provides more flexibility for Idaho hunters and should maintain protection against trespass problems in northern Idaho.
- The Department will pursue standardization of white-tailed deer seasons and tags on a statewide basis." Regular Deer Tag any-weapon seasons will occur primarily during October and should be standardized to the greatest extent possible.

- White-tailed Deer Tag any-weapon seasons will occur during October and November and will be standardized to the greatest extent possible.

Data needs

Meaningful management information pertaining to white-tailed deer is difficult to collect. The secretive nature of white-tailed deer and the habitats they occupy severely limit our ability to estimate population size and composition. Aerial surveys and other traditional approaches such as spotlight surveys and pellet transects provide inaccurate and imprecise indices. Therefore, development of a technique to accurately and precisely estimate population size and composition would permit considerable refinement of whitetail management in Idaho. Harvest data have been difficult to interpret because white-tailed data and mule deer data are combined as "deer" data.

Strategies

- The Department will reassess hunter and landowner satisfaction with the white-tailed deer management program prior to 2010.
- Significantly improve quality and usefulness of white-tailed deer harvest data by establishing a white-tailed deer tag and by modifying the mandatory report system to better evaluate white-tailed deer harvest.
- Design monitoring to help establish the link between harvest data and white-tailed deer populations.
- Adopt a statewide, standard method to index winter severity to help interpret data trends for ungulates by April 2007.

Agricultural and urban deer damage

Department concerns stem from large numbers of white-tailed deer in some areas on predominantly private land. These populations periodically cause large amounts of damage to agricultural crops. The diverse objectives of the many private landowners create a de-facto refuge system in some GMUs, which make many management strategies ineffective. Urban/suburban sites also create refuges that negate many management strategies. Many of these urban/suburban landowners feed and enjoy viewing deer, while others are frustrated with landscaping and garden damage.

Idaho hunters and landowners were asked for input through a random survey as part of the revision of the white-tailed deer plan. Both groups supported various strategies for management but hunters were unwilling to travel in excess of 100 miles to harvest a doe.

Strategies

- The Department will explore additional opportunities to reduce deer numbers through doe harvest in the predominantly private land GMUs. Management tools such as reduced-price tags, multiple tags allowed per person, earlier opening dates, green-field hunt format, etc. will be considered.
- Landowners within white-tailed deer range will be surveyed prior to 2010 to assess satisfaction with the level of damage they sustain. Satisfaction objectives will be established subsequent to the 2010 survey.
- Brochures will be produced and/or purchased by the Department to summarize information on successfully co-existing with white-tailed deer. All County Extension Services and Fish and Game offices will be provided brochures for distribution by July 2005.

Access

Although Idaho's land base is 67% public ownership, private land contributes significantly to the wildlife resources and recreational opportunities of the state. Besides providing important seasonal habitats for numerous big game species, private land provides much of the hunting opportunities for many upland game, waterfowl, and other small game species.

Reduced access to private land or through private land to public land is a growing concern for Idaho sportspersons and the Department. Besides loss of areas for sportspersons to hunt and fish, reduced access to or through private land has led to numerous depredation problems. White-tailed deer can cause significant depredation concerns for agricultural producers and reduced access for hunters exacerbates the problem.

In 2003, the Department implemented the Access Yes! program to address sportsperson's concerns about declining access to private land. Access Yes! financially compensates willing landowners for providing access to or through their property for hunting and fishing. Over 107,000 acres of private land were available to Idaho hunters and anglers the first year. Ultimately the goal is to provide access to 1.2 million acres of private land annually. The Department will focus landowner recruitment efforts in areas where white-tailed deer depredations are a significant concern to agricultural producers and where public land access is restricted by private land.

Strategies

- The Department will encourage access to hunting and fishing opportunities on private land, and encourage access through private to public land.

Availability of mature bucks

Availability of mature bucks is a prominent concern of some white-tailed deer hunters on a nationwide basis. The emergence of Quality Deer Management (QDM) is tied to dissatisfaction with availability of mature bucks in states where buck mortality from hunting is very high, and deer numbers exceed carrying capacity. In order to produce mature bucks without restricting hunter numbers, antler point restrictions have been used, sacrificing buck success rates for availability of adult bucks. High doe harvests are also used in many of these areas to reduce deer densities and improve fitness.

White-tailed deer populations in Idaho exhibit characteristics well beyond goals of QDM managers. Buck survival is high, producing high ratios of mature bucks, and densities are believed to be below carrying capacity, providing good body condition.

As part of this plan revision process, Idaho hunters and landowners were asked for their input regarding a variety of white-tailed deer hunting issues. Results of this White-tailed Deer Management Survey (Appendix I) indicated a strong majority of hunters surveyed were: satisfied with their opportunity to harvest a whitetail buck; satisfied with their opportunity to harvest a mature whitetail buck; and would not support management for more and/or larger whitetail bucks if it meant more restrictions such as shorter seasons, removing the general hunt from the rut, or controlled hunts for bucks.

Strategies

- The Department will ensure hunting seasons do not result in mortality rates that result in low proportions of mature whitetail bucks in the population.

- Statewide, a minimum of 15% of harvested antlered white-tailed deer will have 5 or more antler points on either antler.
- The Northern Forest and Northern Agriculture DAUs will be managed to provide a minimum of 17% of harvested antlered white-tailed deer with 5 or more antler points on either antler.
- The remaining DAUs will be managed to provide a minimum of 10% of harvested antlered white-tailed deer with 5 or more antler points on either antler.

- The Department will explore creating additional hunting opportunities that provide for high success rates, low hunter density, and high percentage of mature white-tailed deer bucks.
- Hunters will be surveyed prior to 2010 to reassess hunter satisfaction with availability of mature bucks for harvest.

Use of motorized vehicles while hunting

Use of off-highway vehicles is popular with many hunters but very unpopular with many other hunters, and is a concern for wildlife managers. Increased motorized access has led to reduced survival of big game (Unsworth et al. 1993) and has resulted in reduced hunting opportunities. Additionally, many hunters believe that encountering motorized vehicles while hunting detracts from their overall experience (Sanyal et al. 1989).

In 2002, the Department first implemented the "Motorized Vehicle Rule" in GMU 47. The rule restricts hunters using motorized vehicles to roads capable of travel by full-sized vehicles. Public support for the rule was high and it was expanded to 26 units in 2004. The Department will evaluate adding additional units where public support exists. Ultimately, the Department will strive for a balance between motorized and non-motorized recreational opportunity while maintaining consideration of biological impacts of motorized recreation.

Strategies

- The Department will support access management on public land providing for a diversity of motorized and non-motorized hunting experiences.
- The Department will continue to work with public land managers and willing private landowners to manage motorized vehicle access at a suitable level for hunters. Concepts of vulnerability (Unsworth et al. 1993), habitat effectiveness (Leege 1984), and hunter behavior and preferences (Sanyal et al. 1989, Gratson and Whitman 2000) will be promoted in land management decisions.
- The Department will conduct a statewide deer hunter survey during 2005 to provide a contemporary assessment of hunter's preferences for motorized and non-motorized recreational opportunity.

Supplemental feeding of deer

The Department recognizes that white-tailed deer populations should be maintained under natural conditions and by naturally available forage. White-tailed deer populations, harvest and weather will vary from year to year throughout the state. In most years, snow depths, temperatures, and animal body condition do not create adverse conditions for wintering animals.

Feeding during winter concentrates white-tailed deer in unsuitable areas, facilitates spread of disease, and promotes the unrealistic expectation that white-tailed deer populations can be maintained without regard to their habitat.

However, there are times when unusual weather patterns may create critical periods of stress when winter forage becomes limited, unavailable, or animals are forced into areas where public safety becomes an issue. The Department's emergency winter feeding policy provides for circumstances when supplemental feeding of deer is authorized 1) to prevent damage to private property or to protect public safety when other methods are determined to be ineffective, and 2) when excessive mortality would negatively affect recovery of the population.

Deer are frequently fed by the public as recreation, but on occasion in an attempt to bolster local populations. The Department has periodically implemented the emergency winter feeding policy during severe winters. During the past 10 years, the Department spent approximately $32,000 feeding approximately 3,000 white-tailed deer.

Strategies

- The Department will work with the appropriate land management agencies or landowners in an effort to maintain winter ranges in a condition suitable to meet white-tailed deer management objectives, including the restoration of ranges damaged from past management practices.
- The Department will discourage private feeding of white-tailed deer for recreational purposes.
- Emergency winter-feeding by the Department will be conducted in accordance with established policies and statutes.

Disease

Diseases such as chronic wasting disease (CWD), tuberculosis (TB), and epizootic hemorrhagic disease (EHD) are prominent on a national scale. Information is lacking, however, on exposure and importance of these and other diseases to white-tailed deer in Idaho. Captive white-tailed deer facilities are uncommon in Idaho, but represent potential sites for disease introductions as well as genetic contamination.

Strategies

- Biological samples will be collected from all white-tailed deer captured by IDFG personnel.
- When feasible, biological samples will be collected from all white-tailed deer that appear ill or have died from disease.
- Brainstems and/or medial retropharyngeal lymph nodes will be collected to help assess exposure to CWD, and to survey for the presence of meningeal worm.
- The Department will continue to prohibit importation of white-tailed deer from outside the state and discourage ownership of captive whitetails within the state.

Literature Cited

Armleder, H. M., R. J. Dawson, and R. N. Thomson. 1986. Handbook for timber and mule deer management coordination on winter ranges in the Cariboo Forest region. B. C. Minist. of For. Victoria, B.C. 98pp.

Baty, G. R. 1995. Resource partitioning and browse use by sympatric elk, mule deer and white-tailed deer on a winter range in western Montana. M.S. Thesis. Univ. of Montana, Missoula. 252pp.

Baumeister, T. R. 1993. Region 2 white-tailed deer habitat use, Project W-160-R-19. Job Comp. Rep. Idaho Dep. Fish and Game, Boise.

Boer, A. 1978. Management of deer wintering areas in New Brunswick. Wildl. Soc. Bull. 6:200-205.

Cheatum, E. L., and G. H. Morton. 1946. Breeding season of white-tailed deer in New York. J. Wildl. Manage. 10:249-263.

Cheatum, E. L., and C. W. Severinghaus. 1950. Variations in fertility of white-tailed deer related to range conditions. Trans. N. Am. Wildl. Conf. 15:125-134.

Dusek, G. L., R. J. Mackie, J. D. Herriges, Jr., and B. B. Compton. 1989. Population ecology of white-tailed deer along the Lower Yellowstone River. Wildl. Monogr. 104. 68pp.

Foreyt W. J., and B. B. Compton. 1991. Survey for meningeal worm (*Parelaphostrongylus tenuis*) and ear mites in white-tailed deer from northern Idaho. J. Wildl. Dis. 27:716-718.

Garrott, R. A., G. C. White, and R. M. Bartmann. 1987. Movements of female mule deer in northwest Colorado. J. Wildl. Manage. 51:634-643.

Gladfelter, H. L. 1966. Nocturnal behavior of white-tailed deer in the Hatter Creek enclosure. M.S. thesis, Univ. of Idaho, Moscow. 46pp.

Gratson, M. W. and C. Whitman. 2000. Characteristics of Idaho elk hunters relative to road access on public lands. Wildl. Soc. Bull. 28:1016-1022.

Hayes, S. G., D. J. Leptich, and P. Zager. 2002. Proximate factors affecting male elk hunting mortality in northern Idaho. J. Wildl. Manage. 66:491-499.

Hill, R. R., and D. Harris. 1943. Food preference of Black Hills deer. J. Wildl. Manage. 7:233-235.

Howard, V. W. 1969. Behavior of white-tailed deer within three northern Idaho plant associations. Ph.D. Thesis, Univ. of Idaho, Moscow. 61pp.

IAFWA. 2002. Economic importance of hunting in America. Int. Assoc. Fish and Wildl. Agencies, Animal Use Issues Comm. Rep. 13pp.

Jageman, H. 1984. White-tailed deer habitat management guidelines. For., Wildl. and Range Exp. Stn. Bull. No. 37. Univ. of Idaho, Moscow. 14pp.

Julander, O., W. L. Robinette, and D. A. Jones. 1961. Relation of summer range condition to mule deer herd productivity. J. Wildl. Manage. 25:54-60.

Keay, J. A. and J. M. Peek. 1980. Relationships between fires and winter habitat of deer in Idaho. J. Wildl. Manage. 44:372-380.

Lancia, R. A., J. D. Nichols, and K. H. Pollock. 1996. Estimating the numbers of animals in

wildlife populations. Pages 215-253 in T.A. Bookhout, ed., Research and management techniques for wildlife and habitats. Fifth ed., The Wildlife Society, Bethesda, Md.

Leege, T. A. 1984. Guidelines for evaluating and managing summer elk habitat in northern Idaho. Wildl. Bull. No. 11. Idaho Dep. Fish and Game, Boise. 37pp.

Leptich, D. J., and P. Zager. 1991. Road access management effects on elk mortality and population dynamics. Pages 126-131 in A. G. Christensen, L. J. Lyon, and T. N. Lonner, comps., Proc. Elk Vulnerability Symp., Montana State Univ., Bozeman. 330pp.

Lyon, L. J. 1979. Habitat effectiveness for elk as influenced by roads and cover. J. For. 77:658-660.

MacLachlan N. J., P. V. Rossitto, H. W. Heidner, L. G. Lezzi, T. D. Yilma, C. D. DeMaula, and B. I. Osburn. 1992. Variation amongst the neutralizing epitopes of bluetongue viruses isolated in the United States in 1979-1981. Vet. Microbiol. 31:303-16.

Matschke, G. H., K. A Fagerstone, F. A. Hayes, W. Parker, R. F. Harlow, V. F. Nettles, and D. O. Trainer. 1984. Population influences. Pages 169-188 in L. K. Halls, ed. White-tailed deer ecology and management. Wildl. Manage. Inst., Washington, D.C.

Mattfeld, G. F. 1974. The energetics of winter foraging by white-tailed deer: a perspective on winter concentration. Ph.D. Thesis, State Univ. New York, Syracuse. 306pp.

Menzel, K. E. 1984. Central and Southern Plains. Pages 449-456 in L. K. Halls, ed., White-tailed deer: ecology and management. Stackpole Books, Harrisburg, Pa.

Moen, A. N. 1968. Surface temperatures and radiant heat loss from white-tailed deer. J. Wildl. Manage. 32:338-344.

Moen, A. N. 1973. Wildlife ecology. An analytical approach. W. H. Freeman and Co., San Francisco, Calif. 458pp.

Moen, A. N. 1976. Energy conservation by white-tailed deer in the winter. Ecology 57:192-198.

Owens, T. E. 1981. Movement patterns and determinants of habitat use of white-tailed deer in northern Idaho. M.S. Thesis, Univ. of Idaho, Moscow. 48 pp.

Ozoga, J. J. 1968. Variations in microclimate in a conifer swamp deeryard in northern Michigan. J. Wildl. Manage. 32:574-585.

_____, and L. J. Verme. 1970. Winter feeding patterns of penned white-tailed deer. J. Wildl. Manage. 34:431-439.

Parker, K. L., C. T. Robbins, and T. A. Hanley. 1984. Energy expenditures for locomotion by mule deer and elk. J. Wildl. Manage. 48:474-488.

Pauley, G. 1990. Habitat use, food habits, home range, and seasonal migration of white-tailed deer in the Priest River drainage, north Idaho. M.S. Thesis. Univ. of Idaho, Moscow. 152pp.

Peek, J. M. 1984. Northern Rocky Mountains. Pages 497-504 in L. K. Halls, ed., White-tailed deer: ecology and management. Stackpole Books, Harrisburg, Pa.

Pengelly, W.L. 1961. Factors influencing production of white-tailed deer on the Coeur d'Alene National Forest, Idaho. USDA For. Serv. North. Reg., Missoula, Mont. 190pp.

Sanyal, N., W. J. McLaughlin, J. F. Tynon, J. Tangen-Foster, S. Allen, and C. C. Harris. 1989. 1987-88 Idaho rifle deer hunting study. Vol. 1: Results. Contribution No. 500,

Idaho For., Wildl., and Range Exp. Stn., Univ. of Idaho, Moscow. 131pp.

Secord, M. L. 1994. Winter habitat use, migration, and spring and summer use of clear cuts by white-tailed deer in the Priest River Watershed of northern Idaho. M.S. Thesis, Univ. of Montana, Missoula. 143pp.

_____, S. Winslow, and P. Zager. 1993. White-tailed deer/forest management relations. Project W-160-R-20. Job Comp. Rep. Idaho Dep. Fish and Game, Boise.

Seton, E. T. 1909. Life histories of northern mammals. Vol. I. New York: Chas. Scribner's Sons. 673 pp.

Shaw, H. G. 1962. Seasonal habitat use by white-tailed deer in the Hatter Creek enclosure. M.S. Thesis, Univ. of Idaho, Moscow 52pp.

Shupe J. L., A. E. Olson, H. B. Peterson, and J. B. Low. 1984. Fluoride toxicosis in wild ungulates. J. Am. Vet. Med. Assoc. 185:1295-1300.

Sparrowe, R. D., and P. F. Springer. 1970. Seasonal activity patterns of white-tailed deer in eastern South Dakota. J. Wildl. Manage. 34:420-431.

Telfer, E. S. 1974. Logging as a factor in wildlife ecology in the boreal forest. The For. Chron. 50:1-5.

Thilenius, J. F. 1960. Forest utilization by cattle and white-tailed deer on a northern Idaho forest range. M.S. Thesis, Univ. of Idaho, Moscow. 87pp.

_____, and K. E. Hungerford. 1967. Browse use by cattle and deer in northern Idaho. J. Wildl. Manage. 31:141-145.

Unsworth, J. W., L. Kuck, M. D. Scott, and E. O. Garton. 1993. Elk mortality in the Clearwater drainage of northcentral Idaho. J. Wildl. Manage. 576:495-502.

Verme, L. J. 1963. Effect of nutrition on growth of white-tailed deer fawns. Trans. N. Am. Wildl. and Nat. Resour. Conf. 28:431-443.

Verme, L. J. 1965. Swamp conifer deeryards in northern Michigan, their ecology and management. J. For. 63:523-529.

Verme, L. J. 1969. Reproductive patterns of white-tailed deer related to nutritional plane. J. Wildl. Manage. 33:881-887.

Wetzel, J. F., J. F. Wambaugh, and J. M. Peek. 1975. Appraisal of white-tailed deer winter habitats in northeastern Minnesota. J. Wildl. Manage. 39:59-66.

Will, G. C. 1972. Studies of northern Idaho white-tailed deer, 1969-1971. Ph.D. Thesis, Univ. of Idaho, Moscow. 40 pp.

Williamson, S. J. 2003. White-tailed deer harvest management and goal setting in the northeast. Wildl. Manage. Inst. Washington, D.C. 164 pp.

Appendix I: Public Opinion Survey

1. I have hunted white-tailed deer in Idaho:

Group	Response	Never	1-5 yrs	6-10yrs	Over 10 yrs
Northern Idaho	366	1%	34%	13%	52%
Southern Idaho	290	58%	27%	4%	11%
Landowners	170	62%	19%	2%	16%

2. I have hunted mule deer in Idaho:

Group	Response	Never	1-5 yrs	6-10yrs	Over 10 yrs
Northern Idaho	366	29%	27%	7%	37%
Southern Idaho	292	4%	30%	13%	53%
Landowners	170	7%	9%	6%	78%

3. When I go deer hunting in Idaho I spend most of my time hunting for:

Group	Response	MD	WTD
Northern Idaho	347	8%	92%
Southern Idaho	283	89%	11%
Landowners	156	88%	12%

4. White-tailed deer compete with mule deer.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	365	14%	20%	35%	16%	14%
Southern Idaho	292	21%	21%	39%	10%	9%
Landowners	169	27%	18%	40%	9%	6%

5. I support IDFG programs to increase expansion of white-tailed deer in southern Idaho.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	366	15%	17%	51%	8%	8%
Southern Idaho	292	23%	20%	24%	13%	22%
Landowners	171	20%	16%	28%	11%	25%

6. White-tailed deer and mule deer should be managed as separate species, with separate seasons and tags.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	350	27%	14%	16%	12%	32%
Southern Idaho	281	33%	16%	18%	9%	24%
Landowners	162	38%	17%	23%	10%	12%

7. If separate tags are issued for white-tailed deer and mule deer and populations can support the harvest, hunters should be able to obtain one for each.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	351	47%	17%	15%	6%	15%
Southern Idaho	278	48%	19%	11%	7%	15%
Landowners	160	40%	18%	14%	8%	19%

8. IDFG should reduce the number of antlerless white-tailed deer on private land to resolve depredations.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	350	23%	25%	25%	13%	15%
Southern Idaho	278	20%	20%	33%	10%	16%
Landowners	163	25%	14%	33%	15%	13%

9. I support a license fee increase (less than $ 5.00) to fund a program that develops access onto private land for the purpose of hunting, including white-tailed deer.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	350	21%	19%	19%	10%	30%
Southern Idaho	281	31%	15%	13%	8%	33%
Landowners	161	20%	12%	21%	8%	39%

10. Tag prices for antlerless white-tailed deer should be reduced in areas where there are insufficient hunters to accomplish the desired harvest.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	350	40%	17%	22%	8%	12%
Southern Idaho	281	36%	23%	20%	7%	14%
Landowners	163	28%	16%	30%	11%	15%

11. More than one antlerless tag should be available per hunter in areas where there are insufficient hunters to accomplish the desired harvest.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	351	53%	23%	13%	6%	6%
Southern Idaho	281	44%	28%	12%	6%	10%
Landowners	163	45%	21%	18%	4%	10%

12. I am satisfied with the number of days of white-tailed deer hunting opportunity offered.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	364	43%	28%	14%	10%	5%
Southern Idaho	289	13%	17%	51%	11%	8%
Landowners	168	14%	18%	49%	11%	7%

13. I am satisfied with my chances to harvest a white-tailed deer.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	364	44%	32%	12%	7%	5%
Southern Idaho	289	10%	16%	53%	13%	8%
Landowners	168	20%	21%	44%	9%	5%

14. It is important for me be able to hunt for white-tailed deer at the same time and place as elk.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	364	47%	14%	25%	7%	7%
Southern Idaho	288	27%	20%	29%	8%	15%
Landowners	170	25%	13%	39%	6%	17%

15. It is important for me to be able to hunt for white-tailed deer at the same time and place as mule deer.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	364	43%	18%	27%	5%	7%
Southern Idaho	288	38%	20%	22%	8%	13%
Landowners	169	17%	19%	36%	10%	18%

16. It is important for me to be able to hunt white-tailed deer during early November.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	363	54%	19%	19%	3%	4%
Southern Idaho	288	26%	25%	40%	4%	5%
Landowners	169	18%	22%	46%	4%	10%

17. It is important for me to be able to hunt white-tailed deer during late November.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	364	61%	14%	19%	2%	4%
Southern Idaho	287	29%	19%	41%	6%	6%
Landowners	168	20%	19%	42%	5%	14%

18. I am satisfied with my chances to harvest a white-tailed buck.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	365	38%	30%	17%	7%	8%
Southern Idaho	288	11%	16%	52%	12%	9%
Landowners	167	15%	16%	55%	8%	7%

19. I am satisfied with my chances to harvest a mature white-tailed buck.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	364	31%	30%	17%	14%	8%
Southern Idaho	287	9%	15%	51%	15%	9%
Landowners	167	13%	15%	51%	10%	12%

20. Some units in Idaho should be managed for large and/or mature white-tailed bucks, even if it means restrictions such as shorter seasons or controlled hunts.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	365	13%	13%	30%	21%	24%
Southern Idaho	288	21%	18%	35%	10%	16%
Landowners	169	27%	20%	37%	7%	9%

21. It is important to be able to hunt deer in more than one part of the state in any given year.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	347	46%	15%	22%	6%	11%
Southern Idaho	279	55%	20%	14%	6%	5%
Landowners	166	41%	17%	22%	8%	12%

22. I would be willing to travel over 100 miles for sole purpose of hunting white-tailed does.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	350	16%	8%	25%	18%	33%
Southern Idaho	280	19%	18%	30%	15%	18%
Landowners	163	12%	6%	29%	15%	37%

23. I would be willing to travel over 100 miles to hunt white-tailed does if I could also hunt elk at the same time and place.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	350	30%	18%	27%	10%	15%
Southern Idaho	278	35%	24%	23%	9%	10%
Landowners	163	20%	18%	29%	10%	23%

24. I support the Clearwater Deer Tag as a way to regulate hunter numbers and reduce trespass complaints.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	345	29%	22%	28%	7%	14%
Southern Idaho	280	19%	21%	40%	8%	13%
Landowners	162	37%	16%	38%	2%	7%

25. I do not support the Clearwater Deer Tag and would prefer other ways to regulate hunter numbers and reduce trespass complaints.

Group	Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Northern Idaho	340	17%	7%	36%	17%	23%
Southern Idaho	279	16%	12%	46%	15%	12%
Landowners	160	13%	4%	51%	12%	20%

Appendix II: QUESTIONNAIRE

IDAHO DEPARTMENT OF FISH AND GAME
600 S Walnut / PO Box 25
Boise, Idaho 83707-0025

Dirk Kempthorne / Governor
Steve M. Huffaker / Director

October 4, 2004

Name Cont#
Address
City, State

Dear Hunter,

The Idaho Department of Fish and Game, in collaboration with sportsmen, has been working on a revision of Idaho's White-tailed Deer Management Plan. Numerous sportsmen have contributed to this effort by participating in surveys, public meetings, letters, and phone calls. An important focus of this planning effort is to recognize white-tailed deer as a unique and important wildlife resource in the state.

On November 18, 2004 the Idaho Fish & Game Commission will consider adopting a revised Idaho White-tailed Deer Management Plan and changes to white-tailed deer hunting opportunities. Specifically, a new White-tailed Deer Tag will be considered for 2005. This new tag could be used wherever white-tailed deer seasons occur and could only be used to harvest a white-tailed deer. The White-tailed Deer Tag would replace the existing Clearwater Deer Tag. The General Deer Tag and existing hunting opportunities, including hunting either mule deer or white-tailed deer, would remain unchanged over much of the state.

It is important for the Department and the Commission to know your opinion regarding a new White-tailed Deer Tag. Please take a few moments to review the background information, complete the brief survey, and return it in the prepaid envelope provided.

The Commission will use your input as they consider the new tag alternative. Your responses are valuable, so I am thanking you in advance for your participation.

Sincerely,

Bradley B. Compton
State Big Game Manager

Enclosures

White-tailed Deer Plan Revision
2004 Hunter Survey

BACKGROUND

Cont#

The Department has conducted numerous sportsmen surveys during the past 1½ years to measure satisfaction levels with current white-tailed deer management and to identify where the public thought improvements could be made. These surveys indicate that hunters shared general agreement on a number of management issues, including:

A. white-tailed deer should be managed separately from mule deer
B. hunting white-tailed deer at the same time and place as elk was desirable
C. hunting white-tailed deer at the same time and place as mule deer was desirable
D. hunting white-tailed deer during November was desirable
E. hunting deer in more than one part of the state in any given year was desirable
F. using the Clearwater Deer Tag to reduce the number of people participating in late-season white-tailed deer hunts was desirable

Based on these survey results the Department, working with deer hunters, developed a management strategy that attempts to address all of these issues. The strategy involves creating a White-tailed Deer Tag, valid statewide for white-tailed deer. Hunters could choose either the current General Deer Tag ***OR*** a White-tailed Deer Tag, but not one of each. The White-tailed Deer Tag would replace the existing Clearwater Deer Tag.

A general description of what opportunities would be offered by the General Deer Tag compared to the White-tailed Deer Tag is:

*Hunters could choose either a General Deer Tag **or** a White-tailed Deer Tag*	
General Deer Tag	**White-tailed Deer Tag**
V used to harvest a mule deer or white-tailed deer where general seasons allow both species	V used to only harvest a white-tailed deer in any season open to General Deer Tag hunters
V used to hunt statewide including the Clearwater Region during *early* seasons	V used to hunt statewide including *late* season white-tailed deer only hunts

SURVEY

Q1. It is important to find out if previous survey results still reflect deer hunter opinions today. How acceptable do you find the management issue statements listed above (A-F)? *(circle one)*

All Are Acceptable	Most Are Acceptable	Neutral	Most Are Unacceptable	All Are Unacceptable
1	2	3	4	5

Q2. How acceptable would it be to you if the Idaho Fish & Game Commission created the White-Tailed Deer Tag? *(circle one)*

Highly Acceptable	Moderately Acceptable	Neutral	Moderately Unacceptable	Highly Unacceptable
1	2	3	4	5

(Continued on back)

Q3. How acceptable would it be to you for the White-tailed Deer Tag to replace the Clearwater Deer Tag? *(circle one)*

Highly Acceptable	Moderately Acceptable	Neutral	Moderately Unacceptable	Highly Unacceptable
1	2	3	4	5

Q4. If the Idaho Fish & Game Commission adopted the White-tailed Deer Tag strategy, which tag would you most likely purchase? *(check one)*

- Ω General Deer Tag
- Ω White-tailed Deer Tag
- Ω Neither

Q5. Which species of deer do you normally hunt? *(check one)*

- Ω Mule Deer
- Ω White-tailed Deer
- Ω Both Mule Deer & White-tailed Deer

Q6. Which Game Management Unit (e.g. 1, 8A, 39, 76, etc.) do you hunt deer in most often? *(list **one** unit)*

Game Management Unit _____

Q7. How many years have you hunted deer in Idaho?

_____

Thank you for completing this survey and returning it to us by October 25.

Please mail your completed survey and any additional comments you may have to IDFG by using the enclosed postage paid envelope, or mail to Idaho Department of Fish and Game, Attn: Wildlife Bureau, 600 South Walnut/PO Box 25, Boise, Idaho 83707.

RESULTS

SAMPLE:

Seven hundred letters each were mailed to hunters in the Panhandle Region, the Clearwater Region, and in the remainder of the state, for a total of 2,100 letters. If no response was received from the letter, a follow-up phone call was made to solicit opinions. A total of 1,177 responses were received (56% response rate). An additional 446 responses were received on the same questionnaire from the Department website. The majority of responses from the web site were from the Clearwater and Panhandle Regions, in that order.

Q1. How acceptable do you find the 6 management issue statements (A-F)?

Group	Responses	Highly Acceptable	Moderately Acceptable	Neutral	Moderately Unaccept.	Highly Unaccept.	Unknown
	N=	1	2	3	4	5	6
Mail Survey	1177	27%	42%	17%	8%	4%	1%
Panhandle	394	28%	44%	13%	8%	5%	1%
Clearwater	411	29%	44%	14%	8%	4%	1%
South	372	26%	39%	23%	8%	4%	2%
Website	446	23%	53%	11%	10%	3%	---

Q2. How acceptable would it be to you if the Idaho Fish & Game Commission created the White-tailed Deer Tag?

Group	Responses	Highly Acceptable	Moderately Acceptable	Neutral	Moderately Unaccept.	Highly Unaccept.	Unknown
	N=	1	2	3	4	5	6
Mail Survey	1177	30%	22%	20%	8%	18%	1%
Panhandle	394	27%	22%	22%	7%	20%	1%
Clearwater	411	29%	22%	17%	10%	21%	1%
South	372	33%	22%	26%	9%	13%	1%
Website	446	34%	26%	10%	12%	18%	---

Q3. How acceptable would it be to you for the White-tailed Deer Tag to replace the Clearwater Deer Tag?

Group	Responses	Highly Acceptable	Moderately Acceptable	Neutral	Moderately Unaccept.	Highly Unaccept.	Unknown
	N=	1	2	3	4	5	6
Mail Survey	1177	32%	18%	22%	7%	17%	3%
Panhandle	394	31%	17%	25%	6%	17%	4%

Clearwater	411	29%	20%	13%	11%	24%	3%
South	372	37%	18%	30%	5%	9%	2%
Website	446	35%	22%	15%	9%	19%	---

Q4. If the Idaho Fish & Game Commission adopted the White-tailed Deer Tag strategy, which tag would you most likely purchase?

Group	Responses N=	General Tag	White-tail Tag	Neither	Unknown
Mail Survey	1177	65%	28%	4%	3%
Panhandle	394	68%	26%	4%	3%
Clearwater	411	43%	48%	6%	3%
South	372	88%	6%	3%	3%
Website	446	55%	41%	4%	---

Q5. Which species of deer do you normally hunt?

Group	Responses N=	Mule Deer	White-tail	Both	Unknown
Mail Survey	1177	28%	36%	33%	2%
Panhandle	394	4%	49%	45%	3%
Clearwater	411	8%	57%	33%	2%
South	372	76%	1%	20%	2%
Website	446	24%	33%	43%	---

Q6. Which Game Management Unit (e.g. 1, 8A, 39, 76, etc.) do you hunt deer in most often?
Game Management Unit _____

Q7. How many years have you hunted deer in Idaho?

Group	Responses N=	Minimum	25%	Median	75%	Maximum	Mean
Mail Survey	1150	1	7	15	30	72	20.5
Panhandle	384	1	6	18	30	72	20.3
Clearwater	402	1	10	20	34	70	22.1
South	364	1	5	16	29	60	18.9
Website	446	0	9	17	27.3	50	18.4

Appendix III: Habitat Management Guidelines

Understanding ecological demands on white-tailed deer and their habitat use strategies to cope with those demands allows us to formulate a basic set of habitat management guidelines. Whereas these guidelines are broadly applicable, unique local conditions may require more specific management prescriptions are appropriate.

- Simulate or promote natural disturbance regimes in white-tailed deer habitats on public lands.
- Provide closed canopy forests (old growth) in low elevation forests where white-tailed deer winter.
  - Maintain an overall 70% cover with 70% crown closure on winter ranges.
  - Provide half of the winter range as key winter range, with 85% crown closure, 250 mature stems/acre, and canopy heights at least 90 feet high.
- Provide suitable foraging areas
  - Promote use of 10-acre or smaller clearcuts
  - Design forest openings such that cover is within 150 feet of all parts of the forest opening.
  - Dispose of slash by fall broadcast burning or cutting to less than 1 foot high.
- Protect riparian areas as habitat and populations linkage areas, especially in southern Idaho, where white-tailed deer habitat is limited.
  - Where practical, fence riparian habitat, and maintain adjacent cover strips of at least 250 feet and at least 20 acres in size.
- Control noxious weeds and promote native habitats for white-tailed deer.
- Protect public safety and white-tailed deer migration and linkage areas in relation to highways and roads.
- Discourage human related disturbance and access in white-tailed deer wintering areas.
- Minimize and mitigate loss of white-tailed deer habitat and public access.
- Encourage adoption of development rules and limitations on dog control, fence construction, landscape plantings, and open space in white-tailed deer habitat.
- Encourage habitat conservation instead of feeding and other artificial means of concentrating or elevating white-tailed deer populations.
- Encourage sustained agriculture on ranch lands that provide white-tailed deer habitat.
- Encourage habitat conservation, restoration, and enhancement to reduce or eliminate white-tailed deer damage to agricultural and ornamental plantings.
- Cooperate and encourage managed access providing deer security and a balance between nonmotorized and motorized hunting opportunities.