

**DRAFT SUPPLEMENTAL
ENVIRONMENTAL IMPACT
STATEMENT**

for the

GAME MANAGEMENT PLAN

October 18, 2002

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

FACT SHEET

Project Title:

Draft Supplemental Environmental Impact Statement (SEIS) for the Game Management Plan

Project Description:

Public review of the first draft Environmental Impact Statement was completed on September 10, 2002. This most recent draft of the SEIS includes revisions based on that public review and edits by the lead agency, the Washington Department of Fish and Wildlife (WDFW).

Proponent:

WDFW. Tentative date for implementation is July 1, 2003.

Lead Agency:

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License Required:

No license is required for this proposal. Implementation of some strategies may require Hydraulics, Shorelines, or other permits.

Authors and Principle Contributors:

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Date of Issue of Revised Draft Supplemental EIS:

October 18, 2002

Date of action:

No specific action date is proposed by Washington Department of Fish and Wildlife at this time. Upon issuance of the Final EIS and adoption by the Fish and Wildlife Commission, subsequent implementation of management strategies will occur.

Type and timing of subsequent environmental review:

Individual projects or management strategies beyond this proposal will be reviewed on a case-by-case basis under the appropriate SEPA protocols.

Location of background data:

Location of background data used in the preparation of this draft SEIS are available for review at WDFW headquarters office (see location under lead agency above).

Supporting documents include:

Risks Involved in Current Management of Elk in Washington – J.M. Peek
Draft and Final WDFW Elk Herd Plans
Washington Residents' Opinions On and Attitudes Toward Hunting and Game Species Management – Responsive Management, M.D. Duda
Washington Hunters' Opinions On and Attitudes Toward Hunting and Game Species Management - Responsive Management, M.D. Duda
WDFW Biennial Report 1999-2001
WDFW Report: The Use of Non toxic Shot for Hunting in Washington
2001 Game Status and Trend Report
2000 Game Harvest Report
2002 Washington Hunter News (Game Trails)
2002 Hunting Regulation Pamphlets

Cost to the public for copy of SEIS:

Copies of the supplemental draft SEIS are available at no cost.

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For the
GAME MANAGEMENT PLAN

July 2003 – June 2009

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1.0 EXECUTIVE SUMMARY

1.1 Statement of Purpose and Need

The purpose of this draft Supplemental Environmental Impact Statement (SEIS) is to develop a Game Management Plan (GMP) to guide the Washington Department of Fish and Wildlife's management of hunted wildlife for the next six years. The focus is on harvest management (hunting) and those factors that have the greatest effect on game populations.

Washington's citizens played a key role in the development of these documents. Over the past two years, a variety of public involvement opportunities were utilized to solicit ideas. In addition, a very extensive public opinion survey was conducted for the Department by the private consulting firm, Responsive Management. The information and the priority issues identified in this comprehensive process directed the development of this SEIS and plan.

The initial Draft Environmental Impact Statement (DEIS) and GMP was available for public comment from July 26th to September 10, 2002. The comments and recommendations from that draft have been incorporated into this SEIS and GMP. Specific responses to comments are attached as an appendix.

The overall goals of the plan are to protect, sustain, and manage hunted wildlife, provide stable, orderly recreational hunting opportunity to all citizens, to protect and enhance wildlife habitat, and to minimize adverse impacts to residents, other wildlife, and the environment.

1.2 Impacts and Mitigation

In general the impacts of developing and implementing a management plan that achieves these goals will be positive to the environment. While there are potential negative impacts from some of the management activities, they are mitigated by the strategies identified in the plan. The analyses contained in this SEIS and the GMP represents the best information available to WDFW and is based on our long history of managing game species in this state. Through the extensive public review process of the DEIS, we expect that any significant environmental impacts or situations that are currently unknown to us will be brought to our attention.

The existing conditions, significant planned population impacts, and mitigation measures are addressed in various sections of the GMP, with existing conditions described extensively in Chapter One. They are also described for individual species or groups of species in Chapter Three under headings of population status, recreational opportunity, and data collection. Some impact assessment is also identified under these headings in Chapter Three, but significant impact assessment is more specifically identified within the "Issue Statements" under the separate titles: habitat, population, and recreation management, information and education, research, and enforcement. Strategies to address and mitigate impacts (issues) are listed for each objective under the Issue Statements. There are few if any significant impacts that have not or cannot be successfully mitigated as described.

With the goal of sustaining wildlife populations as the foundation, many of the strategies identify education, public involvement in decisions, and subsequent monitoring of public satisfaction as priorities. Tribal hunting strategies hinge on the development of cooperative harvest

management plans and increased coordination in the management of our respective hunters. Strategies to review and improve private land programs and address game damage rely on working groups of stakeholders to develop recommendations for future actions.

Attention is given to those values identified in recent public opinion surveys for hunting preferences, predator management, and fair chase regulations. The intent is to provide intensive public education on key issues to maintain public support for hunting; address human/wildlife conflicts with very focused hunting strategies; and provide a variety of hunting opportunities to satisfy different preferences while meeting sustainable game population objectives.

The basis for all actions and issues identified in this plan is science and the professional judgment of biologists. Chapter three focuses on the science and management of hunted species and lays out how those populations will be monitored to ensure long-term perpetuation.

Elk Management

The greatest issues for elk management stem from the recommendations of the panel of scientists and from existing elk herd plans. The most significant changes are to maintain or increase the number of mature (six points or greater) bulls that survive after hunting seasons and to increase harvest of antlerless animals. Both of these measures would be phased in over six years with expected improvements to recruitment and herd dynamics carefully monitored. Distinct population management units would be reviewed and updated to form the geographic boundaries for achieving herd objectives. From the recreational standpoint, current general season strategies would be maintained to the extent possible with a variety of hunting opportunities available and balanced within each of WDFW's seventeen districts. Spike only management would continue to be emphasized in most of eastern Washington and three point or better regulations in western Washington.

Deer Management

Recommended changes to deer management are more subtle with many factors that determine population levels beyond the control of state wildlife managers such as weather, wild fires, disease, and timber harvest. Activities that will be continued include improvement of population monitoring, mule deer research, and refinement of population model inputs such as mortality and recruitment rates. Actions will be increased for surveillance of Chronic Wasting Disease and to determine population impacts from hairlip syndrome. Hunting season changes will be similar to elk regarding maintenance of current general season strategies while ensuring that a variety of hunting opportunities are available and balanced within each of WDFW's seventeen districts. These guidelines would allow continued public debate over the current three point restriction for mule deer along the east slope of the Cascade mountains and in north central Washington as well as other preferences of hunters regarding season regulations while maintaining the minimum population objective of 15 bucks per 100 does after the hunting season.

Special Species Management

Management of bighorn sheep, mountain goats, and moose will largely continue along current paths. The greatest issues for bighorns continue to be a slow recovery of Rocky Mountain bighorns along the Snake and Grande Ronde rivers and reintroductions of California bighorns in

suitable portions of their historic range. With populations of mountain goats in apparent decline and subsequent declines in hunting opportunity, a new mountain goat research project is being initiated with federal funding. Moose populations continue to expand their distribution and management will focus on better documentation of suitable range and development of appropriate levels of harvest. Carefully regulated hunting will continue for all three species by issuing limited numbers of permits and managing for high success rates in these once in a lifetime opportunities.

Black Bear Management

Strategies for black bear management will continue to be refined mainly to address concerns for public safety, pet and livestock depredation, and timber damage. Hunting opportunities will be increasingly focused on those issues. The potential for a grizzly bear to be killed during the black bear hunting season is mitigated through an extensive educational program.

Cougar Management

The greatest changes in cougar management would be to identify cougar reserves where hunting is not currently allowed and the development of harvest guidelines. Hunting seasons would be modified as needed to achieve guidelines. Similar to black bear management strategies, harvest would be focused in those areas with concerns for public safety and pet and livestock depredation. A recently initiated cougar research project will be continued to determine behavior and habitat use of cougars with an emphasis on the urban-wild lands interface.

Management of Migratory Birds

The U.S. Fish and Wildlife Service and the Pacific Flyway states, including Washington, cooperatively manage migratory birds. Management efforts will continue to emphasize protection and enhancement of declining wetland habitats and closely monitored harvest management. Refinement of harvest strategies will further emphasize regional differences and address crop damage concerns, while protecting populations of migratory birds of management concern.

Management of Upland Game Birds

Management strategies for upland game birds (pheasant, quail, and partridge) and wild turkeys will continue to target managing populations in suitable habitats and providing appropriate harvest opportunities for these largely non-native species. Wild turkey populations have expanded dramatically due to enhancement activities over the past twenty years. Several strategies are identified to review current management and success of introductions to determine future direction and determine the level of risk to native species. Mountain quail are considered native to parts of south central and southeast Washington. Strategies are identified to re-establish mountain quail in their native range in eastern Washington.

Pheasants continue to be the focus of upland bird management efforts. Other upland bird populations are either considered healthier such as California quail or receive less attention from hunters. Dedicated and targeted funding for pheasant management is discussed with identified strategies for changes in emphasis. Access to private lands continues to be emphasized with

strategies to focus on expanding opportunities in higher quality pheasant habitat and hunting areas. Forest grouse management strategies suggest emphasis on improving harvest management and monitoring.

Management of Small Game Animals, Furbearers, and Unclassified Wildlife

Small game animal management strategies are largely focused on refining distribution information and addressing nuisance problems. Harvest and education strategies will attempt to minimize negative human-wildlife interactions.

1.3 Conclusions

The most significant impacts of developing and implementing the Game Management Plan that have been identified are game population changes to achieve objectives, potential disturbance or killing of non-target wildlife, and potential impacts of non native species on native wildlife. Where impacts occur to population levels from hunting, they are mitigated through the management strategies identified in the GMP. These typically include developing hunting season regulations, monitoring population trends, and monitoring the impacts of harvest and other management strategies.

The impact or issue of potential disturbance or killing of non-target wildlife is mainly important when related to threatened or endangered species. In those cases, mitigation is achieved through extensive coordination with managers responsible for recovery of listed species, hunting season regulations, and educational campaigns.

The main issue identified regarding non-native species was potential impacts of wild turkeys on native wildlife listed as threatened or endangered. The GMP identifies a strategy to re-evaluate current management and develop a separate plan for wild turkeys that will address potential impacts to native wildlife.

Overall, the development and implementation of the SEIS and GMP will result in achieving the legal mandate of WDFW by protecting, perpetuating, and managing wildlife while attempting to maximize hunting recreation. Over 3 million days of hunting recreation are provided each year and hunters contribute over 327 million dollars to Washington's economy. In addition, the 14 million dollars in license fees they pay each year, provides funding for conservation and management of the state's wildlife.

2.0 DESCRIPTION OF PROPOSAL AND ALTERNATIVES

2.1 Proposal:

The proposed activity is to develop a statewide management plan for hunted animals and birds, primarily focused on those species classified by the Washington Fish and Wildlife Commission as "game" species. The term of this plan is six years, beginning in 2003 and continuing through 2008. The overall emphasis is to accomplish the legislative mandates, balancing the often competing interests of Washington's citizens, while specifically addressing harvest management (hunting) and those factors that limit or significantly impact game populations in this state. This

six-year plan will guide the development of the next two, three-year hunting season packages (2003-05 & 2006-08). In addition the plan will direct the development of work plans and budget proposals with implementation beginning in July 2003.

The goals of the plan are to protect, sustain, and manage hunted wildlife, provide stable, orderly recreational hunting opportunity to all citizens, to protect and enhance wildlife habitat, and to minimize adverse impacts to residents, other wildlife, and the environment.

The establishment of hunting seasons and management of game species is consistent with the authorities granted the Fish and Wildlife Commission and Department of Fish and Wildlife by the Washington State Legislature through Title 77 of the Revised Code of Washington. The Fish and Wildlife Commission develops regulations under their authority through the adoption of Washington Administrative Code. In addition, various Commission and Department Policies and Procedures guide game management.

The principal law that directs the agency is RCW 77.04.012:

Mandate of department and commission:

“Wildlife, fish, and shellfish are the property of the state. The commission, director, and the department shall preserve, protect, perpetuate, and manage the wildlife and food fish, game fish, and shellfish in state waters and offshore waters.”

“The department shall conserve the wildlife and food fish, game fish, and shellfish resources in a manner that does not impair the resource. In a manner consistent with this goal, the department shall seek to maintain the economic well-being and stability of the fishing industry in the state. The department shall promote orderly fisheries and shall enhance and improve recreational and commercial fishing in this state.”

“The commission may authorize the taking of wildlife, food fish, game fish, and shellfish only at times or places, or in manners or quantities, as in the judgment of the commission does not impair the supply of these resources.”

“The commission shall attempt to maximize the public recreational game fishing and hunting opportunities of all citizens, including juvenile, disabled, and senior citizens.”

“Recognizing that the management of our state wildlife, food fish, game fish, and shellfish resources depends heavily on the assistance of volunteers, the department shall work cooperatively with volunteer groups and individuals to achieve the goals of this title to the greatest extent possible.”

“Nothing in this title shall be construed to infringe on the right of a private property owner to control the owner's private property.”

[2000 c 107 § 2; 1983 1st ex.s. c 46 § 5; 1975 1st ex.s. c 183 § 1; 1949 c 112 § 3, part; Rem. Supp. 1949 § 5780-201, part. Formerly RCW [75.08.012](#), [43.25.020](#).]

Implementing this mandate for game species requires knowledge of game population trends and impacts of hunting regulations, development and management of hunting seasons and actions that support (maximizing) public hunting recreation, and conservation of wildlife resources. The Fish and Wildlife Commission adopts major hunting seasons every three years. Minor adjustments are made annually such as modifying permit levels or to address crop damage or nuisance problems. Migratory waterfowl seasons are adjusted annually in coordination with the U.S. Fish and Wildlife Service and the Pacific Flyway Council.

The process for developing hunting seasons typically includes:

- 1) Determine the status of game populations and impacts of previous harvest strategies.
- 2) Preliminary discussion of ideas by the tribes, the public, state and federal agencies, and WDFW staff.
- 3) Development of season and regulation alternatives.
- 4) A formal drafting of regulations and establishment of a public comment period in compliance with the Regulatory Reform Act
- 5) Development of final recommendations by WDFW staff
- 6) Adoption of regulations by the Fish and Wildlife Commission

The process of establishing hunting seasons, bag limits, and geographical areas where hunting is permitted is exempt from State Environmental Policy Act (SEPA) rules through WAC 197-11-840. In addition, feeding of game, issuing licenses, permits, and tags, routine release of wildlife or re-introductions of native wildlife are also listed as exemptions from SEPA rules. Policy development, planning, and all other game management actions are not considered exempt from SEPA rules.

Statewide management plans have been formally adopted through the SEPA process for three game species, elk, black bear, and big horn sheep. In total, there are over 50 species classified as game species. The last comprehensive agency plan for management of wildlife was drafted in 1987, but was never finalized. Local elk herd and big horn sheep herd plans have also been developed or drafted by WDFW. These herd plans expand on the strategies identified in the statewide species plans, identifying more specific actions and local priorities. They are also the key document WDFW has used to facilitate discussion and cooperative management with tribes.

Currently, annual work plans are developed for agency staff to coordinate statewide activities, in many cases without benefit of comprehensive wildlife program plans. Activity priorities are developed at workshops conducted by Lands, Game, and Diversity Divisions and incorporated into annual work plans.

Priorities for game management activities are generally driven by:

- 1) Legal requirements such as development of hunting seasons;
- 2) Monitoring population trends and monitoring harvest with an emphasis on those species most impacted by hunting;
- 3) Activities directed by dedicated funding such as raffle and auction; migratory bird permit, and pheasant enhancement programs;
- 4) Federal, state, international, and tribal agreements;
- 5) Attention to species of management concern;
- 6) Responding to emergent issues such as wild fire, disease, severe weather events, or crop damage.

2.2 Current Conditions, Impacts, and Mitigation Measures:

The major environmental impacts of game management identified during the public involvement process and by WDFW staff include:

- 1) Long-term and temporary changes in the population levels of game animals (increases or decreases);
- 2) Potential disturbance or killing of non-target wildlife;
- 3) Seasonal increase in vehicle traffic;
- 4) Impacts to rural residents by hunters;
- 5) Impacts from non-native species on native wildlife;
- 6) The impact of lead shot and bullets on wildlife;
- 7) Winter-feeding impacts on disease control;
- 8) Impacts of high deer and elk populations on their habitat and property damage by game species;
- 9) Impacts on predator/prey relationships and public safety concerns from cougars and black bears.

Population Level Changes

The goal of regulated hunting is to sustain game populations within habitat and social limits. Large fluctuations in population levels of game species are generally driven by factors other than hunting. Examples are severe weather during critical times of year especially winter and spring, prolonged drought, disease outbreaks, and large scale habitat changes such as human development, fire, timber harvest levels, and agricultural programs. Because game species tend to be relatively abundant, state wildlife managers have limited regulatory authority over human caused habitat changes. Forest practice rules, agricultural programs, and growth management plans mainly incorporate regulatory considerations for listed or rare species. However, program and land managers, planners, and regulators may be influenced through technical recommendations, advice, and comment from wildlife managers in support of game species needs.

Hunting can be an effective tool to modify species numbers to achieve identified objective levels (Strickland et al. 1994). Population level objectives for various game species are identified in Chapter Three of the Game Management Plan (GMP). Some objectives will result in expanded hunting opportunities and efforts to reduce game population levels, some result in restricted hunting opportunities and activities to increase levels, and some maintain current levels. There are other species where hunting as currently provided does not have much influence over population levels. Many of these species population levels fluctuate without regard to hunting opportunity due to natural factors or due to limited interest from the public (especially hunters).

Disturbance of Non-target Wildlife

Disturbance and killing of non-target wildlife is mitigated in a number of ways. First, the majority of hunting seasons are provided in the fall after most wildlife nesting and reproduction has occurred. Seasons are also timed to avoid disturbance during critical wintering periods. The Fish and Wildlife Commission may classify species as protected or endangered if warranted, which gives them legal protection and subjects violators to criminal prosecution.

In cases where misidentification may be a problem, educational information (showing differences) may be provided in the hunting regulations pamphlet, during hunter education classes, and signs are often posted. For example, in situations where endangered species such as grizzly bears are being protected, information is available in the hunting regulation pamphlet, signs are posted at campgrounds, biologists patrol protected areas educating hunters, and the black bear season opening date is delayed to minimize potential encounters between hunters and grizzly bears.

Close coordination occurs between the WDFW's Diversity Division, responsible for non-hunted wildlife, and the Game Division to address potential management conflicts between species. The organizational structure and duties of field biologist positions include management responsibility for both game and diversity species. So the same individual is responsible for local recovery actions of listed species and for hunting seasons and management of game species. This coordination and organizational structure helps ensure that conflicts are identified and addressed. Significant issues and mitigation measures are identified in the species management sections in Chapter Three of the Game Management Plan. In addition, significant conflicts for threatened and endangered species are identified in recovery plans.

Vehicle Traffic

Hunting seasons are currently in existence and this proposal will not significantly change current levels of vehicle traffic. Seasonal increases in vehicle traffic in most areas are expected to be no greater than those caused by other forms of recreation such as camping in summer or snow sports in winter, but may increase total traffic in some areas. Fall hunting seasons, fit in well between other peaks of participation in outdoor recreation and provides significant support for rural economies.

Rural Resident Impacts

Local Fish and Wildlife Officers and Biologists meet informally with rural residents and periodically conduct more formal meetings to assess and mitigate landowner's concerns. Hunting seasons are modified to balance chronic hunter problems with property damage caused by game animals. In addition, Officers conduct emphasis patrols and surveillance when problems between hunters and landowners are particularly acute. There are currently over 150 Officer positions statewide with responsibility to enforce the Fish and Wildlife Code. Residents may report violations and request assistance to address problems with hunters from Fish and Wildlife Officers by contacting the Washington State Patrol.

Non-native Game Species

Impacts of non-native species on native wildlife have been expressed as a concern although there is limited evidence of one species causing declines in another. Washington's non-native game species include low land fox, wild turkey, ring-necked pheasant, Hungarian and chukar partridge, northern bobwhite and California quail. Many of these species have taken advantage of major habitat changes in this state. The most significant changes are the result of urbanization, agricultural development, and timber harvest practices. These large-scale habitat changes, not the presence of non-native species, are likely responsible for native species declines.

The current public concern is mainly focused on wild turkey management and potential conflicts with listed species. The wild turkey section in Chapter Three of the Game Management Plan calls for a re-evaluation of current management. That re-evaluation and subsequent development of a plan will include special emphasis on assessing and resolving (mitigating) conflicts with native wildlife species. In addition, one of the mitigating strategies under wild turkey research is to develop or participate in an inter-specific competition study.

Lead Shot Impacts

The concern that lead shot and bullets used by hunters results in ingestion and subsequent lead poisoning of wildlife has been addressed in a recent WDFW issue paper (see Fact Sheet under “Location of background data”). The review and subsequent modification of regulations emphasizes non-toxic shot restrictions (not bullets) in areas where wildlife may ingest deposited lead. This has included pheasant release areas where sheet water covers open fields and also included areas where raptors concentrate. Non-toxic shot restrictions for hunting waterfowl have been in place for over ten years.

As identified in the GMP, WDFW plans to continue surveillance of migratory birds for contaminants (such as lead) associated with mortality events and take corrective action. A recent example is a swan die-off caused by lead poisoning from shot deposition in Whatcom and Skagit counties and in southern British Columbia. A study to determine the source of the lead and begin remediation has been implemented. In addition, the project was the subject of an educational article in a 2002 WDFW hunting publication that was distributed to hunters (Game Trails, see Fact Sheet “Location of background data). Enforcement emphasis on lead shot violations will be increased in the area.

Winter Feeding of Wildlife

Winter-feeding has mainly been expressed as an issue with feeding of the Yakima elk herd and has been addressed in the GMP. The main concern for feeding is for potential spreading of diseases by concentrating animals. As the GMP states, we will follow disease management guidelines and action plans if a serious disease is detected. WDFW does not recommend or encourage winter-feeding of ungulates, but in the case of the Yakima elk herd, we recognize the extensive loss of access to winter range. When faced with the decision of significant reductions of the elk herd many years ago, WDFW chose to feed the elk. Feeding will continue as planned, however strategies stipulate reducing efforts and stations where possible. The GMP also identifies ongoing disease monitoring as an important component of management. Elk have been monitored for a variety of diseases and parasites for many years especially on the feedlots.

Habitat and Property Damage Impacts from “Over-population” of Ungulates

High deer and elk populations and impacts to habitat are most often expressed relative to areas where deer and elk cause property damage and for elk herds in general. The plan calls for an evaluation of habitat conditions in several elk herds and for evaluating the relative health of deer and elk populations more routinely using body condition information. A poor body condition score may be an indication of poor habitat conditions. Specific techniques for addressing

property damage are laid out in the plan with emphasis placed on dealing with specific problem animals through hunting.

Predator/Prey Relationships

Impacts to predators from human harvest of prey might be an issue where predator populations are limited. As discussed previously, many managers believe that most large-scale fluctuation of game species (especially prey) is the result of events not under the control of wildlife managers. It appears to require large reductions in prey to measurably impact predator populations and most hunting regulations and management strategies are not designed to cause large, widespread reductions (typically in excess of 30 percent of the population) in prey species. A question was specifically raised relative to snowshoe hare and lynx. Hunter interest in harvest of hares is not very high and the likelihood that hunting has much impact on hare numbers or on food availability for lynx is considered very low by the Department.

Concern for impacts of cougar and black bear on public safety as well as impacts to deer and elk populations was raised. The plan does identify strategies to address these issues mainly through focused hunting opportunities, education, and immediate response to complaints or incidents in cases of public safety. Recent efforts such as agency response and cougar removals in high incident areas will be continued and appear to be working as complaint levels have declined. Overall population management strategies are designed to ensure healthy cougar and black bear population levels outside of problem areas.

2.3 Alternative Methods for Game Management:

- 1) Comprehensive planning for game species management could be conducted for a longer period of time (than six years proposed) within the SEPA process.
- 2) It could be done through internal agency (operating type) plans, or internally developed on an annual work plan basis.
- 3) Planning could be conducted on a more sporadic basis with plans developed on a species by species basis as in past years.
- 4) Other recommendations were received during the public involvement process for managing game species with a reduced emphasis on hunting in general, but especially for predators and for those actions with limited public support.
- 5) In addition, a no action alternative could be implemented.

While there is the potential for a large number of alternative methods for management, many of the recommended alternatives are specific to individual species or species groups. Comments and recommendations for refinement of alternative strategies for each of those species or groups have been addressed within the second draft of the GMP. Only alternatives for developing long-term direction or planning will be discussed here.

- 1) A longer term than a six-year plan was considered, however the proposal is to span two three-year hunting season packages. This six-year term should be an adequate amount of time to determine the impacts or trends from changes in management. After that time period, a supplement to the EIS could be developed which would allow for modification of strategies within a reasonable period of time.

- 2) An operation type plan could be developed by WDFW outside of the SEPA process, but it might be at greater risk of legal challenge. An operation plan generally does not receive the same level of public involvement and support.

Annual work plans are an important aspect of planning, but without long term direction, may not adequately consider long-range objectives. Often annual work plans identify short term or reactive strategies. With a longer-term plan, proactive strategies can be emphasized reducing frequent changes in direction based on the latest emergency or controversy. With a plan, the public has a better understanding of where game management is headed and with measurable objectives, knows when success is achieved. Long-term plans facilitate monitoring WDFW accountability to the public. Annual planning will continue to be necessary to balance emergent issues with accomplishment of long-term goals.

- 3) The species by species approach was used to develop plans over the past six to eight years with limited results. In that time, only three statewide plans were completed. This proposal would provide guidance for all game species.
- 4) The suggested alternative to reduce emphasis on hunting of game species is addressed in the GMP in several ways. First, it is important to remember that the legislative mandate for the Fish and Wildlife Commission is to attempt to maximize public recreational hunting opportunities. However, public support for agency actions and for hunting is very important for the long-term management of wildlife. In general, the public is very supportive of hunting as determined in a recent public opinion survey (Duda 2002). The majority of the general public also supports hunting predators, though the level of support was lower than for species such as deer and elk. As identified in Chapter Two of the revised GMP, the Department plans to better identify those specific actions or regulations that the public does not support and recommend modifications as appropriate rather than a general reduction in emphasis on hunting.
- 5) A no action alternative would mean no change from what is currently in place. Individual species plans are periodically developed to address contentious species related issues when new funding becomes available or staff is reassigned. The last game species plan was adopted in 1997 and there are a total of three completed statewide plans out of over 50 game species. The plans are five years old and ready for revision. Currently, management direction hasn't been clearly described or discussed in a public fashion for the majority of game species.

3.0 AFFECTED NATURAL ENVIRONMENTS

3.1 Earth

Managing game species has no significant negative impact on natural conditions or processes on soils or substrates. Wildlife enhancement projects that involve construction will be subject to further environmental review as required by state and federal law.

The impacts of burrowing animals on managed or built soil environments (such as dikes) are mitigated through animal damage programs. Property owners may remove animals causing property damage as authorized under state programs and regulations.

3.2 Air

Exhaust from vehicles used to participate in hunting have minimal significant impact, and would have no greater impact on ambient air quality than general or other recreational vehicle use.

3.3 Water

Water quality may be affected by a number of game species. Over-abundant ungulate populations could reduce water quality by concentrating daily activities in riparian zones. This potential is greatest in dry climates during the summer. Because natural dispersal over the landscape during this time period generally results in low densities of animals, this problem has not been frequently documented in Washington. Another potential period of concentration of ungulates is during winter-feeding operations. Placement of feeding stations away from riparian corridors or exclusion from riparian areas is an important mitigation strategy currently utilized. Agency staff also address landowner and land manager concerns on a case-by-case basis to determine if the cause is related to excessive concentrations or the natural behavior of certain game species. Hunting regulations are adjusted as necessary to address cases of over abundance. Other actions to haze animals away from problematic areas may also be used.

The impacts of water dwelling game animals such as beaver and muskrat are well documented in the scientific literature and are generally considered positive in terms of water quality. Sustaining healthy population levels as described in the management plan helps ensure long-term benefits of these species to water quality. Harvest levels, established through hunting and trapping regulations, are designed to sustain populations on a broad scale. In addition, the Fish and Wildlife Commission may establish reserves or restrict harvest of species such as beaver in local areas where important water quality and habitat benefits are identified. Past examples include areas on the Olympic peninsula, Mount Saint Helens, and in Kittitas County.

Any planned wildlife enhancement projects that involve construction will be subject to hydraulic project approvals, permits, and other environmental review as required by state and federal law.

3.4 Animals

The existing conditions, significant planned population impacts, and mitigation measures are addressed in the species sections of Chapter Three of the GMP. The existing conditions are described extensively in Chapter One. They are also described for individual species or groups of species in Chapter Three under headings of population status, recreational opportunity, and data collection. Some impact assessment is also identified under these headings in Chapter Three, but significant impact assessment is more specifically identified within the “Issue Statements” under the separate titles: habitat, population, and recreation management, information and education, research, and enforcement. Strategies to address and mitigate impacts (issues) are listed for each objective under the Issue Statements.

Public comments and recommendations for alternatives and the priorities for strategies have been incorporated into the revised draft GMP. Specific responses to comments are attached as an appendix to this document.

3.5 Plants

In general, the issues for plants and game species management are identified under the habitat sections of the species sections in Chapter Three. The main issue, identified during the public involvement to date, was related to localized habitat impacts from over abundant or concentrated ungulates described previously. Specific concerns related to protection of important or rare plants were not identified and are usually addressed in other ways.

Land managers such as WDFW, Department of Natural Resources, and the U. S. Forest Service often protect rare plants from wildlife and from hunters by using exclusionary fences, regulations, and/or signs. These direct measures are considered most effective for protecting important plant resources. Any planned wildlife enhancement projects will be subject to environmental review as required by state and federal law.

3.6 Natural Resources

Negative impacts to other natural resources are considered insignificant. The impacts of the strategies identified in the GMP on the natural environment and long term conservation are positive. A stated goal in each of the species sections of the GMP is to preserve, protect, perpetuate and manage game species and their habitats to ensure healthy, productive populations. The strategies seek to maintain balance and harmony between game species, their environment, and humans.

4.0 ASSESSMENT OF IMPACTS TO THE BUILT ENVIRONMENT

4.1 Noise

Noise impacts from implementing the strategies identified in this plan are considered minimal. The likely causes of noise are from the discharge of weapons during hunting, vehicle traffic, and construction activities to improve and develop wildlife habitat. The discharge of firearms, in rural environments most associated with hunting, is generally not considered excessive or out of place. It is also no greater a factor than logging operations, farming practices, or other activities in these areas.

Vehicle noise is fairly consistent across rural landscapes with some increase during hunting seasons especially in farming areas. However this increase is not considered a significant cause of noise when compared to other factors in these areas. Planned wildlife enhancement projects will be subject to environmental review as required by state and federal law.

4.2 Public Health

In comparing statistics from the National Safety Council, hunting is a safe recreational activity. Fewer injuries occur while hunting than during many other recreational activities. This record of

safety may be attributed to mandatory hunter education for all hunters born after 1972 and to safety regulations such as it is unlawful to carry loaded guns in vehicles and the requirement that hunters (using modern firearms) wear visible orange clothing. In a recent public opinion survey, a majority of the general public agreed that hunting is a safe activity (Duda 2002).

Other public health issues are mainly associated with wildlife disease and parasites that might be transmitted to humans. In situations where diseases may be transmitted, warnings are provided through various public information means. While there are several wildlife diseases and parasites that may cause health problems for humans, public education campaigns have resulted in relatively few chronic or significant problems for Washington citizens. These health issues are addressed and coordinated by the Department of Health.

4.3 Land Use

Management of hunted wildlife does not preclude private property use or management. However property management may significantly impact game species management and population levels. In these situations, strategies have been identified in the species sections of Chapter Three to purchase easements, lease, acquire, or otherwise influence the use of key properties from willing property owners.

4.4 Aesthetics

Relevant aesthetic issues have also been addressed under the species sections of Chapter Three with strategies identified for developing a variety of expanded viewing or watchable opportunities.

4.5 Recreation

There are specific sections in Chapter Three dedicated to identifying existing recreation conditions, assessing impacts, and developing the necessary strategies (mitigation). Extensive public involvement has been focused on recreation and the specific strategies the public would like to see implemented. In addition, the hunting season setting process provides significant opportunity for the public to express their ideas for providing recreation related to game species. The recent public opinion survey showed that conflicts between other recreational users and hunters was minimal (Duda 2002). However, that response from the public may be influenced by past consideration from WDFW managers and the Fish and Wildlife Commission to avoid conflicts when establishing hunting season regulations.

4.6 Historic and Cultural Preservation

Chapter One of the GMP describes the significant historic and cultural relevance of hunting and management of game species in this state. Chapters Two and Three discuss the various strategies for preserving and enhancing these historic and cultural values. Protection of specific sites during construction of wildlife enhancement projects will be addressed through environmental review as required by state and federal law.

4.7 Agricultural Crops

The conversion of many areas of the state to agricultural uses has significantly benefited some game species and reduced available habitat for others. Former game species that experienced significant declines have resulted in state listing (classification) as threatened or endangered. These species are no longer classified as game species.

The main issues, identified in Chapters Two and Three of the GMP, are related to crop, livestock, and property damage from game species, predominately deer and elk. The conditions, impacts, and mitigation are identified in several sections of these chapters.

4.8 Transportation/Traffic Hazards

While peak traffic conditions on highways often result from “opening day” hunting season participation, many feel that it is no more congested than on several major holidays. Probably the greatest issue regarding public transportation is from vehicle collisions with wildlife. Vehicle collisions are most evident with deer and elk and cause substantial personal injury and property damage.

There are several major highways that coincide with deer and elk migration corridors or concentrations. Coordination with the Department of Transportation during development or improvement of highways is the key to mitigating impacts.

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