

**Pre-decision Environmental Assessment
Wildlife Services
Gray Wolf Damage Management
In Washington**

Lead Agency:

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Wildlife Services

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1 **List of Acronyms and Abbreviations**

2	APHIS	Animal and Plant Health Inspection Service (USDA agency)
3	AVMA	American Veterinary Medical Association
4	BLM	Bureau of Land Management (USDI agency)
5	CEQ	President’s Council on Environmental Quality
6	CFR	Code of Federal Regulations
7	EA	Environmental Assessment
8	EIS	Environmental Impact Statement
9	EJ	Environmental Justice
10	EO	Executive Order
11	ESA	Endangered species Act
12	FR	Federal Register
13	MIS	Management Information System
14	MOU	Memorandum of Understanding
15	NEPA	National Environmental Policy Act
16	NHPA	National Historic Preservation Act
17	NRMDPS	Northern Rocky Mountain Distinct Population Segment
18	RAG	Radio Activated Guard
19	RCW	Revised Code of Washington
20	T&E	Threatened and Endangered
21	USC	United States Code
22	USDA	United States Department of Agriculture
23	USDI	United States Department of the Interior
24	USFS	United States Forest Service (USDA agency)
25	USFWS	United States Fish and Wildlife Service (USDI agency)
26	WAC	Washington Administrative Code
27	WCMPW	Wolf Conservation and Management Plan for Washington
28	WDFW	Washington Department of Fish and Wildlife
29	WDM	Wildlife Damage Management
30	WS	Wildlife Services (USDA-APHIS program)

31

1 EXECUTIVE SUMMARY

2
3 This environmental assessment (EA) evaluates a proposed action and alternatives to assist the
4 Washington Department of Fish and Wildlife (WDFW), the United States Fish and Wildlife
5 Service (USFWS), and Native American tribal governments with management of gray wolf
6 (*Canis lupus*) conflicts throughout the state. The need for action is based on confirmed and
7 repeated livestock depredation, expectations of increases in damages as the wolf population
8 increases and expands in WA, and the potential for wolves to threaten human safety. The actions
9 to protect livestock are immediately necessary where the gray wolf population is managed by
10 WDFW. Assistance to WDFW may include technical assistance, harassment, lethal removal,
11 live-trapping, collaring, translocation, and monitoring wolves. USFWS may authorize WDFW
12 to conduct nonlethal wolf management (e.g., live-trapping, collaring, translocating wolves for
13 study, or hazing) in portions of the state where wolves are protected under the Federal
14 Endangered Species Act (ESA). When this occurs, WDFW may request the United States
15 Department of Agriculture, Wildlife Services (USDA) to assist. USFWS may also directly
16 authorize United States Department of Agriculture’s (USDA) Animal and Plant Health
17 Inspection Service (APHIS) Wildlife Services (WS) to provide assistance with nonlethal wolf
18 management actions where wolves are Federally listed, in accordance with ESA guidelines.

19
20 Legal status of wolves in Washington

21
22 The most pertinent and recent
23 regulatory action was a 5 May 2011
24 federal delisting of wolves from the
25 federal Endangered Species Act
26 (ESA) in eastern Washington, *which*
27 *will not be subject to judicial review*
28 (76 FR 25590; 5 May 2011, as
29 mandated by Public Law 112–10).
30 Under this rule, wolves were
31 federally delisted in Washington east
32 of Highway 97 from the British
33 Columbia border south to Monse,
34 Highway 17 from Monse south to
35 Mesa, and Highway 395 from Mesa
36 south to the Oregon border, but
37 remained federally listed west of
38 these highways (Figure 1) (74 FR
39 15123; April 2, 2009). This boundary
40 falls within WDFW’s eastern wolf
41 management zone.



42
43 **Figure 1. Map of the area designated by the U.S. Fish and
44 Wildlife Service as the Northern Rocky Mountain distinct
45 population segment of gray wolves.**

43 Wolves in the eastern third of Washington within the Northern Rocky Mountain Distinct
44 Population Segment (NRMDPS) boundary are federally delisted and now managed by WDFW
45 or, for those lands of Indian Nations which are identified as reservation lands, by the sovereign

1 tribal authority. Gray wolves are currently classified as endangered under Washington state law
2 throughout the state (Washington Administrative Code 232-12-297). Based on the expected re-
3 establishment of wolves in Washington, WDFW developed a Final Recommended Wolf
4 Conservation and Management Plan for Washington (WCMPW) on 28 July 2011
5 (<http://www.wdfw.wa.gov/publications/00001/>) to meet the requirements of the Washington
6 ESA. The WCMPW was adopted by the Washington Fish and Wildlife Commission on 3
7 December 2011. It “. . . provides recovery goals for downlisting and delisting the species and
8 prescribes strategies to achieve these goals, including management of conflicts with livestock
9 and ungulates” (Wiles et al. 2011).

10
11 Gray wolves are expected to continue to increase in number in Washington. Outside of the
12 NRMDPS boundary (western 2/3 of Washington, see Figure 1), wolves receive additional
13 protections under the federal ESA where they are currently federally classified as endangered (74
14 FR 15123; April 2, 2009). Where gray wolves are federally listed (those portions of Washington
15 west of the NRMDPS line), the U.S. Fish and Wildlife Service is the responsible federal agency
16 for regulatory compliance for any management decisions affecting wolves. On 7 June 2013, the
17 U.S. Fish and Wildlife Service announced the release of their proposal to delist Gray wolves in
18 Washington and elsewhere. The proposed rules were published in the Federal Register on 13
19 June 2013. The Fish and Wildlife Service welcomed public comment for 90 days from the date
20 of publication. If federal delisting occurs, gray wolves throughout the State would be managed
21 according the WCMPW (Wiles et al. 2011, or as amended). Again, the exception to state
22 management authority would be those lands managed under sovereign tribal authority.

23 24 Need for Action

25
26 The increasing presence of wolves in Washington initiated a need to mitigate and resolve
27 conflicts when wolves cause harm to livestock. This EA discusses the direct and indirect effects
28 of wolf depredation on livestock and public safety throughout Washington. The first likely wolf
29 depredation on livestock was reported in Stevens County in September 2007. More recent wolf
30 attacks on livestock were confirmed July through September 2012, in northeastern WA.
31 Between August and September 2012, WDFW killed seven wolves from the Wedge Pack,
32 including the alpha male and female, in order to reduce wolf predation on livestock and “reset
33 the stage for sustainable wolf recovery in this region” (WDFW Director Phil Anderson,
34 <http://www.wdfw.wa.gov/news/sep2712b/>).

35
36 The number of documented livestock killed by wolves to date in Washington may represent a
37 minimal number, with more livestock kills probably going unconfirmed. Lethal control of
38 wolves may be necessary to resolve repeated wolf-livestock conflicts and would be performed to
39 remove problem animals that jeopardize public tolerance for overall wolf recovery (Wiles et al.
40 2011). Wolf control may also be conducted to protect public safety. WDFW has requested WS
41 to assist so WDFW personnel may focus their efforts on conservation and recovery instead of
42 capture or removal.

1 Actions Analyzed

2
3 Wildlife Services (WS) proposes to assist WDFW, USFWS, and tribes with resolving gray wolf
4 damage, as requested by WDFW under WAC 232-12-297 and the WCMPW or similar guidance.
5 Actions would include assisting WDFW to reduce wolf conflicts to protect livestock, including
6 herding and guarding dogs, and human safety, as defined in WCMPW (Wiles et al. 2011). WS
7 also proposes to assist WDFW with identifying wolf depredation events on livestock, providing a
8 variety of non-lethal damage management assistance to livestock producers, research (e.g., live-
9 capture, monitoring), and public education. At the request and direction of WDFW, WS may
10 lethally remove de-listed wolves from packs identified as being involved in repeated livestock
11 depredations.

12
13 At the request of USFWS, or WDFW acting as an authorized agent of USFWS, WS may take
14 nonlethal actions (e.g., live-capture, monitoring) towards federally listed wolves. However
15 under certain extenuating circumstances, lethal actions may be necessary in defense of human
16 safety or for euthanasia in accordance with ESA guidelines¹ and Code of Federal Regulations
17 (CFR)². On tribal lands, WS may assist tribal governments with all forms of wolf management.
18 All assistance provided by WS would comply with the WCMPW or similar guidance.

19
20 Alternatives

21
22 A “No Action” alternative was evaluated for comparison to describe the environmental baseline.
23 “No Action” refers to maintaining the current WS Wolf Assistance Program, which provides
24 technical assistance and non-lethal direct control. If WS continued with the existing program
25 (“No Action”), WDFW would implement the WCMPW to the best of its ability, including lethal
26 control of wolves (Appendix A). The Eliminate the Current Wolf Assistance Program
27 alternative would prevent WS from conducting any wolf damage management, providing any
28 technical assistance, or assisting in public education and outreach of wolf issues. The Proposed
29 alternative, Expand the Current Wolf Assistance Program, would allow WS to respond to
30 requests from WDFW, USFWS, and tribes to assist with several aspects of the WCMPW,
31 including lethally removing problem de-listed wolves at the request of WDFW or tribes as part
32 of WDFW/USFWS overall conservation and recovery.

33
34

¹ Under Section 11(a)(3), “Notwithstanding any other provision of this Act, no civil penalty shall be imposed if it can be shown by a preponderance of the evidence that the defendant committed an act based on a good faith belief that he was acting to protect himself or herself, a member of his or her family, or any other individual from bodily harm, from any endangered or threatened species.”

² Fish and Wildlife Service regulations authorize certain federal and state employees and agents, when acting within the scope of their official duties, to take endangered and threatened species without a permit, "to aid a sick, injured, or orphaned specimen," to "dispose of a dead specimen," to "[s]alvage a dead specimen which may be useful for scientific study," or to "remove specimens which pose a demonstrable but nonimmediate threat to human safety." 50 C.F.R. §§ 17.21(c)(2), 17.21(c)(3), and 17.31(a) (1993).

1 Environmental Consequences

2
3 The Proposed Alternative was examined to identify potential effects on the Washington wolf
4 population, including the potential for wolf recovery and State ESA delisting. The EA examined
5 the effects on non-target animals, human safety, and on social and aesthetic perspectives
6 including public acceptance, humaneness, and aesthetic enjoyment of wolves. The effectiveness
7 of the alternatives in meeting the purpose and need and how well the alternatives alleviate
8 livestock damages is also discussed. This EA found that there would continue to be a growing
9 wolf population in Washington if the proposal is adopted, and it would likely have no or very
10 few negative effects on other animals and humans.

11
12 WDFW indicated that if Wildlife Services does not adopt the Proposed Alternative, necessary
13 lethal actions would be implemented by the State of Washington, or its agents, as is
14 demonstrated and discussed in the EA, WCMPW, and under the same strict guidelines as
15 allowed by WDFW (Appendix A). WDFW further indicated that increased livestock losses
16 would likely occur, more wolves might be removed, and WDFW's overall wolf conservation
17 efforts in Washington would be challenging without the assistance of the WS program (i.e.,
18 under the No Action or Eliminate the Current Program alternatives).

19
20 A No Action alternative (continue the current program of non-lethal and technical assistance
21 only) was evaluated in detail. Social perspectives were similar between the No Action and
22 Proposed Action alternatives. Some members of the public might prefer the No Action
23 alternative because WS would not kill any wolves, but WDFW, or its agents, would still remove
24 problem wolves as allowed under the WCMPW (Wiles et al. 2011) and state law (RCW
25 77.12.240) whether or not WS assisted. There could be negative environmental consequences if
26 private citizens were allowed to lethally control wolves, rather than state or federal wildlife
27 professionals because it is open to abuse when conducted by the public, thereby requiring law
28 enforcement follow-up (Bangs et al. 2006). If WS was not allowed to provide any technical
29 assistance or public education/outreach, wolf depredation may increase, which could result in a
30 need to lethally remove more wolves. Requiring WDFW to devote its staff time towards lethal
31 wolf control would detract from the time those personnel could devote to wolf conservation
32 (Appendix A, letter from WDFW).

33
34 The Eliminate the Current Program alternative would prevent WS from providing any direct or
35 technical assistance to WDFW, Washington citizens, and other public and private
36 agencies/corporations in Washington. WDFW stated if WS did not assist with wolf depredation
37 management, they would conduct the removals themselves. If WDFW professionals conducted
38 wolf removal, there would be little difference in the environmental effects, except that wolf
39 recovery may be hampered and possibly more wolves would need to be removed due to fewer
40 efforts directed at proactive and preventative measures (Appendix A). But, there could be negative
41 environmental consequences if private citizens were allowed to lethally control wolves, rather than
42 state or federal wildlife professionals. If WS was not allowed to provide any technical assistance or
43 public education/outreach, wolf depredation may increase, which could result in a need to lethally
44 remove more wolves. WDFW indicated that it would be required to direct staff time towards
45 responding to damages which would detract from wolf conservation and recovery (Appendix A).

1 CHAPTER 1. PURPOSE AND NEED FOR ACTION

2
3 **Introduction**

4
5 Historically, gray wolves (*Canis lupus*) were found throughout most or all of Washington before
6 1800. They were essentially extirpated from the state by the 1930s
7 (http://wdfw.wa.gov/conservation/gray_wolf/) through trapping, the use of toxicants, and
8 shooting. The USFWS successfully reintroduced gray wolves into Idaho and Yellowstone
9 National Park in 1995. From that, the wolf population in the northwestern United States
10 increased substantially, leading to an expanded presence of wolves in Washington since 2002.
11 Dispersal of wolves into Washington from British Columbia, Idaho, Montana, and Oregon has
12 resulted in resident breeding population.

13
14 The gray wolf is listed as an endangered species throughout Washington under state law (WAC
15 232-12-014) and under federal law [Endangered Species Act (ESA)] in the western two-thirds of
16 Washington. Wolves in the eastern third of Washington were removed from federal listing in
17 May 2011 and are now under state management (Figure 2).

18
19 Managing human/wolf conflicts is an integral part of wolf management in Washington where
20 emphasis is placed on goals and objectives that the Washington Department of Fish and Wildlife
21 (WDFW) adopted in the Wolf Conservation and Management Plan for Washington (WCMPW)
22 (Wiles et al. 2011). The WCMPW put forth strategies to minimize wolf conflicts by
23 incorporating conflict avoidance, information, education, and limited lethal removals when
24 repeated livestock depredations occur. The WCMPW defines “livestock” to mean: cattle, calves,
25 pigs, horses, mules, sheep, lambs, llamas, goats, guarding animals, and herding dogs. The WCMPW
26 also allows for responding to potential threats to human safety.

27
28 The WCMPW was initiated in 2011 to address the inevitable need to manage wolves in the state.
29 The WCMPW would also serve the State’s legal obligations under the Washington ESA (WAC
30 232-12-297).

31
32 Although livestock losses to wolves are minimal industry-wide, losses to individual operators
33 can be significant (Fritts et al. 1992, Mack et al. 1992). Control of offending wolves, along with
34 increased livestock management practices (e.g., carcass management, fencing, etc.),
35 compensation for losses, and communication with the public have all contributed to wolf
36 recovery where wolf-livestock conflicts exist (Fritts et al. 1992, Mack et al. 1992, Niemeyer et
37 al. 1994, Bangs et al. 2006).

38
39 As of November 2013, there were ten confirmed packs in Washington: seven packs in the
40 Eastern Washington management zone, three packs in the Northern Cascades management zone,
41 and none in the South Cascades & Northwest Coast management zone (Figure 2). There are also
42 two suspected packs in the Eastern Washington management zone and two packs bordering
43 Washington (one near Walla Walla and another in the north Cascade Mountains). Two solitary
44 wolves occur in northeastern Washington.

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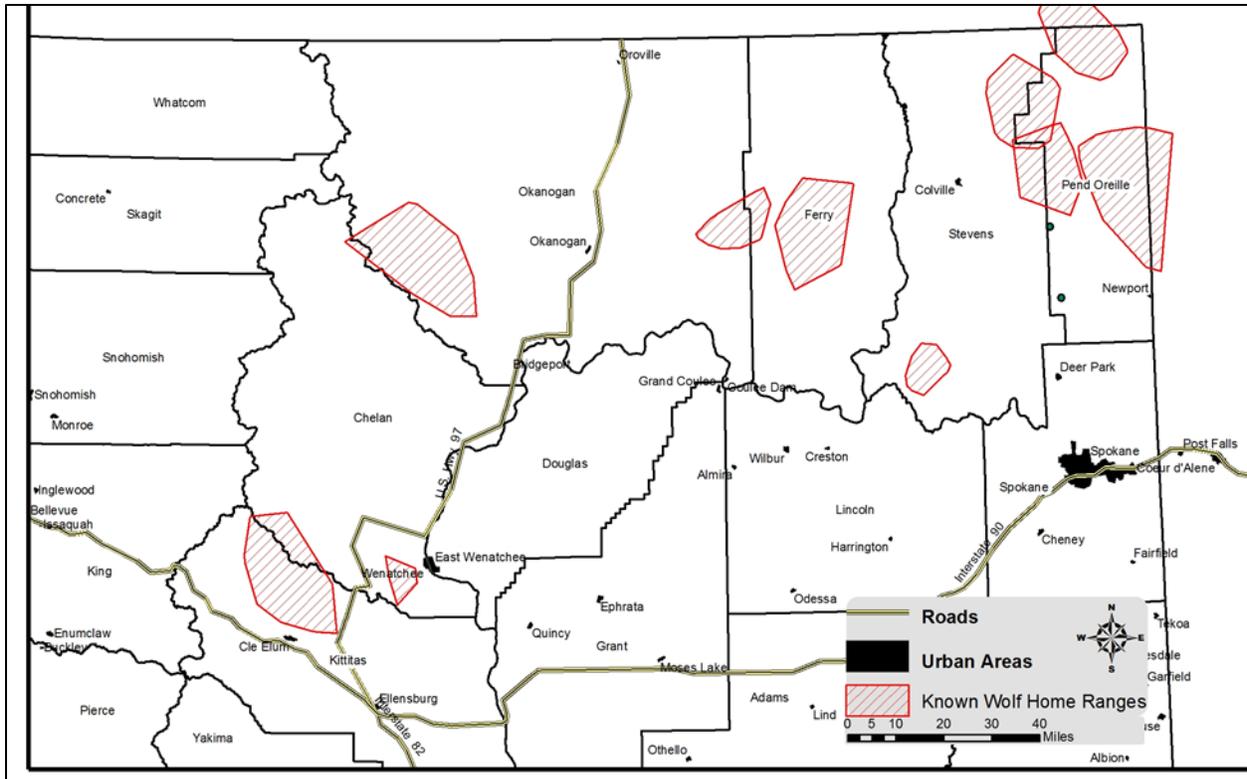


Figure 2. Map of known wolf home ranges in Washington as of 15 November 2013.

1
2 WDFW requested that APHIS, Wildlife Services (WS) assist with managing gray wolf damage
3 to livestock and potential risks to human safety, as defined in WCOMPW. As wolves become
4 established in the state, livestock damage is an anticipated result of actions by some wolves. The
5 reason WS is requested to assist in these cases is because WS has special expertise in evaluating
6 and confirming livestock depredation, technical expertise in non-lethal methods to minimize
7 wolf damage, expertise in live-capturing for radio collaring /monitoring, and removing
8 individual de-listed wolves responsible for depredation or that are deemed to be threats to
9 livestock/public safety. WS also has personnel to provide wildlife damage management
10 assistance, as well as aircraft and pilots/crews, and is readily suited to providing the requested
11 assistance in an efficient and effective manner.

12
13 The proposed action would predominantly occur where gray wolves are not federally managed
14 within Washington's portion of the Northern Rocky Mountain Distinct Population Segment
15 boundary³ (NRMDPS) (Figure 1). Gray wolves throughout Washington are protected under
16 State law as endangered (WAC 232-12-297), with three management zones having been
17 established by WDFW and Washington Fish and Wildlife Commission (Figure 2). Therefore,
18 gray wolves in NRMDPS area of the State (a portion of WDFW Eastern management zone) fall
19 under the protection and management authority of WDFW. WS may also respond to requests
20 from the USFWS and tribes regarding wolf damage management but does not anticipate taking

³ The NRMDPS in Washington includes that portion of Washington east of Highway 97 from the British Columbia border south to Monse, Highway 17 from Monse south to Mesa, and Highway 395 from Mesa south to the Oregon border (74 FR 15123; April 2, 2009).

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1 lethal actions for federally listed wolves.

2 3 Recent Legal Status Changes

4
5 Wolves were absent from Washington for more than 30 years when they gained endangered
6 status in 1973 with their listing under the federal ESA. In 1987, USFWS completed the revised
7 Northern Rocky Mountain Wolf Recovery Plan. Four years later Congress initiated an
8 administrative process to reintroduce wolves into Yellowstone National Park (YNP) and central
9 Idaho. In 1995 and 1996, 66 wolves were captured in Alberta and British Columbia, Canada. Of
10 those, 35 were released in central Idaho and 31 were released into YNP. Wolves were protected
11 as a “non-essential experimental population” under the federal ESA within a specified zone that
12 included portions of Idaho, Wyoming, and Montana.

13
14 When the WCMPW was initiated in 2007, gray wolves in Washington were under the primary
15 jurisdiction of the USFWS and were federally listed as endangered under the federal ESA of
16 1973. On 4 May 2009, wolves in the NRMDPS (east of Hwy. 97/17/395) of Washington were
17 removed from the protections of the federal ESA (Figure 1). However, on 5 August 2010, federal
18 protections for wolves in the NRMDPS portion of Washington were reinstated, which meant that
19 all wolves in Washington were federally-listed as endangered.

20
21 Subsequently, on 5 May 2011, the USFWS published a final rule implementing Public Law 112-
22 10, Section 1713, directing the Secretary of Interior to effectively delist wolves in the identified
23 NRMDPS, including the portion of that boundary identified in Washington (Figure 1) (76 FR
24 25590). That act of Congress changed the legal status of wolves in the eastern third of
25 Washington (the NRMDPS portion of Washington) to no longer fall under federal protection.
26 Thus the only protections in effect in this area are those established by State law under the
27 Washington Endangered Species Act (WAC 232-12-297). On 7 June 2013, the U.S. Fish and
28 Wildlife Service announced the release of their proposal to delist Gray wolves in Washington
29 and elsewhere. The proposed rules were published in the Federal Register on 13 June 2013. The
30 Fish and Wildlife Service welcomes public comment, which will be accepted for 90 days from
31 the date of publication.

32
33 Wolf management is a relatively new issue in Washington. During the initial phases of recovery
34 of the gray wolf under the Washington State ESA as outlined in the WCMPW, federally delisted
35 wolves involved in repeated depredation may be killed by WDFW, WDFW authorized agents, or
36 WS after confirmation by WDFW. The requester will document unsuccessful attempts to solve
37 the situation through non-lethal means. WS may assist WDFW with determining the cause of
38 death in wolf damage complaints; however WDFW will make the final determination. WS may
39 also assist USFWS with the management of federally listed wolves in accordance with USFWS
40 guidance and/or the WMCPW. WS may also assist tribes with management of wolves on
41 sovereign tribal lands under the WCMPW or similar guidance.

CHAPTER 1. PURPOSE AND NEED FOR ACTION

1.1 Purpose

Purpose of the Proposal

The purpose of the proposed action is to reduce livestock depredation by gray wolves in Washington. Additionally, the purpose of this proposal is to be available to assist WDFW, USFWS, sovereign tribal governments, or the public in the unlikely event that wolves threatened public safety [50 C.F.R. §§ 17.21(c)(3), .21(c)(4), .31(a) (1993)]. WS determined it would only conduct actions on behalf of WDFW, USFWS, or tribal governments in accordance with WDFW's conservation and management objectives and goals as defined in detail in the WCMPW or similar guidance.

1.2 Need for Action

Direct predation on livestock

The WCMPW calls for recovery of wolves in Washington, which provides a reasonable expectation that wolves in Washington will increase in number in the foreseeable future. Along with the expectation of increased wolf numbers is the expectation that depredation on livestock will also increase. The increasing presence of wolves in Washington initiated a need to mitigate and resolve conflicts when wolves cause harm to livestock. Lethal control of de-listed wolves may be necessary to resolve repeated wolf-livestock conflicts and would be performed to remove problem animals that jeopardize public tolerance for overall wolf recovery (Wiles et al. 2011). This EA discusses the direct and indirect effects of wolf depredation on livestock and public safety.

The first likely wolf depredation on livestock was reported in Stevens County in September 2007. More recent wolf attacks on livestock were confirmed July through September 2012, in northeastern WA. In August and September 2012, WDFW killed seven wolves from the Wedge Pack, including the alpha male and female, in response to escalating wolf attacks on livestock and "reset the stage for sustainable wolf recovery in this region" (WDFW Director Phil Anderson, <http://www.wdfw.wa.gov/news/sep2712b/>).

The number of documented livestock killed by wolves to date in Washington may represent a minimal number, with more livestock kills probably going unconfirmed. Lethal control of wolves may be necessary to resolve repeated wolf-livestock conflicts and would be performed to remove problem animals that jeopardize public tolerance for overall wolf recovery (Wiles et al. 2011). Wolf control may also be conducted to protect public safety. WDFW requested WS to assist so WDFW personnel could focus their efforts on conservation and recovery instead of capture or removal.

Confirmed losses underestimate probable losses

It is important to recognize that the numbers of livestock that have been confirmed to be killed by wolves to date in Washington may represent only the minimum numbers of livestock actually killed and injured by wolves, and that more livestock were probably killed but not confirmed as

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1 wolf predation (Bjorge and Gunson 1985, Oakleaf et al. 2003). For example, in the Order
2 Staying Enforcement of Rule Pending Judicial Review Conditioned on Providing Security, one
3 Oregon cattle producer declared that he suffered the loss of two pregnant cows, one bull, and two
4 yearlings to wolves during part of a one year, but only two of his animals were confirmed as
5 wolf kills (Cascadia Wildlands, et al. v. Dept. of Fish and Wildlife, et al., No. 149672 (Or. Ct.
6 App. Nov. 15, 2011) order staying enforcement of rule pending judicial review). For the
7 confirmed wolf kills, he received a compensation payment in the amount of \$800⁴ but he
8 incurred additional losses of \$6,600. Thus, this producer was compensated for about 11 % of his
9 direct losses which totaled \$7,400.

10
11 Oakleaf et al. (2003) conducted a study on wolf-caused predation losses to cattle on U.S. Forest
12 Service (USFS) summer grazing allotments near Salmon, Idaho, and concluded that for every
13 calf found and confirmed to have been killed by wolves, there were as many as 8 other calves
14 killed by wolves but not found by the producer, depending upon ruggedness or presence of
15 heavily timbered areas. In areas less rugged or timbered, the ratio could be lower. Bjorge and
16 Gunson (1985) likewise recovered only 1 out of every 6.7 missing cattle during their study and
17 suggested that wolf-caused mortalities were difficult to detect.

18
19 Confirmed incidents of wolf predation on livestock may involve only one or several livestock
20 killed or wounded per incident, but there have also been situations where larger numbers of
21 livestock have been killed in a single incident, particularly in the case of wolf attacks on sheep.
22 Muhly and Musiani (2009) reviewed data on wolf predation on livestock in Idaho, Montana and
23 Wyoming from 1987-2002 and found that while most wolf attacks on cattle involved the death of
24 only 1 animal per incident, wolf attacks on sheep typically involved killing about 14 animals per
25 incident, with up to 98 sheep killed in a single attack. In Oregon, one producer suffered 22 lamb
26 losses to wolves in one day. The same producer also incurred additional lamb losses and the loss
27 of a goat in the days and months that followed, all by the same wolves (ODFW 2012).

28
29 WDFW requires a standard of conclusive evidence before wolf-caused livestock depredations
30 are confirmed (Wiles et al. 2011). In some cases, wolves may have been responsible for the
31 death of a rancher's livestock, but there was insufficient evidence remaining to confirm wolf
32 predation. In other cases, those portions of the livestock carcass that might have contained the
33 evidence of predation may already have been consumed, carried off, or decomposed. Some of
34 these incidents might be classified as "probable" predation, depending on other evidence that
35 might still remain. But in many cases, there may be little or no conclusive evidence of predation,
36 other than the fact that wolves are known to be in the area and some livestock have seemingly
37 disappeared.

38
39 As wolf populations increase and expand their range, local decision makers must choose
40 management strategies that balance competing needs for wolf protection and the reduction of
41 wolf-caused damage (Mech 2001). Wolves prey on domestic animals in all parts of the world
42 where the two coexist (Mech and Boitani 2003, OWCMP 2010,). Data from the NRMDPS
43 suggest that individual wolves do not automatically prey on livestock, but members of wolf

⁴ Compensation was provided by a Defenders of Wildlife fund which is no longer in effect.

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1 packs encountering livestock on a regular basis are likely to depredate sporadically (Bangs and
2 Shivik 2001).

3
4 The relative risk of predation on livestock posed by individual wolves was analyzed by WS for
5 Idaho (USDA 2011a). The authors measured the likelihood for depredation to occur from
6 wolves, black bears, cougars, and coyotes and showed that individual wolves were more likely to
7 depredate on sheep and cattle than individual coyotes, bears, and cougars.

8
9 Where and how livestock are managed and where and how wolves are managed will influence
10 depredation rates. In Alberta, Canada, cattle on heavily forested but less intensively managed
11 grazing allotments suffered three times as many depredation incidents as more intensively
12 managed lease areas having less forest cover (ODFW 2010). In North America and Europe,
13 untended livestock occupying remote pastures suffered the greatest losses from wolves.
14 Newborn livestock held in remote pastures are more vulnerable to wolf predation.

15 16 Indirect depredation effects on livestock

17
18 Although direct losses of livestock due to predation are often conspicuous and economically
19 significant to affected producers, they likely underestimate the total impact on producers because
20 they do not consider indirect effects as a result of livestock being exposed to the threat of
21 predation (Howery and DeLiberto 2004, Lehmkuhler et al. 2007). Shelton (2004) suggested that
22 the value of livestock killed by predators is the “tip of the iceberg” in assessing the actual costs
23 that predators impose on livestock and producers including time and effort spent looking for
24 missing livestock, and increased costs associated with efforts to mitigate predation which may
25 include night confinement, improved fencing, additional livestock guarding animals, early
26 weaning, choice of grazing area, and/or increased feeding costs related to loss of grazing
27 acreage.

28
29 Using an example of a producer in Oregon who incurred \$7,400 in direct cattle losses (Cascadia
30 Wildlands, et al. v. Dept. of Fish and Wildlife, et al., No. 149672 (Or. Ct. App. Nov. 15, 2011)
31 order staying enforcement of rule pending judicial review), increased labor and other costs
32 brought his economic impact from wolves during a portion of one year to over \$18,000. Indirect
33 costs are not included in compensation payments, therefore, when considering his compensation
34 payment of \$800 for a portion of his direct losses, this producer was compensated for only about
35 four percent of his total (direct and indirect) losses. In another example (Cascadia Wildlands, et
36 al. v. Dept. of Fish and Wildlife, et al., No. 149672 (Or. Ct. App. Nov. 15, 2011) order staying
37 enforcement of rule pending judicial review), a cattle producer which estimated \$4,900 in cattle
38 losses to wolf depredation, (not including lost profits), also incurred additional management
39 costs of \$19,000. These examples illustrate the severity of indirect economic consequences that
40 wolf depredation and threats can have on individual livestock operations.

41
42 Indirect impacts to livestock arise from the stress and disruption associated with the presence of
43 wolves or wolves pursuing herd mates. Effects on livestock may include reduced weaning
44 weights, increased cattle aggressiveness, and delayed rebreeding, as well as increased production
45 costs associated with an increased level of vigilance, alteration of pasture rotation and turnout
46 timing, and handling costs. Harassment by predators may directly cause livestock to lose weight

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1 due to increased energy expenditure associated with running and loss of sleep, but may also
2 indirectly reduce the ability of ruminants to convert plant nutrients into weight gain due to
3 decreased rumination time (Howery and DeLiberto 2004). Cattle and sheep exposed to
4 harassment by predators become very skittish and spend much of their time remaining vigilant
5 for predators (Kluever et al. 2008). They do not disperse and feed normally, and therefore may
6 not take in the quantity and quality of feed they would have if unstressed, resulting in reduced
7 weight gains at the end of the grazing season (Muhly et al. 2010). In addition, cattle are
8 sometimes stampeded through fences and injured when wolves chase them (Lehmkuhler et al.
9 2007). Lehmkuhler et al. (2007) also suggested that wolves could stress cattle by chasing them
10 repeatedly which can also cause cattle to abort calves, calve early, or give birth to a weak calf.

11 Wolf predation on dogs

12
13
14 As wolves expand their range in Washington, dog owners will need to be aware of the potential
15 risks to their animals. Areas or situations where wolves and domestic dogs encounter each other
16 can result in dog mortality. In some instances, wolves may alter their regular movements or
17 activities to seek out and confront domestic dogs (ODFW 2010). In Wisconsin, wolf depredation
18 on hounds used for black bear hunting resulted in more compensation payments than for
19 livestock (Treves et al. 2002). In Minnesota, 25 dogs were reported killed by wolves in 1998
20 alone (Bangs and Shivik 2001, Mech and Boitani 2003). The killing of guard dogs by wolves
21 has been documented in the Rocky Mountain Recovery Area. However, guard dogs appear to be
22 more effective and less at risk when an adequate numbers of dogs per herd are present coupled
23 with the presence of trained herders. Livestock producers using working dogs in conjunction
24 with trained herders face added costs to protect their livestock from potential wolf depredation.
25 Working dogs and trained herders may be more effective for protecting sheep flocks than cattle
26 (ODFW 2010).

27
28 In Washington, some wolves are likely to occupy areas near human habitation or areas used for
29 recreation which could put pets or working dogs at risk. Dogs working cattle or sheep could be
30 vulnerable in these situations. Public education will be important in preventing wolf/domestic
31 dog interactions. Livestock guarding and herding dogs are often highly valued animals, both
32 from a monetary standpoint and in terms of the human-social bond. Individual livestock
33 guarding dogs may be worth more than \$1,000 each.

34
35 To date, no working dogs have been confirmed as lost due to a wolf attack in Washington;
36 however, one dog guarding sheep in the vicinity of the Teanaway pack was injured, requiring
37 veterinary care (Dave Ware, WDFW, pers. comm.). As wolf numbers increase, potential
38 conflicts could be expected.

39 **1.3 Scope of Analysis – Location and Actions Analyzed**

40 Location

41
42
43 Currently, federally delisted wolves occur within the Washington portion of the NRMDPS which
44 is defined as the area east of Highway 97 from the British Columbia border south to Monse,
45 Highway 17 from Monse south to Mesa, and Highway 395 from Mesa south to the Oregon

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1 border. Nonlethal wolf damage management may occur as requested by WDFW, USFWS, or
2 sovereign tribal governments wherever potential or confirmed repeated depredations arise.

3
4 Wolf depredation management actions to assist WDFW, USFWS, or sovereign tribal
5 governments are currently expected to occur in very limited and isolated geographic locations
6 because wolves are not yet numerous or widely distributed in Washington, and thus resultant
7 conflicts have been relatively few, compared with conflicts in other states or by other predators
8 in Washington. Even when wolf numbers increase, lethal removals would be limited to those
9 constraints presented by WCMPW, USFWS regulations, or tribal authority.

10
11 The likely locations included in the analysis would include any land at or near the depredation
12 incident, and is likely to occur on private, state, tribal, or federal land including USFS and
13 Bureau of Land Management (BLM) lands where livestock are grazed.

14
15 If wolves are removed from the federal ESA outside the NRM DPS, they would be managed by
16 WDFW under the WCMPW. Thus any actions allowed by the WCMPW, as amended, would
17 apply to wolves throughout the state. While no packs have become established in the Southern
18 Cascades and Northwest Coast, expansion into the western third of Washington is anticipated.

19 20 Site Specificity

21
22 This EA analyzes the potential impacts of WS' wolf damage management on all lands in
23 Washington where conflicts with livestock and human safety may occur. Specific locations or
24 times where such damage will occur cannot be predicted due to the mobility and unpredictability
25 of wolves, and the distribution of livestock across the Washington landscape. Therefore, *this EA*
26 *anticipates all substantive environmental issues that are likely to exist where wolf damage*
27 *management may occur.* The WS Decision Model (Slate et al. 1992) is the site-specific
28 mechanism for determining the most appropriate actions to take within the scope of actions
29 allowed under any NEPA decision. Any substantive new issue or change in circumstance that
30 might arise with wolf damage management which has not been considered in this EA may
31 require additional NEPA compliance. Therefore this EA meets the intent of NEPA with regard
32 to site-specific analysis.

33 34 Actions Analyzed

35
36 This EA evaluates WS proposed actions to assist WDFW, USFWS, or tribal governments in
37 providing advice, information, and direct assistance to livestock producers with non-lethal
38 methods that can be used to aid in wolf conflict prevention, and to lethally remove federally
39 delisted wolves at the request of WDFW or tribes if wolves have been confirmed as having
40 caused repeated livestock depredation or for USFWS under the guidance of the ESA. WS also
41 proposes to assist WDFW, USFWS, and sovereign tribal governments by using its expertise to
42 determine whether or not wolves were responsible for depredation. Other than on sovereign
43 tribal lands, only WDFW or USFWS will make the final confirmation of repeated livestock
44 depredation. Lethal take of federally delisted wolves under WDFW control is allowed by
45 livestock owners, (including family members and authorized employees) on private land they
46 own or lease at all listed statuses, with an issued permit, after documented depredation (injury or

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1 killing) in the area and efforts to resolve the problem have been deemed ineffective (WDFW
2 2011). On 26 April 2013, WDFW enacted an emergency rule:

4 **WAC 232-36-05100B Killing wildlife causing private property damage**

5 Notwithstanding the provisions of WAC 232-36-051:

6
7 1) An owner of domestic animals, including livestock, the owner's immediate
8 family member, the agent of an owner, or the owner's documented employee may
9 kill one gray wolf (*Canis lupus*) without a permit issued by the director, regardless
10 of its state classification, if the wolf is attacking their domestic animals.

11 (a) This section applies to the area of the state where the gray wolf is not listed
12 as endangered or threatened under the federal endangered species act.

13 (b) Any wolf killed under this authority must be reported to the department
14 within twenty-four hours.

15 (c) The wolf carcass must be surrendered to the department.

16 (d) The owner of the domestic animal must grant or assist the department in
17 gaining access to the property where the wolf was killed for the purposes of data
18 collection or incident investigation.

19
20 (2) If the department finds that a private citizen killed a gray wolf that was not
21 attacking a domestic animal, or that the killing was not consistent with this rule,
22 then that person may be prosecuted for unlawful taking of endangered wildlife
23 under RCW 77.15.120.

24 (3) In addition to the provisions of (1), the director may authorize additional
25 removals under RCW 77.12.240.

26
27
28 WS may act as an authorized agent on a depredation permit, to remove federally delisted gray
29 wolves under WDFW permit conditions for livestock producers or permittees. The specific non-
30 lethal and lethal measures to reduce wolf conflicts are discussed in detail in the Sections 2.1 and
31 2.3. At the request of USFWS or WDFW acting as an authorized agent of USFWS, WS may
32 take nonlethal actions towards federally listed wolves. WS would not take any actions towards
33 federally listed wolves outside the guidance of the ESA. On tribal lands, WS may assist tribal
34 governments with all forms of wolf management. All assistance provided by WS would comply
35 with the WCMPW or similar guidance.

36
37 A critical factor guiding this analysis is that WS wolf damage management activities would be
38 conducted only at the request of WDFW, USFWS, affected property owners (for nonlethal
39 assistance), and tribal governments. WS has no decision making authority for where or when to
40 remove problem wolves when acting at the request of USFWS, WDFW or WDFW authorized
41 depredation permit holders. WS can only decide if it will accept WDFW, USFWS, or tribal
42 requests to remove problem wolves. Wolf damage management strategies are established in the
43 WCMPW to ensure conservation and management goals will be met, therefore, any action
44 selected must fall within those measures allowed under WCMPW, as it is updated. As discussed
45 under the proposed action, on tribal lands WS would conform to similar implementation
46 guidelines for the management of wolf depredation including limitations on the lethal removal of

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1 wolves. Where wolves are federally listed, WS would not take any lethal actions outside the
2 guidance of the ESA.

3
4 WDFW will remove problem wolves in the absence of assistance from WS (Appendix A).
5 Requests for assistance by sovereign tribal governments in the foreseeable future are possible but
6 not likely. Therefore the actions analyzed in this EA are weighed against the environmental
7 baseline or the environmental status quo of wolf depredation management by the responsible
8 wildlife management agencies.
9

10 **1.4 WDFW Wolf Management Goals**

11
12 Under WDFW request, WS actions would abide by the WCMPW. Any work performed by WS
13 on tribal lands or where wolves are federally listed, would conform to tribal/federal regulations
14 or similar implementation guidelines outlined in the WCMPW.
15

16 **Managing livestock conflicts:** WDFW's objectives for addressing wolf damage to livestock, as
17 stated in the WCMPW, are to develop and implement a phased approach based on population
18 objectives for wolves that ensures conservation of the species while minimizing conflicts with
19 livestock.
20

21 **Managing wolf populations:** WDFW's wolf population objectives are separated into three
22 regions: Eastern Washington, Northern Cascades, and Southern Cascades and Northwest Coast
23 (Figure 2). The Northern Cascades zone and Southern Cascades and Northwest Coast zone fall
24 outside the NRMDPS and are currently under federal ESA rules.
25

26 The goals of the WCMPW are to:

- 27
- 28 • Restore the wolf population in Washington to a self-sustaining size and geographic
29 distribution that will result in wolves having a high probability of persisting in the state
30 through the foreseeable future (>50-100 years).
- 31 • Manage wolf-livestock conflicts in a way that minimizes livestock losses, while at the
32 same time not negatively impacting the recovery or long-term perpetuation of a
33 sustainable wolf population.
- 34 • Maintain healthy and robust ungulate populations in the state that provide abundant prey
35 for wolves and other predators as well as ample harvest opportunities for hunters.
- 36 • Develop public understanding of the conservation and management needs of wolves in
37 Washington, thereby promoting the public's coexistence with the species.
38

39 Meeting the delisting criteria outlined in WCMPW will necessitate tolerance for wolves on
40 public and private lands. Therefore, to achieve conservation of wolves in Washington as
41 required by the state ESA, the WCMPW outlines a range of options for livestock producers to
42 deal with problem wolves. While the WCMPW describes measures that WDFW will take to
43 conserve and manage the species, it provides for non-lethal and lethal management strategies that
44 could be taken to protect livestock from wolf depredation and address human safety concerns.
45 These measures are outlined in Section 2.3 and detailed in the WCMPW.
46

1 **1.5 Period for which this EA Remains Valid**

2
3 This EA may remain valid until WS, in consultation with WDFW, USFWS, and affected
4 sovereign tribal governments, determines that the need for action, issues driving this EA,
5 environmental conditions, or wolf management plans have changed substantially. Substantive
6 changes may trigger the need to review and amend the analysis in this EA, further involve the
7 public, and provide the decision-maker with additional information necessary to make an
8 informed decision about WS' role in wolf damage management in Washington. The need for
9 action to protect livestock from wolf predation and protect public safety, as described in Section
10 1.2, would be expected to increase over time as Washington's wolf populations grow and
11 expand. The WCMPW uses adaptive management to incorporate new information into
12 WDFW's management schemes which may affect when and where WS would take actions. WS
13 would follow this adaptive management scheme by adjusting to the changes. Wolf management
14 as conducted by WDFW is expected to continue into the foreseeable future and result in an
15 eventual State delisting.
16

17 **1.6 Decision to be Made**

18
19 Based on agency relationships, Memoranda of Understanding (MOUs) and legislative direction,
20 WS is the lead agency for this EA, and therefore responsible for the scope, content, and decisions
21 made. WDFW and USFWS were consulted during the development of the EA, and the USFS,
22 BLM, Washington Department of Agriculture (WDA), and tribes had opportunity for input
23 during preparation of the EA.
24

25 Based on the scope of this EA, the decisions to be made are:

- 26 • Should the Washington WS program respond to WDFW requests for assistance with the
27 WCMPW as well as assisting USFWS and sovereign tribal governments?
- 28 • Might there be other reasonable alternatives that could be selected?
- 29 • What are the likely environmental effects of the alternatives, and could the proposed
30 action have significant effects on the quality of the human environment and therefore
31 require an EIS?
32

33 **1.7 Summary of Public Involvement Efforts**

34
35 Scoping, agency, and public input in the NEPA process for this EA were conducted consistent
36 with WS NEPA procedures. Issues related to the proposed action were identified from:
37 cooperating agency input from WDFW including the WCMPW and Final EIS for Wolf
38 Conservation and Management Plan for Washington, prior WS experience with wolf
39 management issues in other states (USDA 2011a, USDA 2008, and USDA 2006), agency
40 knowledge of wolf damage management issues in Washington, and interagency and tribal
41 reviews of the draft EA.
42

43 This EA was made available to the public by posting the notice of its availability on the WS
44 website at http://www.aphis.usda.gov/wildlife_damage/nepa.shtml, by issuing a legal notice in
45 the Olympian on December 17, 2013, and by posting the pre-decisional EA on

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1 <http://www.regulations.gov/#!docketDetail;D=APHIS-2013-0107>. All substantive comments
2 received according to the instructions provided in the notices will be considered in the finalized
3 EA. A summary of public comments and response will be contained in Appendix C after they
4 are received.
5

6 **1.8 Relationship of this EA to other Environmental Documents**

7 Final Rule to Delist NRMDPS

8
9
10 On 5 May 2011, USFWS published a final rule to remove protections of the ESA from most of
11 the concurrently designated gray wolf NRMDPS (74 FR 15123). The population of wolves in
12 the eastern one third of Washington was included in this delisting, as they were part of the
13 NRMDPS. Background information on the NRM gray wolf population was contained in the
14 USFWS 2 April 2009, Final Rule (74 FR 15123) <http://www.regulations.gov>⁵
15

16 2011 Wolf Conservation and Management Plan for Washington.

17
18 The WCMPW provides relevant discussions which are summarized herein. The relationship of
19 the WCMPW to this EA is that it provides the framework and basis for describing the existing
20 environment and no action alternative, and it sets parameters and limitations on the proposed
21 action. The No Action and Eliminate the Current Wolf Assistance Program alternatives are not
22 consistent with WDFW management goals and objectives, as specified in the WCMPW.
23

24 Final Environmental Impact Statement for the Wolf Conservation and Management Plan for 25 Washington.

26
27 WDFW issued a Final EIS on wolf conservation and management for Washington on 28 July
28 2011. This document served as a backbone for the WCMPW and relevant information available
29 in the EIS has been incorporated by reference into this EA.
30

31 Wildlife Services Programmatic Final Environmental Impact Statement

32
33 WS issued a Final EIS on the national APHIS-WS program and Record of Decision published in
34 1995. The FEIS received minor updates in 1997 (USDA 1997). Relevant information available
35 in the EIS has been incorporated by reference into this EA.
36
37

⁵ Lawsuits challenging the USFWS April 2, 2009, final rule were filed in U.S. District Court for the District of Montana and U.S. District Court for the District of Wyoming. On August 5, 2010, the U.S. District Court for the District of Montana vacated and set aside our 2009 delisting rule (*Defenders of Wildlife et al. v. Salazar et al.*, (729 F. Supp. 2d1207 (D. Mont.)). On April 15, 2011, President Obama signed Public Law 112–10—The Department of Defense and Full-Year Continuing Appropriations Act, 2011. Section 1713 of Public Law 112–10 which required the Secretary of the Interior to reissue the final rule published on April 2, 2009 (74 FR 15123 *et seq.*), and that the reissuance could not be subject to judicial review.

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Final EIS on the Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho

The USFWS (1994) issued a Final EIS and Decision regarding the potential impacts of reintroducing wolves to YNP and central Idaho. Part of the analysis in the EIS assessed potential impacts of a fully-recovered wolf population on livestock. This EIS also assessed the anticipated impact of wolf removals for protection of livestock. Relevant analysis from USFWS (1994) is incorporated by reference in this EA.

1.9 Authority and Compliance

WS cooperates with land and wildlife management agencies to resolve wildlife damage problems in compliance with applicable federal, state and local laws.

1.9.1 Authority of Federal and State Agencies in Wolf Damage Management

APHIS-Wildlife Services

The WS program is authorized to carry out wildlife damage management programs necessary to protect the Nation's agricultural and other resources. The primary statutory authorities are the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c). WS recognizes that wildlife is an important public resource greatly valued by the American people. By its very nature, however, wildlife is a highly dynamic and mobile resource that can damage agricultural resources, pose risks to human safety, and affect other natural resources. The WS program provides federal leadership in helping to solve problems that occur when human activity and wildlife are in conflict with one another.

United States Bureau of Land Management (BLM)

The BLM manages lands under its jurisdiction for multiple uses including livestock grazing, recreation, wildlife habitat, and other uses while recognizing the state's authority to manage resident wildlife. The BLM recognizes the importance of managing wildlife damage on lands and resources under its jurisdiction, as integrated with its multiple use responsibilities. Similar to the USFS, BLM and WS have entered into a MOU which identifies the roles and responsibilities of each agency in animal damage management operations, coordination, and NEPA compliance. WS currently does not conduct work on BLM lands, but may so at their request or may coordinate with them when requested by a grazing leasee.

United States Fish and Wildlife Service (USFWS)

The USFWS is a federal agency within the U.S. Department of the Interior authorized to manage fish, wildlife, and habitats. USFWS mission reads, "working with others to conserve, protect, and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people." As the principal federal agency responsible for administering the ESA, the USFWS takes the lead in recovering and conserving imperiled species by fostering partnerships, employing scientific excellence, and developing a workforce of conservation leaders.

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United States Forest Service (USFS)

The USFS has the responsibility to manage National Forests for multiple uses including livestock grazing, timber production, recreation, and wildlife habitat, while recognizing the state's authority to manage resident wildlife. The USFS recognizes the importance of managing wildlife damage on lands and resources under their jurisdiction, as integrated with their multiple use responsibilities. The USFS and WS have a MOU agreeing that “APHIS-WS is designated as the lead agency concerning wildlife damage management (WDM) and wildlife disease activities, and that in evaluating the need for, and in conducting WDM programs, multiple-use values must be considered”. The MOU directs the USFS to coordinate with WS in the development and annual review of wildlife damage management plans governing WS’ activities on National Forest System lands and to cooperate in WS’ NEPA processes. WS currently does not work on USFS lands, but could be requested to do so in the future. Work done on USFS lands would be conducted in coordination with the Regional Forester and under annual WDM work plans. In this way, the USFS ensures that proposed wildlife damage management activities are consistent with forest land uses as allowed under its Land and Resource Management Plans and Forest Plans.

Washington Department of Fish and Wildlife

WDFW has the authority to manage all wildlife in Washington. RCW 77.04.012 mandates that “the commission, director, and the department [WDFW] shall preserve, protect, perpetuate, and manage the wildlife and food fish, game fish, and shellfish in state waters and offshore waters”. In part, this policy states that the WDFW shall conserve the wildlife and food fish, game fish, and shellfish resources in a manner that does not impair the resource and 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.

1.9.2 Compliance with Federal and State Laws, Policies and Executive Orders

Several federal and state laws regulate wildlife damage management. WS complies with relevant federal and state laws, and consults and cooperates with other agencies as appropriate.

Bureau of Land Management

Under the Act of 1931, as amended, (7 U.S.C. 426-426c), BLM and WS, along with the states, cooperate to manage animal damage on BLM lands. Similar to the USFS, BLM and WS have entered into a MOU which identifies the roles and responsibilities of each agency in animal damage management operations and coordination, and NEPA compliance. The BLM is responsible for the management of land and resources under its jurisdiction and for conducting non-predator control operations on its’ lands, including NEPA compliance on these activities. The MOU directs BLM to coordinate with WS in the development and annual review of animal damage management work plans governing WS’ activities on BLM lands and to cooperate in WS NEPA processes.

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Executive Order (EO) 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Environmental Justice (EJ) promotes the fair treatment of people of all races, income and culture with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment implies that no person or group of people should endure a disproportionate share of the negative environmental impacts resulting either directly or indirectly from the activities conducted to execute this country's domestic and foreign policies or programs. All WS activities are evaluated for their impact on the human environment and compliance with EO 12898 to ensure EJ. WS personnel use wildlife damage management methods as selectively and environmentally conscientiously as possible. No pesticides are proposed for use. It is not anticipated that the proposed action would result in any adverse or disproportionate environmental impacts to minority or low-income persons or populations.

EO 13045 - Protection of Children from Environmental Health and Safety Risks

Children may suffer disproportionately from environmental health and safety risks for many reasons. Wolf damage management as proposed in this EA would only involve legally available and approved damage management methods in isolated or remote situations and otherwise under circumstances where it is highly unlikely that children would have an opportunity to be exposed and potentially be adversely affected. Therefore, implementation of the proposed action would not increase environmental health or safety risks to children.

Federal Endangered Species Act

It is federal policy, under the ESA, that all federal agencies shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of the purposes of the ESA [Sec. 7(a)(2)]. Section 7 consultations with the USFWS are conducted to use the expertise of the USFWS to ensure that "any action authorized, funded, or carried out by such an agency is not likely to jeopardize the continued existence of any endangered or threatened species. WS conducts Section 7 Consultations with the USFWS when proposed actions may affect federally listed species.

Under Section 11(a)(3), "Notwithstanding any other provision of this Act, no civil penalty shall be imposed if it can be shown by a preponderance of the evidence that the defendant committed an act based on a good faith belief that he was acting to protect himself or herself, a member of his or her family, or any other individual from bodily harm, from any endangered or threatened species."

Fish and Wildlife Act of 1956 (section 742j-1) Airborne Hunting

This Act, approved in 1971, was added to the Fish and Wildlife Act of 1956 and is commonly referred to as the Airborne Hunting Act or Shooting from Aircraft Act. The Act allows shooting animals from aircraft for certain reasons including protection of wildlife, livestock, and human life as authorized by a federal or state issued license or permit. USFWS regulates the Airborne Hunting Act but has given implementation to the states. WDFW or its agent is authorized to

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1 conduct aerial shooting as described under this proposal according to WAC 232-12-057 (Hunting
2 with the aid of aircraft, boats, or other vehicles).

3 4 National Environmental Policy Act

5
6 NEPA requires that federal actions be evaluated for environmental impacts, that these impacts be
7 considered by the decision maker(s) prior to implementation, and that the public be informed.
8 This EA has been prepared in compliance with NEPA (42 USC Section 4231, et seq.); the
9 President’s Council on Environmental Quality (CEQ) Regulations, (40 CFR Section 1500 –
10 1508), and USDA APHIS NEPA Implementing Regulations (7 CFR Part 372).

11
12 One purpose of any EA is to “. . . briefly provide sufficient evidence and analysis for
13 determining whether to prepare an environmental impact statement or a finding of no significant
14 impact” (40 CFR 1508.9). If the environmental impacts are found to be significant, the NEPA
15 process would likely be continued and an EIS would be prepared. If the impacts of the proposal
16 are not found to be significant on the human environment, a Finding of No Significant Impact
17 and decision to implement a selected alternative may be issued.

18 19 National Historic Preservation Act (NHPA) of 1966, as amended

20
21 The NHPA requires federal agencies to: 1) evaluate the effects of any federal undertaking on
22 cultural resources, 2) consult with the State Historic Preservation Office regarding the value and
23 management of specific cultural, archaeological and historic resources, and 3) consult with
24 appropriate American Indian tribes to determine whether they have concerns for traditional
25 cultural resources in areas of these federal undertakings. We have determined that the proposed
26 action is not a federal “undertaking” as defined by NHPA and would not affect cultural
27 resources.

28 29 Tribal Authorities

30
31 When working with Tribes, the Departments recognize that Indian lands, whether held in trust by
32 the United States for the use and benefit of Indians or owned exclusively by an Indian tribe, are
33 not subject to the controls or restrictions set forth in federal public land laws. Indian lands are not
34 federal public lands or part of the public domain, but are rather retained by tribes or set aside for
35 tribal use pursuant to treaties, statutes, court orders, executive orders, judicial decisions, or
36 agreements. Accordingly, Indian tribes manage Indian lands in accordance with tribal goals and
37 objectives, within the framework of applicable laws.

38 39 U.S. Fish and Wildlife Service

40
41 Currently wolves in the NRM are managed by the USFWS with cooperation from the other
42 agencies and tribes. While all federal agencies have the responsibility to “utilize their authorities
43 in furtherance of the purposes of the ESA . . . pursuant to section 4” of the ESA, the USFWS has
44 primary authority for endangered species recovery. Currently, the USFWS has legal
45 responsibilities for wolf recovery in the western 2/3rd of WA; however, the USFWS can, through

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1 cooperative agreements and other documents permit the states and tribes to lead implementation
2 of wolf restoration efforts, as long as those programs are within the authorities of the ESA.

3
4 Fish and Wildlife Service regulations authorize certain federal and state employees and agents
5 (which could include WS), when acting within the scope of their official duties, to take
6 endangered and threatened species without a permit, "to aid a sick, injured, or orphaned
7 specimen," to "dispose of a dead specimen," to "[s]alvage a dead specimen which may be useful
8 for scientific study," or to "remove specimens which pose a demonstrable but nonimmediate
9 threat to human safety." 50 C.F.R. §§ 17.21(c)(3), .21(c)(4), .31(a) (1993).

10 11 U.S. Forest Service

12
13 Under the Act of 1932, as amended, (7 U.S.C. 426-426c), the USFS and WS, along with the
14 states, cooperate to manage animal damage on National Forest System lands. Under the
15 framework of a 2011 MOU between the USFS and WS (Appendix B), WS is designated as the
16 lead agency concerning animal damage management activities involving predators on National
17 Forest System lands. This includes a responsibility to maintain technical expertise in the science
18 of animal damage management, control tools and techniques, conducting management programs,
19 and complying with the NEPA for activities related to predator damage management.

20
21 The USFS is responsible for the management of land and resources under its jurisdiction. The
22 MOU directs the USFS to coordinate with WS in the development and annual review of wildlife
23 damage management plans governing WS' activities on National Forest System lands and to
24 cooperate in WS' NEPA processes. WS currently does not work on USFS lands, but could be
25 requested to do so in the future. Work done on USFS lands would be conducted in coordination
26 with the Regional Forester and under annual WDM work plans.

27 28 Washington Endangered Species Act

29
30 The Washington ESA (WAC 232-12-297) provides protection for any wildlife species native to
31 the state of Washington that is seriously threatened with extinction throughout all or a significant
32 portion of its range within the state and any wildlife species native to the state of Washington
33 that is likely to become an endangered species within the foreseeable future throughout a
34 significant portion of its range within the state without cooperative management or removal of
35 threats.

36 37 WDFW - Mandate (RCW 77.04.012)

38
39 RCW 77.04.012 mandates that "the commission, director, and the department [WDFW] shall
40 preserve, protect, perpetuate, and manage the wildlife and food fish, game fish, and shellfish in
41 state waters and offshore waters". In part, this policy states that the WDFW shall conserve the
42 wildlife and food fish, game fish, and shellfish resources in a manner that does not impair the
43 resource and may authorize the taking of wildlife, food fish, game fish, and shellfish only at
44 times or places, or in manners or quantities, as in the judgment of the commission does not
45 impair the supply of these resources.

1 CHAPTER 2. DESCRIPTION OF ALTERNATIVES

2
3 WDFW requested Wildlife Services (WS) to assist them with managing wolves and wolf
4 damage. Without WS assistance, wolf damage management will be implemented by WDFW
5 according to the WCMPW (Appendix A). WS developed three reasonable alternatives in
6 response to the request assist with wolf damage management in WA. The Current Program “No
7 Action” alternative was evaluated for comparison to describe the environmental baseline. “No
8 Action” means no change from the status quo. The status quo is that WS provides technical
9 assistance and some non-lethal control methods to people in Washington asking for help. If WS
10 selected the Current Program “No Action” alternative, WDFW would implement the WCMPW
11 to the best of its ability, including lethal control of wolves (Appendix A). The second alternative
12 is the Eliminate the Current Wolf Assistance Program alternative. This would prevent WS from:
13 1) conducting any wolf damage management, 2) providing any technical assistance, and 3)
14 assisting in public education and outreach of wolf issues. The Proposed alternative, Expand the
15 Current Wolf Assistance Program alternative, would allow WS to develop an integrated
16 approach to respond to requests from WDFW, USFWS, and tribes to assist with several aspects
17 of the WCMPW or similar guidance, including lethally removing wolves to enhance overall
18 conservation and recovery efforts.

19
20 Within the limited decision space afforded WS by the WCMPW, WS has no regulatory authority
21 or latitude to implement other approaches, nor can it require alternative actions/requests of
22 WDFW, USFWS, or tribes.

23
24 **2.1 Alternative 1 - No Action**

25
26 The Current Program “No Action” Alternative is for WS to continue its existing wolf damage
27 management actions, as is. This is the *environmental status quo*, a required NEPA component, a
28 viable alternative that could be selected, and serves as a baseline for comparing the action
29 alternatives (CFR 1502.14[d]). Under this alternative, WS would continue its current activities
30 conducting investigations of livestock conflicts, providing the public with advice and
31 recommendations on the appropriate use of non-lethal methods to protect livestock from wolf
32 damage, and performing select non-lethal control actions to reduce wolf damage.

33
34 Wildlife Services assists and reports to WDFW and USFWS (in areas where wolves are federally
35 listed) in conducting livestock damage investigations. When mortality events are determined to
36 be caused by predation, they are investigated further to determine the species that caused the
37 damage. If wolves may be potentially involved, WS coordinates investigation activities with
38 WDFW/USFWS and/or other appropriate agencies.

39
40 Non-lethal methods currently recommended by the WS program include: radio-activated guard
41 (RAG) devices, non-injurious harassment, non-lethal injurious harassment, fladry, range riders,
42 animal husbandry practices, installation of fencing, and the use of livestock guarding animals.

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1 WS provides the results of confirmed, probable, and possible wolf conflict investigations to
2 WDFW/USFWS, but would not provide lethal removal assistance to WDFW, USFWS, tribes, or
3 livestock producers to alleviate confirmed wolf damages. *WDFW stated that they would conduct*
4 *the necessary actions as described in the WCMPW to remove repeated depredating wolves if the*
5 *WS program were not available* (Appendices A). Therefore, the Current Program “No Action”
6 alternative must be evaluated as the conditions under which gray wolves are managed by
7 WDFW.

8
9 The WCMPW describes measures the WDFW would take to conserve and manage wolves,
10 including actions that could be taken to protect livestock from wolf depredation. The following
11 summarizes the primary components of the WCMPW, but removes WS from conducting lethal
12 removal or trapping of wolves for WDFW/USFWS under this “no action” alternative.

13
14 Under this alternative (No Action), WS would not conduct any trapping or lethal control.
15 However, the following actions may still occur by other agencies and/or individuals:

- 16
17 • In areas where wolves are federally delisted but listed as a state endangered species under
18 WAC 232-12-297, the WCMPW allows for the following actions, which may be
19 implemented by WDFW or its agents, USFWS, tribes, and WS (except for live trapping,
20 relocation, and lethal removal):
 - 21 ○ Non-injurious harassment: Livestock owners and grazing allotment holders (or their
22 designated agents) will be allowed to harass wolves with non-injurious techniques when
23 wolves are in close proximity to livestock or livestock grazing areas on private and public
24 land. These techniques could include scaring off an animal(s) by firing shots or cracker shells
25 into the air, making loud noises, or other methods of confronting the animal(s) without doing
26 bodily harm.
 - 27 ○ Non-lethal injurious harassment: This form of harassment involves striking wolves with non-
28 lethal projectiles, such as rubber bullets specifically designed and approved for use on
29 wolves, paintballs, and beanbags (Bangs et al. 2006). Livestock owners and grazing allotment
30 holders (or their designated agents) may be issued a permit to use non-lethal injurious
31 harassment on their own land or their legally designated allotment, respectively. *WS would*
32 *not apply injurious harassment toward wolves under this alternative.*
 - 33 ○ Relocate individual wolves: Relocating an individual wolf is a possible management tool to
34 remove the animal from a conflict situation. This activity would be evaluated on a case-
35 specific basis, but would especially be considered during endangered and threatened status.
36 *WS would not capture or relocate wolves under this alternative.*
 - 37 ○ Any relocation would be conducted by WDFW, or its agents, in consultation with the
38 appropriate land management agency and the USFWS, if wolves are federally listed in that
39 portion of the state.
 - 40 ○ *Lethal control to resolve repeated livestock depredations: WS would not conduct lethal*
41 *removal under this alternative; however, lethal removal may be used by others to stop*
42 *repeated depredation if it is documented that livestock have been killed by wolves, non-lethal*
43 *methods have been tried but failed to resolve the conflict, depredations are likely to continue,*
44 *and there is no evidence of intentional feeding or unnatural attraction of wolves by the*
45 *livestock owner.* In areas of Washington where wolves are federally listed, any proposal to
46 lethally control wolves would have to be consistent with federal law. WDFW does not have
47 authority to lethally remove wolves where they are federally listed. During state endangered
48 and threatened status, lethal control would be conducted by WDFW or its agents. If a

CHAPTER 2. DESCRIPTION OF ALTERNATIVES

1 situation were to occur where WDFW did not have the resources to address a situation of
2 repeated depredations, WDFW may consider issuing a permit to a livestock owner to conduct
3 lethal control during a specific time period on private lands they own or lease.

- 4 ○ Lethal take in the act of attacking livestock: *WS would not lethally remove wolves under this*
5 *alternative.* This provision allows lethal take of federally delisted wolves “in the act” of
6 attacking livestock (defined as biting, wounding, or killing; not just chasing or pursuing) by
7 livestock owners, family members, and authorized employees with an issued WDFW permit
8 on private land they own or lease (including federal grazing allotments) during all state listed
9 statuses. This provision would not be available in areas of the state where wolves are
10 federally endangered. Federal law does not allow lethal take of an endangered species in the
11 act of attacking livestock. At federal threatened status, there is more management flexibility
12 through federal regulations. Wherever wolves are federally listed in Washington, the U.S.
13 Fish and Wildlife Service is the lead management authority. In these areas, WDFW will
14 consult with and collaborate with the U.S. Fish and Wildlife Service on management
15 decisions and actions to ensure consistency with federal law. State law (RCW 77.15.120)
16 prohibits the killing of an endangered species unless it has been authorized by rule of the
17 commission. Subject to limitations established by the commission, certain private citizens
18 may kill wildlife that is threatening human safety or causing property damage. Under RCW
19 77.36.030, the conditions set by the commission must include “appropriate protection for
20 threatened or endangered species.” It also states that in establishing the limitations and
21 conditions related to wolves, the commission “shall take into consideration the
22 recommendations of the Washington state wolf conservation and management plan.” Under
23 WAC 232-36-051, it is unlawful to kill state endangered species causing damage to
24 commercial livestock unless authorized by commission rule or WDFW permit.

- 25
26 ● The federal Endangered Species Act provides that “...any person may take endangered wildlife in
27 defense of his own life or the lives of others” (50 CFR 17.21(c)(2)). State law also makes it
28 permissible to kill “...wild animals engaged in the physical act of attacking a person” (Chapter
29 WAC 232-36-050(3)(a)). It is important to understand that wolves passing near, watching, or
30 otherwise behaving in a non-threatening way near humans should not necessarily be considered
31 as dangerous. Under these circumstances, wolves could and should be hazed using non-lethal
32 methods; use of lethal force is unneeded and illegal.
- 33
34 ● A strong information and education program is proposed to ensure anyone with an interest in
35 wolves is able to learn more about the species and stay informed about wildlife management
36 activities.
- 37
38 ● Several research projects are identified as necessary for future success of long-term wolf
39 conservation and management. Monitoring and radio-collaring wolves are listed as critical
40 components of the WCMPW for conservation and communication with Washingtonians.

41
42 Based on experiences in other states, wolf depredation on livestock is expected to occur in
43 Washington as wolves become reestablished. Resolving wolf-livestock conflicts will require
44 non-lethal and lethal control responses. Resolution of conflicts will need to be managed in a way
45 that does not jeopardize recovery of the species and is consistent with state and federal laws.
46 This approach for managing a listed species is highly unusual, but is required because of the
47 desire to reduce conflicts and build social tolerance for wolves, thereby enhancing the chances
48 for reestablishing the species in the state.

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1 The WCMPW endeavors to provide as much flexibility to address conflicts as possible while still
2 remaining focused on achieving wolf conservation goals. This incremental approach is designed
3 to provide options to wolf managers, livestock producers, and the public while promoting the
4 goal of conservation for wolves. The WCMPW provides that WDFW can authorize the killing of
5 federally delisted wolves due to repeated livestock losses when the requester has documented
6 unsuccessful attempts to solve wolf-livestock conflict with non-lethal methods.

7
8 Management approaches are based on the status of wolves, ensuring that recovery objectives are met.
9 Non-lethal management techniques will be emphasized throughout the recovery period and beyond.
10 Actively informing and equipping landowners, livestock producers, and the public with tools to
11 implement proactive wolf damage management techniques will be an important aspect of this
12 approach. Lethal control will be used only as needed after case-specific evaluations are made, with
13 use becoming less restrictive as wolves progress toward delisting. *WS would not conduct lethal*
14 *removal under this alternative.*

15
16 Currently, state laws RCW 77.36 and WAC 232-36 allow owners of commercial livestock (cattle,
17 sheep, and horses held or raised by a person for sale) to be compensated by WDFW for animals
18 killed or injured by bears, cougars, and wolves if required conditions are met. This plan provides for
19 a state compensation program for documented confirmed and probable wolf-killed livestock in order
20 to reduce the financial losses that some livestock producers might experience while wolves are state
21 listed. Public support for a state-funded wolf compensation program was expressed in the comments
22 received during public meetings in 2007 and 2009 and the plan's public review period in 2009-2010.
23 An effective compensation program supported by the public and Legislature can also help maintain
24 tolerance for wolves among some landowners and livestock producers (Bangs et al. 2006, Stone
25 2009), which can help decrease illegal killings and aid wolf recovery.

26
27 The role of WS under this alternative would be *indirect*: WS could provide advice to producers
28 on the use of non-lethal methods, could investigate wolf damage incidents and report results to
29 WDFW, and could conduct select nonlethal harassment. WDFW makes the final determinations.

30 **Non-lethal Methods Available to WS, WDFW, USFWS, Tribes, and the Public**

31
32
33 Some wolf damage management methods are available for anyone to use. These consist of non-
34 lethal preventive methods such as cultural practices (*e.g.*, possible changes in livestock
35 management) and localized habitat modification (*e.g.*, clearing brush, improving fencing, etc.) on
36 private property. Cultural practices and other management techniques are implemented by the
37 resource owners/managers. Livestock producers and resource owners/managers are encouraged
38 to use these methods, based on the level of risk, need and professional judgment on their
39 effectiveness and practicality. WS', WDFW's, or USFWS' involvement in the use of these
40 methods is usually limited to providing technical assistance.

41
42 **Livestock Management Practices** are implemented to prevent or reduce wolf damage and may
43 include approaches such as: 1) maintaining healthy, well-fed animals, 2) properly disposing of
44 livestock carcasses (*i.e.*, removal, burying, liming, or burning), 3) conducting calving or lambing
45 operations in close proximity to the ranch headquarters when practical, 4) penning vulnerable
46 livestock at night where practical, 5) monitoring livestock on a regular basis to detect any
47 disease, natural mortality, or predation, 6) keeping livestock away from areas of historic wolf

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1 activity, and 7) incorporating other non-lethal methods. Property owners and land managers
2 could implement these management practices or request the assistance of other agencies or
3 private organizations to implement them, or take no action.

4
5 **Exclusion** with some type of fence or other barrier may be used to prevent or limit access by
6 predators to livestock pastures, calving or lambing areas, or livestock confinement areas. Where
7 practical and cost effective, sheep, calves, or other vulnerable livestock may be penned near
8 ranch buildings at night.

9
10 **Fladry** is a form of barrier and wolf deterrent involving red flags measuring approximately 3 x
11 18 inches, strung about 20 inches apart, hanging from a thin rope or cord suspended about 30
12 inches above the ground. Fladry is installed around pastures or other areas where livestock are
13 confined to discourage wolf access. Part of the repellency provided by fladry is probably related
14 to the frequent human visitation required to ensure that the flags remain freely suspended and
15 that the line is properly maintained. Like many other frightening devices, wolves eventually
16 habituate to this deterrent, but field trials in Idaho have shown that fladry may provide deterrence
17 for as long as 60 days (Musiani et al. 2003). Davidson-Nelson and Gehring (2010) reported that
18 if maintained, fladry can exclude wolves from livestock for up to 75 days; however Shivik et al.
19 (2003) found that fladry did not effectively protect bait sites from scavengers, including wolves.

20
21 **Turbo-Fladry** is very similar to regular fladry with the exception that the cord is substituted
22 with electrified wire attached to a standard livestock electric fence generator. As wolves
23 habituate to the fladry line and try to cross under it, the negative stimulus they receive after
24 getting shocked by the electrified barrier can increase the amount of time the barrier may remain
25 effective.

26
27 **Livestock guarding animals** such as large, aggressive breeds of guarding dogs (*e.g.*, Great
28 Pyrenees, Akbash, etc.) have been used with some success to protect livestock from wolves, but
29 multiple guard dogs work better than just one or two guard dogs (Bangs et al. 2005, Urbigkit and
30 Urbigkit 2010). Even with 3 or more dogs present, wolves occasionally kill or severely injure
31 livestock guarding dogs. Livestock guarding dogs are generally not killed as prey but because of
32 interspecies aggression (Bangs et al. 2005). Other types of livestock guarding animals, such as
33 llamas, which have been shown in some circumstances to be effective in protecting sheep from
34 coyotes, are not as effective in deterring wolves. Wolves probably view llamas as prey, and
35 multiple instances of wolves killing and feeding on llamas have been documented in the NRM
36 area (USFWS et al. 2003, 2008, 2009, and 2010).

37
38 **Guarding and hazing** involves using human presence to guard an area and then using
39 pyrotechnics or other frightening devices to frighten wolves from the site if/when they arrive.
40 Hazing can be used as an aversive technique, but requires that the technique be used consistently
41 whenever the animal attempts to prey on the protected resource so they do not identify
42 conditions when they can obtain prey without receiving a negative experience (Shivik 2004). If
43 there are any radio-collared wolves in a pack which may pose a threat to livestock, non-lethal
44 hazing efforts can be enhanced if the livestock producer or other personnel make use of a radio
45 receiver to determine when wolves are near or approaching the livestock (Bangs et al. 2006).
46 This requires diligent and persistent monitoring, but can make hazing much more effective.

1 **Frightening devices** are methods that usually involve lights, sound and/or motion devices
 2 designed to deter wolves from a certain area. Strobes and flashing lights, propane exploders,
 3 sirens, and various combinations of these devices have all been used in attempts to reduce
 4 livestock losses, with wide-ranging degrees of effectiveness (Linhart 1984, Andelt 1987).
 5 Animal habituation (becoming accustomed) to the stimulus is one of the primary limiting factors
 6 for repellents. Essentially, anything new or different is likely to elicit avoidance behavior by
 7 canids, but this effectiveness disappears over time. Moving the devices intermittently and
 8 randomly as well as alternating the stimuli (*e.g.*, a different type of noise or light) may extend the
 9 effective period of the system (Shivik and Martin 2001). The period of efficacy may also be
 10 extended by using systems which are motion-activated or only activated when a wolf wearing a
 11 transmitter collar comes into close proximity to the protected site. The RAG box is one such
 12 frightening device that employs this approach, and RAG boxes have been field-tested in Idaho
 13 with some success (Breck et al. 2002). Use of the RAG box in Idaho has been most effective in
 14 protecting livestock in small (≤ 60 acre), fenced-in areas.

15
 16 **Non-lethal Methods Available to WDFW, USFWS, and Tribes, but not WS**

17
 18 Some non-lethal methods, research projects, and population monitoring efforts involve capture
 19 and handling wolves which may not be conducted by the general public. Methods that require
 20 capture and handling of wolves under state authority would only be conducted by WDFW
 21 personnel or agencies permitted by the WDFW. Sovereign tribal governments could act under
 22 their own authority on sovereign tribal lands.

23
 24 **Foot-hold traps** can be effectively used to live capture wolves, and are an extremely important
 25 tool in wolf damage management. When wolves are trapped they are ordinarily physically
 26 restrained or chemically immobilized, radio-collared, and released on site, or euthanized on site.
 27 Effective trap placement, pan-tension devices and the selection and placement of appropriate
 28 lures and baits by trained personnel contribute to the foot-hold traps' selectivity. Traps may also
 29 be modified with small protrusions or "nubs" on the jaws to reduce the likelihood of the wolf's
 30 foot moving back and forth in the jaws, thereby reducing the potential for trap-related injury.
 31 Washington State has a trap check rule in effect requiring that all foothold traps be checked
 32 every 24 hours.

33
 34 Disadvantages of traps include the difficulty of keeping them operational during rain, snow or
 35 freezing weather, and the fact that they cannot be 100% selective. Although pan-tension devices
 36 are effective in reducing the likelihood of unintentional capture of non-target species smaller
 37 than wolves (*e.g.*, red fox, coyote), they cannot preclude the occasional capture of larger non-
 38 target species such as cougars or black bears. They do, however allow for the option of releasing
 39 non-target animals which may infrequently be captured.

40
 41 **Foot snares** are devices consisting of a cable loop and a locking device that captures an animal
 42 around its foot or lower leg. The cable may be activated around the lower leg with a spring-
 43 powered throw-arm (Aldrich-type) or trap-type (Belisle) device. The foot snare can be modified
 44 with a stop on the cable to restrict the closure of the loop. Careful snare placement, pan-tension
 45 devices and the selection and placement of appropriate lures and baits by trained personnel
 46 contribute to the selectivity of this device. As with foot-hold traps, when foot snares are used as

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1 a live-capture device, wolves would ordinarily either be radio-collared and released on site, or
2 euthanized. Foot snares are more often used for capture of cougars and black bears than for
3 wolves. Washington State has a trap check rule in effect requiring that all foot snares be checked
4 every 24 hours.

5
6 **Drug delivery tools** are capture tools that utilize a dart or syringe filled with an immobilization
7 drug, dispensed from a specially-designed device. These devices include hand or poll syringes,
8 blow guns, and compressed gas or gun-powder charged systems. They would often be used on
9 wolves when conducting live-capture operations from a helicopter. Once immobilized, the
10 animal may be handled safely and processed for research or monitoring purposes. Use of drug
11 delivery tools would have no effect on non-target species because positive target species
12 identification is made before animals are darted.

13
14 **Neck Snares** can be used to kill, or to live-capture animals with a cable loop around the neck
15 and the use of a “stop” to prevent full closure of the loop. Improved methods for use are being
16 developed for live-trapping wolves and other carnivores (Olson and Tischaefer 2004). Snares
17 are ordinarily not as affected by rain, snow, and freezing weather as foot-hold traps are. These
18 devices offer a degree of selectivity based on the size of the cable loop and the height of the loop
19 above ground level. They also offer a viable live-capture alternative to foot-hold traps during the
20 winter months, when freezing temperatures combined with restricted blood circulation could
21 result in damage to the wolf’s foot.

22 23 **Non-lethal Methods which may Require Special Authorization from WDFW, USFWS, 24 and Tribes**

25
26 These methods are not available to WS under this alternative (Alternative 1, NO Action). Some
27 animal behavior modification systems involve capturing and fitting wolves with radio-
28 transmitting collars to deliver or trigger repellent stimuli (*i.e.*, aversive conditioning). Other
29 systems sometimes referred to as “less than lethal munitions,” involve shooting wolves with
30 projectiles such as rubber bullets or bean bag rounds. These techniques involve intentionally
31 using painful stimuli to modify wolf behavior and WDFW and the USFWS may require permits
32 or other authorizations to use these methods and any other experimental wolf damage
33 management techniques. Methods that require capture and handling of wolves would be
34 conducted only by personnel from WDFW, USFWS, or tribes, and / or personnel authorized by
35 either of these entities.

36
37 **Aversive Stimuli** are stimuli that cause discomfort, pain and/or an otherwise negative experience
38 paired with specific behaviors to achieve conditioning against these behaviors. One example
39 would be using something like a dog training shock collar that is activated when wolves come
40 into close proximity to a protected area such as livestock pens (Shivik et al. 2003, Schultz et al.
41 2005).

42
43 **Non-lethal Projectile** use involves guarding an area and then using rubber bullets, bean bag
44 rounds or other non-lethal projectiles to prevent a predation event. They can be used as an
45 aversive technique, but require that the projectiles be used consistently whenever the predator
46 attempts to prey on the protected resource, so it is less likely to identify conditions when it can

1 obtain prey without receiving a negative experience (Shivik 2004). Methods which require
 2 around-the-clock presence of a person to guard the resource are most efficiently used when there
 3 are radio-collared wolves involved and the landowner/resource manager assists with the
 4 implementation. WDFW authorizes the use of these methods.

5
 6 For additional discussion of the advantages and disadvantages of various non-lethal and lethal
 7 wolf damage management methods used in the NRM, see Bangs et al. (2006)
 8 (http://www.aphis.usda.gov/wildlife_damage/nwrc/publications/06pubs/shivik067.pdf).
 9

10 **Description of Lethal Methods Available to WDFW, USFWS, and Tribes, but not WS**

11
 12 These methods are specifically designed to lethally remove wolves in certain situations to
 13 stabilize, reduce, or eliminate damage. The amount of removal necessary to achieve a reduction
 14 in wolf damage varies according to the effectiveness of other damage management strategies, the
 15 damage situation, and the level and likelihood of continued depredations. There would be no
 16 lethal wolf damage management techniques available to WS under Alternative 1, but the use of
 17 foothold traps and snares, as described above, followed by euthanasia, typically by gunshot to
 18 the brain, as recommended by the American Veterinary Medical Association (AVMA 2013,
 19 Julien et al. 2010) would be available to WDFW or its agents, USFWS, and tribes. Additional
 20 lethal methods used under Alternative 1 would include shooting from the ground as well as from
 21 fixed-wing aircraft or helicopters.
 22

23 **Shooting** from the ground is highly selective for the target species, and may be employed in
 24 conjunction with the use of auditory attractants (*e.g.*, sounds of prey animals in distress or
 25 imitations of wolf vocalizations). Removal of one or two specific animals by shooting in the
 26 problem area can sometimes provide immediate relief from a predation problem. Shooting is
 27 often tried as one of the first lethal management options because it offers the potential of solving
 28 a problem more quickly and selectively than some other techniques, but it requires visually
 29 sighting the wolf within effective shooting distance. Shooting may sometimes be one of the only
 30 management options available if other factors preclude the setting of equipment (*i.e.*, traps or
 31 snares).
 32

33 **Aerial Shooting** typically involves visually locating suspected depredating individuals or packs
 34 from either a small single-engine fixed-wing aircraft or a helicopter, and shooting them from the
 35 aircraft. Depredation problems can sometimes be resolved very quickly and effectively through
 36 aerial shooting (*e.g.*, by starting the aerial operation in the vicinity of a recent wolf kill and
 37 catching the wolf or wolves when they return to feed on the livestock carcass). Cain et al. (1972)
 38 rated aerial shooting as “very good” in effectiveness for problem solving, safety, and lack of
 39 adverse environmental impacts. Smith et al. (1986) cited cost-effectiveness and efficacy as
 40 benefits of aerial shooting.
 41

42 Good visibility is required for effective and safe aerial shooting operations, and relatively clear
 43 and stable weather conditions are necessary. Summer conditions limit the effectiveness of aerial
 44 shooting because the increased vegetative cover makes finding the animals more difficult, and
 45 the higher ambient air temperatures reduce air density, which affects low-level flight safety.

46 Aerial shooting is one of the most effective wolf damage management tools available.

1 **Sodium Pentobarbital** (Beuthanasia®-D) is registered for euthanasia of dogs, but may legally
2 be used for other animals if the animal is not intended for human consumption. Barbiturates
3 depress the central nervous system in descending order, beginning with the cerebral cortex, with
4 unconsciousness progressing to death. The primary advantage of barbiturates is the speed of
5 action on the animal. Barbiturates induce euthanasia smoothly, with minimal discomfort to the
6 animal (AVMA 2013). This method of euthanasia would likely only be used in the rare
7 circumstance where an already sedated wolf was determined to have health or injury issues such
8 that it would be most appropriate to euthanize the animal.

9
10 **Monitoring**

11
12 WS provides information on wolf sightings, identification of wolf activity (tracks or scat),
13 depredation investigations, telemetry searches, or any other monitoring activities. Wildlife
14 Services monitors its program activities using a national software program, Management
15 Information System (MIS), which compiles data on harassment locations, damages, methods
16 used, and other information. Information from MIS can then be provided to cooperating
17 agencies, used in wildlife management decisions and environmental analyses, and is available to
18 the public.
19

20 **2.2 Alternative 2 – Eliminate the Current Wolf Assistance Program**

21
22 Under Alternative 2, the Eliminate the Current Wolf Assistance Program Alternative, WS would
23 not provide any wolf assistance to WDFW, USFWS, other public agencies, tribes, or private
24 individuals within Washington. WS would not distribute available equipment or assist
25 landowners with the implementation and use of non-lethal methods and devices. WS would not
26 investigate wolf depredation complaints to determine if the wolves are responsible for losses.
27 WDFW would make the final determinations for investigations under their jurisdiction. WS
28 would not assist WDFW, USFWS, or tribes with capturing wolves for radio-collaring for
29 monitoring purposes and/or to enhance effectiveness of non-lethal deterrents such as the RAG
30 devices.
31

32 The WCMPW describes measures WDFW would take to conserve and manage wolves,
33 including actions that could be taken to protect livestock from wolf depredation. Alternative 2
34 encompasses all the primary components of the WCMPW and all actions and components listed
35 in Alternative 1, but removes WS as an assisting agency to WDFW, USFWS, and tribes. While
36 the WCMPW references WDFW using WS for assisting with wolf recovery, WS would not
37 actually participate in any wolf-related actions under this alternative. WDFW, or its agents,
38 would have to redirect personnel from conducting wolf research, outreach, and recovery projects
39 to conducting wolf control and removal. WS would not be able to guarantee any mitigation
40 measures against the accidental impact to target and non-target wildlife, public safety, or
41 personnel safety during wolf control activities conducted by others.
42
43

2.3 Alternative 3 – Proposed Action – Expand the Current Wolf Assistance Program

This alternative would allow WS to use non-lethal methods, capture wolves for monitoring or translocation needs, and respond to requests by WDFW or tribes to lethally remove non-federally listed depredating wolves, and with the addition of USFWS, wolves jeopardizing public safety as outlined in the WCMPW or similar guidance (e.g., ESA and CFR). Wolves could be removed after a request from WDFW or tribes based on confirmed livestock depredation and after unsuccessful attempts using non-lethal methods had been documented. *The proposed action encompasses all of the methods discussed in Alternative 1 with WS conducting the direct activities.*

The role of WS in this program would be *direct*: WS would conduct a fully integrated approach to wolf damage management, as requested by WDFW, USFWS, or tribes under the guidance of the WCMPW or similar guidance. WDFW would maintain responsibility for making the final determinations on removal of federally delisted wolves, USFWS would retain management of federally listed wolves, and tribes would maintain management of wolves on tribal lands. WS wolf damage management on tribal lands would mirror procedures and restrictions on non-tribal lands, with the exception that tribal wildlife managers or WS may confirm wolf damages.

As per WS policy, it would only provide direct wolf damage management on properties after *Agreement for Control* or other work authorization documents have been completed. On federal public lands, planned activities must be included in work plans developed in coordination with each National Forest or BLM Resource Area, or in emergency, unplanned situations, in consultation with the respective USFS or BLM office. On tribal reservation lands, WS wolf damage management would only be conducted at the request of the tribe and under individual agreements with each sovereign tribal government.

Like Alternative 1, the Current Program, a strong information and education program, which focuses on nonlethal management, would be managed by WDFW with assistance from WS. This aspect would help ensure anyone with an interest in wolves is able to learn more about the species and stay informed about wildlife management activities. The WCMPW includes examples of education on wolf damage management issues such as public outreach, public meetings, information on the WDFW website, training, and discussions with individuals.

Several research projects are identified as necessary for future success of long-term wolf conservation and management. Monitoring and radio-collaring wolves would be included in this alternative for conservation and communication with the public. WS may assist in capturing wolves for radio-collaring.

Adaptive management would be used by WDFW to revise protocol according to changes in the phase of wolf recovery in Washington. Over time, wolves are expected to increase in number and expand their range within Washington, and therefore management approaches will be slightly modified as numbers increase (Wiles et al. 2011).

Finally, the WCMPW requires annual reporting to the WDFW on program implementation, thus WS would provide all information on its involvement with wolf captures including capture locations, methods used, and disposition to WDFW.

Formulating a strategy for wolf removal

Upon receiving a request to assist WDFW, USFWS, or tribes with capturing individuals from packs with confirmed repeated depredating wolves, WS would use its Decision Model (Figure3) (Slate et al. 1992) to determine the appropriate method of removal based on allowable methods (foot-hold traps, foot snares, neck snares, shooting, or aerial shooting) under the WCMPW, or similar guidance, and consultation with WDFW, USFWS, or tribes.

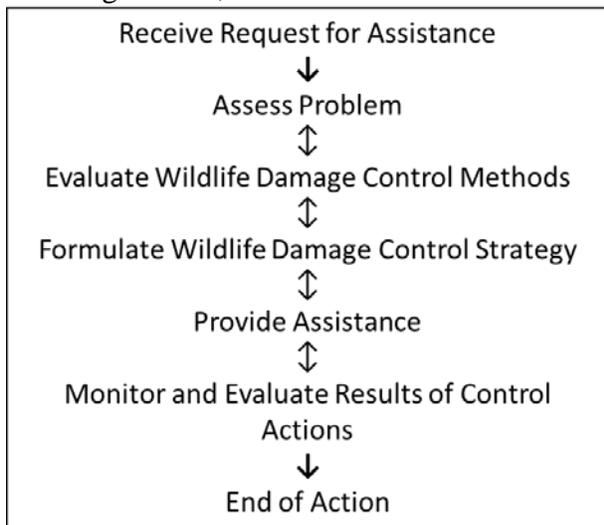


Figure 3. APHIS-WS Decision Model (Slate et al. 1992)

In selecting appropriate management techniques, consideration is given to: whether or not a collared or breeding wolf could be affected, location and land jurisdiction; land uses (such as proximity to urban or recreation areas); possible presence of humans, pets and non-target wildlife; feasibility of implementation of the various techniques; wolf movement patterns and life cycle; local environmental conditions such as terrain, vegetation, and weather; potential legal restrictions such as availability of tools or management methods; humaneness of the available options; and costs of control options (the cost of control in this proposal may be a secondary concern because of overriding environmental, management, and legal considerations).

When responding to requests from WDFW or tribes, *lethal removal of wolves from packs causing repeated livestock depredation would only be done after unsuccessful attempts to use non-lethal methods had been documented. While the WCMPW dictates this for WDFW, WS would only agree to lethal removal on tribal lands under similar guidance.*

Description of Lethal Methods Available to WS

This alternative includes all non-lethal methods described in Alternative 1, the Current Program, and adds the following lethal methods. These methods are specifically designed to lethally remove problem wolves in certain situations to stabilize, reduce, or eliminate damage. The amount of removal necessary to achieve a reduction in wolf damage varies according to the effectiveness of other damage management strategies, the damage situation, the level and likelihood of continued depredations, and WDFW or tribal final decision. The lethal wolf damage management techniques available to WS would include the use of foothold traps and

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1 snares, followed by euthanasia, as recommended by the American Veterinary Medical
2 Association (AVMA 2013, Julien et al. 2010). Additional lethal methods used under Alternative
3 3 would include shooting from the ground as well as from fixed-wing aircraft or helicopters.

4
5 **Shooting** highly selective for the target species, and may be employed in conjunction with the
6 use of auditory attractants (*e.g.*, sounds of prey animals in distress or imitations of wolf
7 vocalizations). Removal of one or two specific animals by shooting in the problem area can
8 sometimes provide immediate relief from a predation problem. Shooting is often tried as one of
9 the first lethal management options because it offers the potential of solving a problem more
10 quickly and selectively than some other techniques, but it requires visually sighting the wolf
11 within effective shooting distance. Shooting may sometimes be one of the only management
12 options available if other factors preclude the setting of traps or snares.

13
14 **Aerial Shooting** typically involves visually locating suspected depredating individuals or packs
15 from either a small single-engine fixed-wing aircraft or a helicopter, and shooting them from the
16 aircraft. Depredation problems can often be resolved quickly and effectively through aerial
17 shooting (*e.g.*, by starting the aerial operation in the vicinity of a recent wolf kill, and catching
18 the wolf or wolves when they return to feed on the livestock carcass). Cain et al. (1972) rated
19 aerial shooting as “very good” in effectiveness for problem solving, safety, and lack of adverse
20 environmental impacts. Smith et al. (1986) cited cost-effectiveness and efficacy as benefits of
21 aerial shooting.

22 Good visibility is required for effective and safe aerial shooting operations, and relatively clear
23 and stable weather conditions are necessary. Summer conditions limit the effectiveness of aerial
24 shooting because the increased vegetative cover makes finding the animals more difficult, and
25 the higher ambient air temperatures reduce air density, which affects low-level flight safety.

26 Aerial shooting is one of the most effective wolf damage management tools available.

27
28 **Neck Snares** can be used to kill, or to live-capture animals with a cable loop around the neck
29 and the use of a “stop” to prevent full closure of the loop. Improved methods for use are being
30 developed for live-trapping wolves and other carnivores (Olson and Tischaefer 2004). Snares
31 are ordinarily not as affected by rain, snow, and freezing weather as foot-hold traps are. These
32 devices offer a degree of selectivity based on the size of the cable loop and the height of the loop
33 above ground level. They also offer a viable capture alternative to foot-hold traps during the
34 winter months, when freezing temperatures combined with restricted blood circulation could
35 result in damage to the wolf’s foot.

36
37 **Sodium Pentobarbital** (Beuthanasia®-D) is registered for euthanasia of dogs, and may legally
38 be used for other animals if the animal is not intended for human consumption. Barbiturates
39 depress the central nervous system in descending order, beginning with the cerebral cortex, with
40 unconsciousness progressing to death. The primary advantage of barbiturates is the speed of
41 action on the animal. Barbiturates induce euthanasia smoothly, with minimal discomfort to the
42 animal (AVMA 2013). This method of euthanasia would likely only be used in the rare
43 circumstance where an already sedated wolf was determined to have health or injury issues such
44 that it would be most appropriate to euthanize the animal.

Measures used by WS to Minimize Environmental Risk

WS uses many standard operating procedures built into its programs which serve to minimize the potential for negative effects on the environment, including potential harm to humans and non-target wildlife. While the WCMPW may be updated and permit conditions can change, currently, WS standard operating procedures, the WCMPW and/or WDFW permit conditions and conservation measures include, but are not limited to the following measures:

- Conspicuous, bilingual warning signs alerting people to the presence of traps and snares are placed at major access points when they are set.
- WS personnel are trained in identification of wolves and wolf sign.
- WS will maintain regular contact with appropriate state and federal agencies, reporting any sightings of wolves, wolf sign, or wolf depredations.
- WS will monitor traps every 24 hours while using foothold traps or snares.
- WS will incorporate pan-tension devices in foot/leg snares and foot-hold traps to reduce exposure of capture to smaller non-target animals.
- WS will maintain regular contact with WDFW, USFWS, and/or tribes to keep apprised of locations and information on the presence of any T&E animals.
- Most wolf trapping will occur at or near depredation sites or along wolf trails to and from depredation sites.
- Non-target animals captured are released at the site of capture unless the WS personnel determine that they will not survive.
- AVMA (2013) recommended euthanasia procedures are followed, if feasible, to minimize pain and suffering.
- Research continues to improve the selectivity and humaneness of management devices.
- WS work on Native American Indian tribal lands would conform to tribal government plans for wolf damage management. WS work on tribal lands would also closely mirror protocol outlined in WCMPW in regards to lethal and non-lethal management of wolf depredation.
- WS records and monitors all WS wolf removal through its Management Information System (MIS). Close coordination with and reporting to WDFW, USWFS, and/or tribes would occur for each wolf to be removed. More detail is provided under Monitoring in this section.
- Motorized vehicle access on public lands will be limited to permitted roads and areas.

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- 1 • Wolf damage management activities would be conducted only at the request of, and in
2 coordination with the landowner or land management agency, and in the case of lethal control,
3 per WDFW, USFWS, or tribal government decisions. Coordination provides for the
4 communication necessary to avoid conflicts with land uses such as sensitive areas or public
5 safety zones.
6
- 7 • The WS program is conducted under Cooperative Agreements and MOUs with federal and
8 state agencies. National MOU's with the BLM (1995) and USFS (2010) delineate expectations
9 for wildlife damage management on public lands administered by these agencies.
10

11 *General Measures to Protect Federally Threatened or Endangered Species*

- 12 • In accordance with WS policy, foot-hold traps and foot snares would be placed
13 farther than 30 feet from exposed carcasses to avoid inadvertent capture of
14 eagles.
- 15 • WS WA would prioritize control methods to be used and would include
16 consideration of non-target species in making these decisions. Where non-
17 target species of concern may be vulnerable, selective measures are generally
18 preferred (such as shooting or darting). For large animals, culvert or cage traps
19 may be preferred over other trapping methods. Foot-hold traps and foot snares
20 are generally preferable to neck snares except under certain environmental
21 conditions. WS WA will fully consider risk to non-target species in making
22 these decisions.
- 23 • When conducting trapping, WS WA staff will consider target species, non-
24 target species, site-specific conditions, as well as all policy and regulatory
25 requirements in determining types of traps, sets, lures or scents, and supporting
26 hardware. The decision on whether to use a drag or stake will follow the
27 considerations discussed earlier in the project description.
- 28 • WS WA staff that are trapping large predators (e.g., wolves, cougars, and black
29 bears), in areas where and when grizzly bear are reasonably likely to be present,
30 will be trained in the identification of large predators (particularly in
31 distinguishing between black bears and grizzly bears) and their sign. Training
32 conducted by WS WA may be done in collaboration with the local USFWS or
33 WDFW offices, or in conjunction with WS in other states.
- 34 • Mapped landscape areas (designated for pygmy rabbit, lynx, grizzly bear, or
35 federally listed wolves) will be reviewed on an annual basis with USFWS,
36 WDFW, and other appropriate species experts to determine if an increase,
37 decrease, or other modification is necessary. Applicable section 10(a)(1)(A)
38 permits will be reviewed at that time to ensure continued applicability and
39 listing of appropriate staff.
- 40 • Prior to trapping within mapped landscape areas (designated for lynx, grizzly
41 bear, or federally listed wolves), WS WA will contact USFWS and/or WDFW
42 for the most-recent information regarding the distribution of these species. WS
43 WA will conduct pre-trapping reconnaissance in a manner that is directed
44 toward finding sign of these species and will report any positive findings to

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1 WDFW and USFWS. Personnel conducting such pre-trapping reconnaissance
2 will be adequately trained in the identification of sign left by these species.

- 3 • Where pre-trapping reconnaissance discovers recent signs of certain species, or
4 pre-trapping coordination reveals recent reliable observations of those species
5 (i.e., grizzlies or lynx), alternative methods that are more selective will be used
6 in lieu of trapping unless otherwise approved on a case-by-case basis by the
7 USFWS after considering public safety and animal welfare.
- 8 • When trapping in grizzly bear, lynx, or federally listed wolf mapped landscape
9 areas, or trapping for federally listed wolves, traps or snares should be checked
10 by mid-morning, or as soon thereafter as possible in case of extenuating
11 circumstances.

12 *Measures Specific to Federally Listed Gray Wolves*

- 14 • When doing pre-trap or operational reconnaissance for federally listed wolves
15 and sign in areas that may contain wolves, howling will be conducted to
16 facilitate detection if it is appropriate for the surroundings.
- 17 • While targeting coyotes and other predators, and where pre-trapping
18 reconnaissance discovers recent sign or pre-trapping coordination reveals recent
19 reliable observations of federally listed wolves, WS WA may resort to non-
20 trapping alternatives to achieve their objectives if capture of a wolf in that area
21 is not deemed to be desirable. When capture of a wolf is deemed desirable by
22 WS WA and wildlife agencies, WS WA will follow appropriate protocols
23 provided by the wildlife agencies and all conservation measures that apply in
24 case they inadvertently capture a wolf.

25
26 *When operating within a mapped landscape area for federally listed wolves, WS*
27 *will implement the following:*
28

- 29 • Initial mapped landscape areas for federally listed wolves shall be the pack
30 polygons maintained by WDFW and depicted on the WDFW website
31 (http://wdfw.wa.gov/conservation/gray_wolf/packs/). These may change on
32 a frequent basis as wolf distribution changes. Whether this system is
33 working adequately will be assessed on an annual basis.
- 34
35 • Prior to controlling coyotes and other predators, WS WA would coordinate
36 closely with USFWS and/or WDFW to ensure that field personnel have the
37 most recent and most-reliable information on wolf activity in the action
38 area. WS WA would conduct pre-trapping reconnaissance in a manner to
39 detect any potential wolf sign prior to setting traps; this may include
40 howling when appropriate.
- 41 • When controlling predators smaller than wolves, traps and equipment must
42 be of sufficient strength to adequately restrain any wolf without equipment
43 failure, or allow the wolf to pull free from the trap. Stakes will be preferable

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1 in these situations as staking may allow a captured wolf to pull-out of the
2 trap more easily.

- 3 • When conducting predator control, no traps or snares shall be used within
4 0.5 mile of occupied federally listed wolf den sites, known active
5 rendezvous sites, or areas of recently documented pup activity from May 1
6 to July 15, and within 1 mile of these areas from July 15 to October 1,
7 unless approved on a case-by-case basis by the USFWS.
- 8 • When conducting predator control, neck snares will not be used in mapped
9 landscape areas without prior approval by USFWS.

10
11 *When trapping federally listed wolves, WS will implement the following:*

- 12 • No traps or snares shall be used within 0.5 mile of occupied federally listed
13 wolf den sites, known active rendezvous sites, or areas of recently
14 documented pup activity from May 1 to July 15, and within 1 mile of these
15 areas from July 15 to October 1, unless approved on a case-by-case basis by
16 the USFWS.
- 17 • Neck snares will not be used to capture federally listed wolves unless such
18 use is approved by USFWS.
- 19 • Foot-hold traps will not be used to capture federally listed wolves in
20 nighttime temperatures below 25°F unless otherwise approved by USFWS.
- 21 • When live capturing federally listed wolves, WS WA will use Livestock
22 Protection Company #7 offset jaws or EZ-grip® traps or equivalent, unless
23 otherwise approved by the USFWS. At least 2 swivels will be used (one at
24 trap and one at drag or stake).
- 25 • WS WA will ensure, in advance, that a means of safe transport for federally
26 listed wolves (e.g., a large kennel) is readily available if medical treatment
27 should be necessary.
- 28 • WS WA staff that capture federally listed wolves will be trained in chemical
29 immobilization and handling of wolves, or will be accompanied by WS WA
30 staff that have been so trained.
- 31 • This consultation will not supplant or replace any other reporting
32 requirements or informational commitments. WS will adhere to any
33 guidelines and protocols cooperatively developed among WS WA, WDFW,
34 and USFWS regarding responding to sightings, captures, mortalities,
35 information about illegal activities, or other reports of gray wolves in
36 Washington State.
- 37
38 • When WS WA purposefully or incidentally captures federally listed wolves,
39 in addition to adhering to the Response Guidelines, such capture will be
40 managed in the following manner:
 - 41 ○ If the wolf is dead, WS will transport the carcass from the field and

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1 report the death to the USFWS Washington Fish and Wildlife Office
2 within 24 hours for data collection and disposal. The carcass will be
3 kept as cold as feasible to preserve its integrity.

- 4 ○ If the wolf will not be able to survive in the wild and should be
5 euthanized on site, the most-expedient means of euthanasia shall be
6 employed consistent with the surroundings and situation. Following
7 euthanasia, WS will transport the carcass from the field and report to
8 the USFWS Washington Fish and Wildlife Office so that they can
9 cooperatively collect data and dispose of carcass. The carcass will
10 be kept as cold as feasible to preserve its integrity.
- 11 ○ If the wolf requires veterinary medical attention and transport is
12 necessary and feasible, WS will pursue veterinary medical care and
13 notify the USFWS Washington Fish and Wildlife Office for
14 instructions regarding the best course of action following such care.
15 If the wolf is a candidate for release, the details of such release shall
16 be determined cooperatively with the WDFW and the USFWS.
- 17 ○ If the wolf is essentially uninjured and is a good candidate for further
18 research, WS will follow protocols provided by the USFWS and
19 WDFW for collecting samples, data, and any fitting with
20 instrumentation. Chemical immobilization shall only be done by
21 personnel experienced with handling wolves and certified to
22 administer chemical immobilization drugs, unless otherwise
23 approved by USFWS.
- 24 ○ If the wolf is uninjured and no research is needed, WS will release
25 the wolf as expeditiously as possible in a manner that protects the
26 wolf and maximizes its chances for successful release and survival.
27 Steps outlined in applicable protocols shall be followed. In some
28 cases, this may require restraint and or chemical immobilization.
29 Chemical immobilization shall only be done by personnel
30 experienced with handling wolves and certified to administer
31 chemical immobilization drugs, unless otherwise approved by
32 USFWS.

33 34 *Measures Specific to Grizzly Bear*

- 35 ● When conducting predator control and where pre-trapping reconnaissance or
36 pre-trapping coordination with USFWS or WDFW reveals sign of grizzly bear
37 or recent reliable observations, WS WA would resort to non-trapping
38 alternatives to achieve their objectives unless otherwise approved on a case-by-
39 case basis by the USFWS after considering public safety and animal welfare.
40
- 41 ● WS WA staff conducting trapping for large predators (wolves, cougars, or black
42 bears) in areas where and when grizzly bear are expected to be present will
43 carry a copy of a grizzly bear protocol including contact numbers and will
44 follow its instructions in the event a grizzly bear is captured. In the event that

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1 WS WA captures a grizzly bear, WS WA shall contact USFWS [Grizzly Bear
2 Coordinator at (406) 240-6506] and an appropriate representative from WDFW.
3 Arrangements would then be made to provide personnel from USFWS and/or
4 WDFW to assist with handling the bear and determining the fate of the animal
5 following the interagency guidelines already in place for recovery areas.
6

7 *When operating within the grizzly bear mapped landscape areas during times*
8 *that grizzly bears are expected to be out of the den (1 April to 30 November),*
9 *WS WA will implement the following:*
10

- 11 • Initial mapped landscape areas for grizzly bear will be the Federal lands
12 within the North Cascades Recovery Zone; all lands within WDFW Game
13 Management Units 108, 111, and 113; and all lands within the “Wedge”
14 (named after the wedge-shaped part of northwestern Stevens County on the
15 Canadian border between the Kettle and Columbia Rivers)(Game
16 Management Unit 105). The mapped landscape areas and measures
17 followed within those areas may increase, decrease, or change on an annual
18 basis following review with the wildlife agencies and others.
19
- 20 • WS WA would contact WDFW and USFWS to obtain most-recent grizzly
21 distribution information.
22
- 23 • WS WA would conduct pre-trapping reconnaissance in a manner sufficient
24 to detect any potential grizzly sign prior to setting traps. Where pre-trapping
25 reconnaissance discovers recent signs of grizzly bear or pre-trapping
26 coordination reveals recent reliable observations, WS WA would resort to
27 non-trapping alternatives to achieve their objectives unless otherwise
28 approved on a case-by-case basis by the USFWS after considering public
29 safety and animal welfare.
30
- 31 • WS WA staff participating in trapping of large predators (wolves, cougars,
32 or black bear) will be trained in the identification of grizzly bears
33 (particularly in distinguishing between black bears and grizzly bears) and
34 grizzly bear sign.
- 35 • Staff participating in trapping of large predators (wolves, cougars, or black
36 bear) will be trained in implementation of techniques to avoid accidentally
37 trapping grizzly bears.
- 38 • WS WA staff conducting capture of large predators (wolves, cougars, or
39 black bear) will have been trained in chemical immobilization and in
40 handling of large predators, or will be accompanied by WS WA staff that
41 have been so trained.
42
- 43 • Use of foot snares and foot-hold traps for wolves, cougars, or black bears
44 will be limited.

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- 1 ○ WS WA would prioritize the methods to be used with more-selective
2 methods (e.g., shooting or aerial darting) being preferable.
3 Generally, more-selective measures are attempted first in an overall
4 step-wise progression of control.
- 5 ○ If no recent sign or knowledge of recent observations exists, WS
6 WA may use foot snares and/or foot-hold traps within the mapped
7 landscape area. WS WA would provide written notification to
8 USFWS (electronic mail is acceptable) in advance (or within 72
9 hours if advance notice is not possible) that would include
10 demonstration of why such use is necessary in that particular
11 situation as well as any prior methods that were attempted during the
12 current control effort.
- 13 ○ WS WA will report, annually, the extent and results of such
14 trapping, the rationale for the use of foot-hold traps or foot snares,
15 any prior methods that were attempted, and the timing and extent of
16 coordination with USFWS.
- 17 ○ Such notifications will not be necessary when trapping wolves
18 within the range of the federally listed wolf because coordination
19 and notification will occur concurrently with the USFWS request to
20 do such work.
- 21 ● Neck snares will not be used for any species without prior approval on a
22 case by case basis by USFWS, except for trapping coyotes within the
23 following developed areas such as airports, urban/suburban developments,
24 and animal-husbandry operations. For purposes of this measure, animal-
25 husbandry operations include, for example, barnyards, corrals, poultry
26 operations, animal enclosures, and similar operations near houses. When
27 used in these situations, neck snares will be placed judiciously to avoid areas
28 a grizzly bear or cub could reach or access. Appropriate neck snare
29 locations may include coyote crawl-ways under fences or buildings.
- 30 ● When using formulated or commercial scents at trap sites, WS WA would
31 utilize scents that are less attractive to grizzly bears (e.g., wolf urine vs.
32 scents resembling natural bear foods).
- 33 ● Where possible and practical, wolf traps would be anchored to a solid
34 anchor such as a tree or, if such anchorage is not possible, to drags of at
35 least 500 pounds dead weight or Livestock Protection Company® heavy-
36 duty drag.
- 37 ● If foot snares are used for the capture of black bears, wolves, or cougars, all
38 snares used will be grizzly sized snares with ¼-inch steel cables anchored to
39 fixed positions, and equipped with appropriate swivels. This is to ensure
40 that if a grizzly bear is unintentionally captured the snare will hold the
41 animal (rather than breaking away from the anchor and the grizzly bear
42 escaping with the snare remaining on the leg) until it can be safely
43 immobilized and released.

Monitoring

Wildlife Services role in monitoring would be to provide data to WDFW, USFWS, or tribes from its wolf damage management actions in Washington. Additionally, WS would provide information on wolf sightings, identification of wolf activity (tracks or scat), depredation investigations, telemetry searches, or any other monitoring activities. Wildlife Services monitors its program activities by using MIS, which compiles data on take locations, damages, methods used, and other information. Information from MIS can then be provided to cooperating agencies, used in wildlife management decisions and environmental analyses, and is available to the public.

2.4 Summary of Actions allowed by Alternative

Table 1. Summary of WS activities that would be applied under each alternative (Adapted from WCMPW (Wiles et al. 2011, Table 9).

Activities	Alt. 1, No Action	Alt. 2, Eliminate the Program	Alt. 3, Proposed Action
Investigate Wolf Depredation for WDFW, USFWS, and tribes.	Yes	No	Yes
Non-lethal Technical Assistance (advice and information).	Yes	No	Yes
Non-lethal Direct Assistance (non-injurious harassment).	Yes	No	Yes
Non-lethal Direct Assistance (injurious harassment).	No	No	Yes
Lethal removal of non-federally listed wolves involved in repeated livestock depredation, as directed by WDFW or tribal authority.	No	No	Yes
Lethal removal of wolves that threaten human safety (per WDFW, USFWS, tribal, and/or ESA guidance).	No	No	Yes
Non-lethal capture for relocation, collaring, research, and/or monitoring.	No	No	Yes
Assist WDFW, USFWS, and tribes with Wolf Monitoring.	Yes	No	Yes

Table 1 identifies and compares the major components allowed under each of the alternatives. Specific criteria or conditions for actions, as required by the WCMPW, are summarized under the detailed descriptions of each alternative.

2.5 Alternatives Considered but Rejected from Detailed Analysis, with Rationale

Integrated Wolf Damage Management without a Threshold of Loss Requirement

This alternative would differ from the proposed action in that it would have removed the threshold of livestock loss imposed by the WCMPW for agency removals of confirmed repeated depredating wolves. Under this alternative, WS would be able to remove wolves that simply threatened livestock or had killed fewer than the allowed threshold of loss. This alternative is not a viable alternative and cannot be selected based on the direction outlined in the WCMPW. Wolves are not yet sufficiently abundant in Washington to allow for more liberal removal actions and all actions must conform to the strategies allowed by the State. There is some flexibility in the WCMPW that would allow producers to take wolves under permit which enhances agency actions. This alternative may interfere with WDFW's ability to achieve wolf conservation and management goals.

Use of Birth Control Strategies to Reduce Wolf Depredation on Livestock

Under this alternative, wolves would be sterilized or other contraceptive methods would be administered to limit the ability of wolves to produce offspring under the assumption that inability to reproduce would reduce wolf depredation on livestock. This strategy may interfere with WDFW and USFWS goals for conservation and delisting of gray wolves. In USDA (2011a), WS considered wolf contraception strategies that involve removal of all wolves in a pack that had caused repeated livestock depredation with the exception of the breeding pair, which would be live-captured, surgically sterilized, radio-collared, and released under the assumption that the pair would maintain and defend its territory against other wolves. WDFW has not considered or included any wolf contraception strategies in the WCMPW, nor does WS have the authority to implement or require WDFW or the USFWS to test or implement such strategies.

Eradication

This alternative would direct all WS program efforts toward planned, total elimination of wolves. This alternative was not considered in detail because eradication of established wolf populations is contrary to state and federal efforts to protect and conserve wildlife and contrary to federal and state ESA requirements, WS objective is to reduce damage, not to engage in large-scale eradication or suppression, and eradication of wolves is not acceptable to most members of the public.

Agencies Exhaust All Non-lethal Methods Before Attempting Lethal Methods

Under this alternative, all non-lethal methods would have to be attempted and proven ineffective prior to using lethal wolf damage management methods even though, in the professional judgment of WS, WDFW, or USFWS personnel, some methods that would have to be attempted would be impractical (*e.g.*, would incur costs in excess of value of resources protected), inappropriate (*e.g.*, use of a light siren device in areas near human residences), or likely to be ineffective for the particular situation (*e.g.*, situations where the predator appears to have

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1 habituated). This alternative will not be addressed in detail for a number of reasons including: 1)
2 time and resources of agencies and individuals experiencing damage may be unnecessarily
3 expended when non-lethal methods are unlikely to be effective, based on circumstances,
4 experience and professional judgment; 2) the potential that additional losses could be incurred
5 while experimenting with non-lethal methods; and 3) experimenting with non-lethal approaches
6 may not be appropriate in the rare instance of a wolf-related threat to human safety.

7 8 Lethal Only Program

9
10 Under this Alternative WS would only provide technical and operational assistance with lethal
11 damage management techniques. In certain situations, non-lethal methods may provide short-
12 term or long-term solution to wolf damage problems. Prohibiting WS from using or providing
13 technical assistance on effective and practical non-lethal wolf damage management methods is
14 not in the best interest of the continued recovery of the species and is contrary to agency policy
15 and directives (WS Directive 2.101).

16 17 Sport Hunting and Trapping to Resolve Damages

18
19 WS has no authority to authorize or deny hunting or trapping season for wolves, nor is this
20 allowable under federal ESA regulations. This issue is outside the scope of any decision that WS
21 would make as a result of this EA.

22 23 Live Capture and Relocation of Depredating Wolves.

24
25 When individual wolves or wolf packs are already established as repeated depredators of
26 livestock, moving them to another location may pose a high risk that the wolves would simply
27 cause livestock predation losses in their new area. Wolves can and often do move long distances
28 in relatively short periods of time and cannot be expected to stay in areas to which they are
29 relocated. Thus, even if wolves could be relocated to remote wilderness or sparsely inhabited
30 areas away from livestock, they cannot be relied upon to stay in such areas and avoid further
31 livestock depredation problems. WS has no authority to authorize or require WDFW, USFWS,
32 or tribes to choose this alternative, and this issue is outside the scope of any decision that WS
33 would make as a result of this EA.

1 CHAPTER 3 - ISSUES IMPORTANT TO THE ANALYSIS OF IMPACTS

2
3 **3.1 Issues Driving the Analysis**

4
5 The following environmental issues or resources have been evaluated in this EA to help
6 determine the impacts of the proposed action on the environment and to compare the alternatives
7 in Chapter 4.

- 8
- 9 • **Impacts on wolf populations** - What might be the impact of the proposed action be on the
10 growing Washington wolf population, in eastern Washington and statewide? What would be
11 the cumulative effects of the proposal?
12
 - 13 • **Impacts on non-target animals and human safety** - Would there be impacts on other
14 species besides wolves? Could the program affect pets? Might the program have adverse or
15 beneficial effects on federally protected species? Are there risks to human safety?
16
 - 17 • **Social and Aesthetic Perspectives** – How acceptable are the alternatives to stakeholders?
18 How is humaneness perceived? What are the implications for the aesthetic value of wolves?
19
 - 20 • **Effectiveness** – A discussion on the effectiveness of the alternatives will reveal how well the
21 alternative meets the purpose and need for action. This issue is not an environmental issue,
22 but it is an important management consideration that will be weighed with the environmental
23 findings to make an informed decision.
24

25 **3.2 Issues Not Analyzed in Detail, with Rationale**

26
27 Appropriateness of preparing an EA (rather than an EIS) for a state program rather than
28 preparing multiple EAs for smaller, more site-specific areas

29
30 Federal agencies have the discretion to determine the geographic scope of their NEPA analyses
31 [*Kleppe v. Sierra Club*, 427 U.S. 390, 414 (1976)] and WS has determined that preparation of
32 this EA to address wolf damage management in Washington is appropriate and consistent with
33 state (Wiles et al. 2011) and federal wolf management objectives and plans. If a determination is
34 made through this EA, that the proposed action would have a significant impact on the quality of
35 the human environment, then an EIS may be prepared in compliance with NEPA.

36
37 Effects of wolf removal on a pack structure

38
39 Pack resilience to mortality is inherent in wolf behavioral adaptation and reproductive
40 capabilities (Brainerd et al. 2008). Wolf populations have sustained human-caused mortality
41 rates of 30 to 50% without experiencing declines in abundance (Keith 1983, Fuller et al. 2003).
42 In addition, Brainerd et al. (2008) found that 62% of packs in recovering populations retained
43 territories despite breeder loss, and of those that lost territories, one-half became re-established.
44 Pup survival is primarily dependent on size of pack and age of pup because multiple pack

CHAPTER 3. ISSUES IMPORTANT TO THE ANALYSIS OF IMPACTS

1 members feed pups despite loss of a breeder. Pup survival in 84% of packs with breeder loss
2 was similar or higher than packs without breeder loss (Mech and Boitani 2003).

3
4 WDFW, USFWS, or tribes are responsible for determining when a wolf shall be removed from a
5 pack. This will occur whether WS assists with removal or not.

6 7 Ecological effects of wolf removals

8
9 Wolf removal during damage management actions, combined with other forms of mortality,
10 would not result in a negative effect to wolves in WA, because if WS did not remove the wolf,
11 WDFW would conduct the removal or contract with a private party to conduct the removal.
12 Wolf removal as a mechanism of wolf damage management is expected to support wolf
13 conservation and management as discussed in the WCMPW (Wiles et al. 2011). Based on a
14 review of available literature in USDA (2011a), and Mech (2012), we find no reason to expect
15 that wolf removals by WS would result in significant adverse effects on the quality of the human
16 environment because of possible wolf-related changes in ecosystems.

17
18 WDFW, USFWS, or tribes are responsible for determining when a wolf shall be removed from a
19 pack. This will occur whether WS assists with removal or not.

20 21 Producers should consider that wolf predation losses are a cost of doing business

22
23 Livestock producers recognize that some level of predation losses are likely to occur, in spite of
24 their own and government (state or federal) efforts to reduce the amount of losses. The
25 WCMPW is not setting expectations of preventing all losses, nor does it prescribe lethal wolf
26 damage management as a solution to all depredation incidents. The WCMPW established an
27 integrated approach to resolve wolf damage complaints. In some situations, the use of non-lethal
28 methods alone may be adequate for resolving wolf depredation complaints, but there will be
29 situations which require lethal measures. Most instances of wolf predation on sheep, for
30 example, occur in spite of sheep producers' use of herders and livestock guarding dogs to help
31 protect the sheep from predation. Livestock producers incur direct losses and indirect losses
32 from wolves without always resulting in wolf removal. These include harassment of livestock
33 by wolves, fence repairs after wolves chase livestock through fences, costs to gather and regroup
34 livestock dispersed by wolves, and extra costs when producers have to pay for feed because
35 livestock are removed from grazing pastures to minimize risks from wolves. These and other
36 indirect effects that wolves have on livestock are discussed under Section 1.2.

37 38 Tribal Lands

39
40 Tribal wildlife managers with responsibilities to protect and manage treaty-reserved wildlife
41 resources in Washington may meet wolf management needs in their areas of interest and
42 influence. Tribal leaders may choose how to manage wolf issues within their lands and may or
43 may not coordinate with the WCMPW.

44
45 WS contacted the 29 federally recognized tribes in Washington to solicit tribal concerns for this
46 EA. No issues were provided from these tribes. Because extensive outreach occurred during the

CHAPTER 3. ISSUES IMPORTANT TO THE ANALYSIS OF IMPACTS

1 preparation of the WCMPW, no new issues arose from the outreach and consultation associated
2 with this EA.

3
4 As discussed under the proposed action, WS determined that WS work on tribal lands would
5 conform to similar depredation management protocols as allowed under the WCMPW and
6 USFWS regulations. Therefore, work on tribal lands in Washington would not add new issues or
7 change the analysis of effects considered in detail.

8 9 Effects on Wilderness, Wilderness Study Areas, National Parks, State Parks, and National 10 Monuments

11
12 Wolf removals would not occur in National Parks or National Monuments. Because individual
13 wolves may be removed from surrounding areas, the potential for a slight temporary effect on
14 users of National Parks and National Monuments may occur by reducing the opportunity to view
15 or hear a wolf that may have otherwise traveled into the protected area, however the effect would
16 be insignificant because wolf populations would be expected to continue to grow for the reasons
17 discussed in the WCMPW and in Chapter 4.

18
19 Wolf removal may occur in federally designated wilderness areas or Wilderness Study Areas.
20 The Wilderness Act (16 U.S.C. §§ 1131-1136) established a national preservation system to
21 protect areas “*where the earth and its community life are untrammelled by man*” for the United
22 States. Wilderness areas are devoted to the public for recreational, scenic, scientific, educational,
23 conservation, and historical use. This includes the grazing of livestock where it was established
24 prior to the enactment of the law (Sept. 3, 1964). The Wilderness Act did leave management
25 authority for fish and wildlife with the States for those species under their jurisdiction. Some
26 portions of wilderness areas in Washington have historic grazing allotments and WS may
27 conduct limited wolf removal for protecting livestock or human safety as directed by WDFW in
28 accordance with the WCMPW and coordination with the Regional Forester.

29
30 In accordance with Forest Service Manual 2323.33c, the Regional Forester may approve predator
31 damage management on a case-by-case basis to protect livestock and human health and safety in
32 designated wilderness. The Regional Forester will only approve the action when removing the
33 offending animal would not diminish wilderness character. Any wolf control in Wilderness
34 Areas would be coordinated with the Regional Forester under annual WDM work plans as
35 defined in the MOU between the USFS and WS (Appendix B). Proposed WS work plans are
36 reviewed by USFS during the work planning process to ensure that areas of conflict do not exist.
37 Therefore, WS wolf damage management would have no negative effect on wilderness character
38 or management objectives. It would not impair the wilderness designation by Congress.

39
40 WS conforms to Revisions and Clarifications to H-8550-1, Interim Management Policy for
41 Lands Under Wilderness Review (March 19, 2004 memorandum (No. 2004-140) from BLM
42 Director to all Washington and Field Office Officials). WS follows BLM's Interim Management
43 Policy for Lands Under Wilderness Review, H-8550-1 (1995), and the MOU between BLM and
44 WS.

CHAPTER 3. ISSUES IMPORTANT TO THE ANALYSIS OF IMPACTS

1 WS proposed activities on lands under wilderness review (WSAs) do not conflict with BLM
2 management objectives as set forth in the RMPs. In WSAs, WS work is limited to actions
3 allowed in BLM's Interim Management Policy for Lands Under Wilderness Review (H-8550-1,
4 III. G. 5., July 5, 1995), as revised (BLM 2004). These documents provide, in part, that wildlife
5 damage management may be permitted in certain circumstances in order to protect domestic
6 livestock and reduce human health or safety risks. Coordination is required in order that wildlife
7 damage management activities planned in WSAs meet the non-impairment criteria. Proposed
8 WS AWP's are presented for review by BLM during the work planning process to ensure that
9 areas of conflict do not exist. If WS did not remove the wolf, as requested by WDFW or their
10 agents could remove the wolf. Therefore, WS actions would have no effect on wilderness
11 characteristics such as size, naturalness, solitude, aesthetics, primitive or unconfined type of
12 recreation, supplemental values, and the possibility of returning the area to a natural condition as
13 stated in BLM's Wilderness Inventory Handbook from 1978 and the Interim Management Policy
14 for Lands under Wilderness Review. (H-8550-1, July 5, 1995)

15
16 For the reasons discussed above, WS' proposed wolf damage management activities would not
17 negatively impact Wilderness or WSAs.

18 **Additional issues not considered because they are outside the scope of this analysis**

19 Issuance of permits to landowners to take wolves

20
21
22 Wolves that are federally delisted are managed by the WDFW whereas wolves that remain
23 federally listed are managed by the USFWS. WS' has no authority to issue permits to
24 landowners and livestock producers and this outside the scope of any decision that WS would
25 make as a result of this EA. Actions by others to address wolf conflicts have been considered
26 under the cumulative impacts discussions in Chapter 4.

27 Desire for or opposition to a hunting season for wolves

28
29
30 WS has no authority to authorize or deny hunting or trapping season for wolves, and this issue is
31 outside the scope of any decision that WS would make as a result of this EA.

32 Appropriateness of livestock grazing on public lands

33
34
35 Regulating or authorizing livestock grazing on public lands is the responsibility of the respective
36 public land management agencies, not WS.

37 Appropriate population level for wolves in Washington

38
39
40 Wolves that are federally delisted are managed by the WDFW whereas wolves that remain
41 federally listed are managed by the USFWS. Appropriate population levels are determined by
42 each agency, not WS, and this is outside the scope of any decision that WS would make as a
43 result of this EA.

1 Other resources

2
3 The actions discussed in this EA do not involve ground disturbance or construction or alteration
4 of vegetation. Therefore, the following resource values are not expected to be significantly
5 affected by the alternatives analyzed: soils, geology, minerals, water quality/quantity, flood
6 plains, wetlands, visual resources, air quality, prime and unique farmlands, aquatic resources,
7 vegetation, cultural resources or special management areas. There are no significant irreversible
8 or ir retrievable commitments of resources other than a minor use of fossil fuels to operate
9 vehicles. These resources will not be analyzed further.
10

11 **3.3 Evaluation Methodology**

12
13 Each issue will be evaluated under each alternative and the direct, indirect, and cumulative
14 effects will be disclosed as applicable. NEPA describes the elements that determine whether or
15 not an impact is “significant”. Significance is dependent upon the context and intensity of the
16 impact. The following factors will be used to evaluate the significance of the impacts in this EA
17 that relate to context and intensity (adapted from USDA (1997, revised) for this proposal):
18

19 Magnitude of the Impact (size, number, or relative amount of impact) (intensity) –
20 Quantitative analysis is used where possible as it is more rigorous and is based on all known
21 sources of wolf mortality and actions provided for under the WCMPW. Magnitude may be
22 determined quantitatively or qualitatively;
23

24 Duration and Frequency of the Impact –
25 Temporary, seasonal impact, year round or ongoing (intensity);
26

27 Likelihood of the Impact –
28 (intensity);
29

30 Geographic Extent –
31 Limited to the local unit area or to the management zone (context); and
32

33 Legal Status -
34 Of the species that may be affected; and conformance with regulations and policies that protect
35 the resource in question (context).
36

37 The analyses in Chapter 4 use the WCMPW and USFWS guidance/regulations as the
38 environmental baseline under which wolves are managed. The analyses do not attempt to
39 identify wolf populations or trends or whether a wolf should or should not be taken, as that is the
40 responsibility of WDFW, USFWS, or tribes as the appropriate resource managers. The analyses
41 are limited to what effects WS may have if WS removes a wolf compared to that of WDFW,
42 USFWS, tribes, or their agents taking a wolf at the decision and request of WDFW, USFWS, or
43 tribes. The cumulative effect on the gray wolf population in Washington includes past, present,
44 and reasonably foreseeable future actions of WS and others.

1 CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

2
3 Chapter 4 provides information needed for making informed decisions on the wolf damage
4 management objectives identified in Chapter 1. This chapter uses the four issues identified in
5 Section 3.1 as the evaluation criteria. Each issue will be analyzed for its environmental
6 consequences under each alternative.

7
8 Direct, indirect, and cumulative impacts are discussed in relationship to how WS' actions under
9 that alternative may affect the wolf population, non-target impacts, perspectives of human social
10 values and aesthetics, and effectiveness relative to if WS did not take any action. The
11 effectiveness of the alternatives is also discussed as a measure for comparison in meeting the
12 purpose and need for action.

13
14 **4.1 Alternative 1 – No Action**

15
16 The “No Action” Alternative is for WS to continue the existing wolf damage management
17 program as is. This is the *environmental status quo*, a required NEPA component, a viable
18 alternative that could be selected, and serves as a baseline for comparing the action alternatives
19 (CFR 1502.14[d]). Under this alternative, WS would continue its current activities conducting
20 investigations of livestock conflicts, providing the public with advice and recommendations on
21 the appropriate use of non-lethal methods to protect livestock from wolf damage, and performing
22 non-lethal control actions to reduce wolf damage.

23
24 WDFW would implement measures in the WCMPW and governing regulations and would
25 remove target wolves themselves. Tribes with management authority of wolves could
26 implement measures according to their wildlife policies. Thus, the cumulative effects of such
27 actions are the current environment under which wolves exist, and are discussed as the
28 environmental baseline, or the environmental status quo.

29
30 **4.1.1 Impact on wolf population**

31
32 Gray Wolf Population in Washington

33
34 As of March 2013, there were ten confirmed packs in Washington: seven packs in the Eastern
35 Washington, three packs in the Northern Cascades management area, and none in the South
36 Cascades & Northwest Coast management area (Figure 2). There are also indications of two
37 additional packs in the Eastern Washington management area two bordering packs (one near
38 Walla Walla and another in the north Cascade Mountains (Figure 2). A least a few solitary
39 wolves likely occur in other scattered locations of Washington.

40
41 Continued wolf movement into Washington from adjacent states is likely given the population of
42 wolves in the state of Idaho which identified 101 documented wolf packs and an estimated
43 population of 746 wolves, with additional packs overlapping along bordering states (IDFG and
44 Nez Perce Tribe 2012). The wolf population in Washington is expected to grow as Washington

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

1 wolves continue to reproduce and as wolves from other states and Canada enter Washington
2 through natural dispersal. The Idaho portion of the NRMDPS is expected to continue to supply
3 new dispersing wolves to Washington, which will diversify the gene pool and fill in home ranges
4 that become vacant due to lethal control, natural mortality, unintended mortalities, or westward
5 dispersal.

6
7 The rate of wolf dispersal into and throughout Washington cannot be predicted. The ability of
8 wolves to reach areas of habitat outside northern and eastern Washington is assumed. There are
9 documented wolf packs as far west as the Cascade Mountains (Figure 2), but resident wolves or
10 packs have not yet been confirmed west of the Cascade Mountains.

11
12 As wolf activity is documented through discovery of individual wolves or wolf pack activity,
13 WDFW or USFWS will continue to radio-collar and monitor individuals. By monitoring and
14 observing wolves regularly, determinations regarding the habitats they select and occupy will be
15 possible. Management decisions will be evaluated for reducing conflicts while promoting
16 recovery.

17
18 Wolves can occupy a variety of habitats provided adequate prey is available and they are
19 tolerated by humans (Wiles et al. 2011). The specific habitat chosen will be determined by prey
20 availability and human tolerance and probably will include national forests, parks, and
21 wilderness areas, designated roadless areas, and areas with low densities of open roads (Wiles et
22 al. 2011). Areas in the Cascade Mountains, northeastern Washington, Olympic Peninsula, and
23 Blue Mountains meet these criteria.

24 Direct effect on the gray wolf population

25
26
27 WS would have no effect on individual wolves or wolf conservation and management in
28 Washington under the No Action alternative, other than as a provider of technical assistance and
29 select non-lethal control to WDFW and landowners. In this capacity, WS's assistance would
30 help ranchers minimize wolf damage, thereby reducing the need for some lethal removal. Lethal
31 removal would still be required and conducted by WDFW and/or tribes.

32 Cumulative effects on the gray wolf population

33
34
35 WS' actions would have no negative effects on wolf populations. The wolf population in
36 Washington is expected to increase and expand throughout the state, and livestock damage is
37 also expected to increase and expand (Wiles et al. 2011). WDFW wrote that if WS was not able
38 to assist further, it WDFW would, by necessity, respond to wolf damage and would remove
39 problem wolves as defined in the WCMPW (Appendix A). Further, WDFW indicated that it
40 may remove more wolves that otherwise necessary (as compared to the Proposed Alternative)
41 since it would need to refocus its efforts away from proactive nonlethal measures. Ultimately,
42 this alternative could hamper WDFW wolf recovery and conservation efforts (Appendix A).

1 **4.1.2 Impacts on non-target animals and human safety**

2
3 Non-target animals

4
5 WS would have no effect on non-target animals or human safety under the No Action alternative.

6
7 Wolf removal actions by WDFW are expected to continue. The potentially harmful non-lethal or
8 lethal methods available to WS are also available to WDFW.

9
10 WS's use of traps and foot snares in Washington has not presented any safety risks to people
11 (MIS 2012). This conclusion was made on the national WS program by a formal risk assessment
12 of WS methods (USDA 1997, Appendix P). It is unlikely that this risk would be higher if
13 WDFW or its agents applied these methods.

14
15 **4.1.3 Social and Aesthetic Perspectives**

16
17 Wildlife generally is regarded as a source of economic, recreational, and aesthetic benefits
18 (Decker and Goff 1987), and the mere knowledge that wildlife exists is a positive benefit to
19 many people. Under this alternative, WS would not take action to remove wolves and would not
20 directly affect those with strong opinions on this aspect of wolf damage management or on
21 humaneness, nor would WS have any positive or negative effect on the ability of the public to
22 potentially experience wolves in the wild. The No Action alternative would not preclude
23 WDFW and others taking actions to resolve wolf depredation, using lethal means where
24 authorized.

25
26 Humaneness

27
28 Under this alternative, wolves could be trapped or shot by experienced WDFW personnel as
29 humanely as possible using the best methods available. All activities would be conducted in
30 accordance with Washington Administrative Codes and WDFW guidelines to minimize the
31 amount of time target and non-target animals remain in traps, and improve the likelihood that a
32 non-target animal may be released unharmed. WS would not lethally remove or physically harm
33 any wolves including during non-lethal harassment.

34
35 Wolves could be killed by livestock producers, where they are federally delisted, under WDFW
36 permit or when caught in the act of attacking or killing livestock (WAC 232-36-05100B). The
37 humaneness of private individuals shooting wolves would depend on the skill of the individual
38 and their ability to make a quick and efficient kill.

39
40 Some individuals would consider this alternative inhumane because they oppose all lethal
41 methods of damage management. Others will be opposed to this alternative because they object
42 to specific lethal wolf damage management methods like traps and cable restraints and perceive
43 these methods as being unjustifiably cruel and inhumane. Some individuals would prefer that
44 cage traps be used to capture wolves and would perceive this method as being more humane than
45 traps and cable restraints. Unfortunately, the use of cage traps to capture wolves is impractical
46 and ineffective because it is extremely difficult to get a cage trap big enough for an adult wolf

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1 into remote locations, and because it is rare to capture an adult wolf in a cage trap (USDA 2006).
2 Individuals with animals that have been injured, threatened, or killed by wolves may see this
3 alternative as being acceptable because it includes necessary lethal actions to help prevent further
4 injuries to their livestock and pets.

5
6 Finally, livestock owners feel that they have a right to protect their property, and may consider it
7 unacceptable that their domesticated animals be subjected to harm by wolves.

8 9 Aesthetic Effects

10
11 Aesthetics is the philosophy dealing with the nature of beauty, or the appreciation of beauty.
12 Therefore, aesthetics is truly subjective, dependent on what an observer regards as beautiful.
13 Direct benefits are derived from a user's personal relationship or direct contact with wildlife and
14 may include either consumptive (*e.g.*, using or intending to use the animal such as in hunting or
15 fishing) or non-consumptive use (*e.g.*, observing or photographing animals) (Decker and Goff
16 1987). Indirect benefits, or indirect exercised values, arise without a human being in direct
17 contact with an animal and are derived from experiences such as looking at pictures or videos of
18 wildlife, reading about wildlife, or benefiting from activities or contributions of animals such as
19 their use in research (Decker and Goff 1987). Two forms of indirect benefits exist according to
20 Decker and Goff (1987): bequest and pure existence. Bequest benefits arise from the belief that
21 wildlife should exist for future generations to enjoy; pure existence benefits accrue from the
22 knowledge that the animals exist in the human environment (Decker and Goff 1987) or that they
23 contribute to the stability of natural ecosystems (Bishop 1987).

24
25 Some people directly affected by problems caused by wolves insist on the lethal removal of the
26 problem animal(s) from the area where the conflict occurs. Others have the view that all wildlife
27 involved in conflicts should be captured and relocated to another area to alleviate the problem.
28 Individuals not directly affected by a conflict may be supportive of affected humans, neutral, or
29 totally opposed to any removal of wildlife from specific locations or sites.

30
31 Those who oppose removal of wildlife may do so because of emotional or spiritual ties to the
32 animals, which are similar to the bonds that may exist between a human and a pet. Some may
33 totally oppose wolf damage management, especially if lethal methods are used, and want
34 management agencies to teach tolerance of wolves causing conflicts. These individuals generally
35 believe that individual animals have inherent value and should not be killed to meet the desires
36 of man-kind. They may also feel that individual animals have rights similar to those of humans
37 and that, if it is inappropriate to treat a human in a given manner, then it is also inappropriate to
38 treat an animal in that manner.

39
40 Under this alternative WS would not remove wolves. WDFW would still remove problem
41 wolves (Appendix A), as could tribal authorities. The ability to view and aesthetically enjoy
42 wolves at a particular site could be temporarily limited when the wolves are removed. New
43 animals would most likely reoccupy the site in the future if suitable habitat exists, although the
44 length of time until new wolves arrive is variable, depending on the habitat type, time of year,
45 and population density of wolves in nearby areas. An objective of the WCOMPW is to conserve
46 wolves to the point of recovery, while managing conflicts. Given that wolves are expected to

1 continue to expand in number and range in Washington, the current program alternative and
2 environmental status quo will not jeopardize the viability of the wolf population, thus
3 opportunities to view, hear, and aesthetically enjoy wolves will likely be available to the public
4 and grow over time as wolves reach recovery and management stages.

5
6 **4.1.4 Effectiveness**
7

8 The integrated and adaptive approach employed by WDFW, USFWS, or tribes under the
9 WCMPW could incorporate the use of lethal and non-lethal measures to stop or reduce the
10 likelihood of wolf damage. In assessing the effectiveness of various management approaches to
11 dealing with wolf predation on livestock in the NRM area, Bangs et al. (2009) concluded that
12 while non-lethal tools were temporarily helpful in some situations, they were generally
13 ineffective, particularly in areas that simply would have too many livestock conflicts for wolf
14 packs to persist. That is, scaring wolves away from one specific location in an area with large
15 numbers of livestock everywhere else simply results in the wolf conflicts with livestock in
16 adjacent areas where focused non-lethal efforts are not being employed or as ardently. Bangs et
17 al. (2009) also concluded that lethal management of problem wolves was usually effective in
18 reducing conflict because it: 1) enhanced effectiveness of non-lethal control measures, 2)
19 interrupted use of livestock as food by surviving wolves, 3) removed offending individuals, 4)
20 reduced wolf density in conflict areas, 5) eliminated packs where repeated livestock depredations
21 had been occurring, 6) helped to keep wolf packs out of unsuitable habitat, 7) made surviving
22 pack members temporarily avoid or be more wary of people and/or areas with livestock, 8)
23 reduced the pack's overall need for food, 9) made it more difficult for the fewer remaining pack
24 members to kill larger prey like adult cattle or attack calves protected by cows, 10) increased the
25 detection rate of subsequent depredations because livestock carcasses were consumed more
26 slowly (so additional control could be applied more rapidly), 11) reduced compensation and
27 control costs, and 12) moderated some of the public anger over wolf predation on livestock.
28 Mech (1995) similarly concluded that in most circumstances, lethal removal of wolves was
29 usually the only practical approach to resolving incidents of wolf predation on livestock.

30
31 Karlsson and Johansson (2009) reviewed data on livestock predation by brown bears, wolves and
32 lynx on farms in Sweden and concluded that the risk of predation greatly increased during the
33 first several weeks after an initial predation incident. They suggested that control efforts,
34 whether lethal or non-lethal, would be most effective if applied during this period of time
35 following an initial depredation event. Bradley (2004) found that after partial or complete wolf
36 pack removal, depredations usually ceased for the remainder of the given grazing season.
37 However, the majority of packs that were partially removed (68%) depredated again within the
38 year. Where entire packs were removed, the rate of re-colonization was high (70%) and most re-
39 colonization (86%) occurred within a year of removal of the previous pack; most packs (86%)
40 that recolonized the same area were implicated in depredations. Packs in which breeders were
41 removed were no less likely to cause depredations again within the year than packs with non-
42 breeders removed.

43
44 Although non-lethal methods are often only temporarily effective, they may sometimes offer
45 protection for a long enough period of time to protect a resource when it may be most vulnerable.
46 An example is the use of the RAG box in small calving pastures. Breck et al. (2002) reported

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1 that this frightening device, activated by the radio signal from an approaching radio-collared
2 wolf, was effective in keeping a radio-collared wolf pack away from several small calving
3 pastures in central Idaho for 60 days. However, this device is only useful in those cases where at
4 least one and preferably multiple wolves in the pack are radio-collared, and it is only useful for
5 protecting relatively small areas. Fladry has also been used to deter wolves for up to 60 days
6 before the wolves habituated to it and began killing livestock again (Musiani et al. 2003). One
7 consideration in the use of these temporarily effective non-lethal methods, is, that if wolves will
8 eventually be lethally removed anyway (after habituating to the frightening stimulus), the
9 investment of time and resources in the non-lethal efforts may not be practical.

10
11 One of the most effective non-lethal deterrents to wolf predation may be the on-site presence of
12 humans who remain near the livestock and are vigilant in trying to detect the presence of wolves
13 so they can be consistently frightened away (Shivik 2004). These efforts can be more effective if
14 there are radio-collared wolves in the area and the livestock guardian personnel make use of
15 radio-telemetry receivers to detect the nearby presence of wolves. The costs to provide 24/7
16 human presence around livestock would ordinarily be cost-prohibitive for livestock producers,
17 but in some situations, outside parties with an interest in wolf conservation have provided such
18 assistance at no cost to livestock producers, in order to promote greater tolerance for wolves.
19 The Defenders of Wildlife have paid for such efforts in the Big Wood River drainage of central
20 Idaho during several recent summer grazing seasons, and while these efforts have not been 100%
21 effective in eliminating wolf problems, they appear to have been effective in reducing the
22 number of wolf attacks on sheep and livestock guarding dogs in this area (USDA 2010).

23
24 Bangs and Shivik (2001) reported that while some non-lethal methods may be temporarily
25 effective, many are expensive to implement and none available at the time of their report were
26 widely effective. Many non-lethal methods of preventing livestock losses to wolves have been
27 tried and abandoned in the United States and Europe because of lack of effectiveness. Use of
28 guard dogs alone has been tried against wolves in Minnesota with only limited success (Fritts et
29 al. 1992). Coppinger and Coppinger (1996) showed the dominance of wolves over livestock
30 guarding dogs in direct confrontations, and Coppinger and Coppinger (1996) and Bangs et al.
31 (1998) reported that wolves have killed livestock guarding dogs. Wolves have also been
32 translocated to other areas, but many either returned to where they were caught or became a
33 problem elsewhere (Fritts et al. 1984, 1985). Mech et al. (1996) concluded that where wolf
34 populations are large and secure, translocation has little value in wolf management. Aversive
35 conditioning (Gustavson and Nicolaus 1987, Shivik and Martin 2001, Shivik et al. 2003) has not
36 yet proven effective with wild wolves (Fritts et al. 1992). Electric fencing may hold some
37 promise for protecting livestock from wolves, but fences tested for coyotes have been extremely
38 expensive, high maintenance, and better suited for small areas (Dorrance and Bourne 1980, Nass
39 and Theade 1988, Paul and Gipson 1994), rather than range operations.

40
41 In looking at the possible role of livestock husbandry practices in reducing wolf predation,
42 Bradley and Pletscher (2005) assessed multiple factors potentially related to wolf depredations
43 on cattle in fenced pastures in Montana and Idaho. They concluded there was no relationship
44 between depredations and carcass disposal methods, calving locations, calving times, breed of
45 cattle, or the distance cattle were grazed from the forest edge. They did find that depredations
46 were more prevalent in pastures where elk were more likely to occur, where the pastures were

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1 larger in size, had more cattle, and where cattle were grazed farther from residences than
2 pastures without depredations. Mech et al. (2000) likewise concluded there were essentially no
3 differences in husbandry practices between farms in Minnesota that suffered repeated wolf
4 depredations, as compared to similar operations which experienced no depredations, and that
5 farms with cattle farther from human habitation suffered more losses.

6
7 Haight et al. (2002) and Cochrane et al. (2003) reported on a model developed to assess three
8 different strategies for reducing wolf predation on livestock, including: 1) reactive management,
9 where wolf removal occurred soon after depredations occurred, 2) delayed reactive management,
10 where wolf removal occurred in the winter months prior to the grazing season in areas with a
11 history of previous depredations, and 3) population-size management, where wolves were
12 removed annually in the winter months from all areas near farms. The authors' concluded that:
13 1) each of these approaches reduced predation by about half compared with no action, 2) delayed
14 reactive management and population-size management actually removed fewer wolves than
15 reactive management because wolves were removed in winter before pups were born, and 3)
16 population-size management was least expensive because repeated annual removal kept most
17 territories near farms free of wolves. The WCMPW allows lethal methods to only be used as a
18 reactive approach.

19
20 In conclusion, non-lethal methods are used and recommended but not always successful in
21 stopping or reducing damages, especially over time and must be supplemented with lethal
22 methods. WDFW's approach is to allow for limited lethal removal of wolves after they have
23 been confirmed to have been involved in repeated livestock depredation. WDFW has indicated
24 that it would target wolves for lethal control, similar to the proposed action, however without
25 additional assistance from WS, service to landowners may be reduced or delayed and WDFW
26 would have to redirect their personnel from conservation and recovery focus to lethal removal,
27 thus wolf depredation on livestock may increase and overall conservation and recovery may be
28 slowed.

30 **4.2 - Alternative 2 – Eliminate the Current Wolf Assistance Program**

31
32 Under Alternative 2, the Eliminate the Current Wolf Assistance Program Alternative, WS would
33 not provide any wolf assistance to WDFW, other public agencies, or private individuals within
34 Washington. WS would not distribute available equipment or assist landowners with the
35 implementation and use of non-lethal methods and devices. WS would not investigate wolf
36 depredation complaints to determine if the wolves are responsible for losses. WDFW, USFWS,
37 and tribes could take the same actions as those described under the No Action alternative, thus
38 nonlethal and lethal control would still occur. The cumulative effects of such actions are similar
39 to the current environment under which wolves exist, and are discussed as the environmental
40 baseline, or the environmental status quo in Section 4.1.

1 **4.2.1 Impact on wolf population**

2
3 Direct effect

4
5 WS would have no involvement or effect with/on wolves.

6
7 Cumulative effects on gray wolves in Washington

8
9 The cumulative effects on wolves would be similar to that described under Section 4.1.1.
10 USFWS has responsibility for managing federally listed wolves, WDFW has responsibility for
11 managing federally delisted wolves, and tribal governments have authority on tribal lands within
12 their boundary. Ranchers and livestock producers must work directly with WDFW and USFWS
13 when wolf/livestock conflicts occur in their areas of management. Livestock producers that see
14 wolves on their property or suspect wolves have attacked livestock are instructed to immediately
15 call WDFW, USFWS, or county officials. WDFW, USFWS, or tribes would implement wolf
16 damage management per appropriate regulations, as discussed in Section 2.1, and individual
17 wolves are expected to be removed when and where a need exists and in accord with the
18 requirements for removal. In addition, producers in areas where wolves are managed by the state
19 (currently within the NRMDPS boundary), and who have been issued a WDFW permit or catch
20 wolves attacking their animals (WAC 232-36-05100B), may kill wolves.

21
22 Because WDFW would implement the WCMPW with or without the assistance of WS
23 (Appendix A), effects on the wolf population would be similar to the No Action Alternative.

24
25 **4.2.2 Impacts on non-target animals and human safety**

26
27 Non-target animals

28
29 WS would have no effect on non-target species or humans under this alternative.

30
31 Human Safety

32
33 WS would have no effect on human safety under this alternative.

34
35 Cumulative effects in Washington

36
37 Lethal methods would be used by WDFW, its agents, or tribes in the absence of any assistance
38 from WS, and thus would present no change in human safety risk from that of the current
39 environmental baseline (the No Action alternative).

40
41 In the unlikely event that wolves threatened human safety, WDFW, USFWS, and tribes could
42 take actions as allowed under the WCMPW, ESA, CFR, or tribal guidance.

1 **4.2.3 Social and Aesthetic Perspectives**

2
3 Non-lethal actions are generally preferred by members of the public. However, members of the
4 public who experience wolf threats to or losses of livestock, as well as some pet owners, feel that
5 they have a right to protect their property, and may consider it unacceptable that their
6 domesticated animals be subjected to harm by wolves by using non-lethal methods if they are not
7 effective. People have bred the defensive capabilities out of many domestic animals and thus
8 may feel that they have an obligation to protect them from being killed by predators.

9 As discussed in Section 4.1.3, livestock producers, some rural residents, and hunters would be
10 more likely to approve of the most effective methods that will reduce wolf damages, and some
11 members of the public would prefer if wolves were removed from Washington.

12
13 Because WDFW (Appendix A), USFWS, or tribes could take necessary action to lethally remove
14 wolves under this alternative, ultimately, social perspectives would be expected to be similar to
15 the No Action Alternative.

16
17 Humaneness

18
19 The effects of this alternative would be similar to the No Action alternative because of the role of
20 WDFW in implementation of the WCMPW, which allows for nonlethal and lethal control.

21
22 Impact of wolf removal on public aesthetic enjoyment

23
24 Under this alternative, WS would have no effect on the ability of the public to enjoy wolves
25 since it would have no effect on individual wolves or the wolf population. However for the
26 reasons discussed under the No Action alternative, WDFW, USFWS, or tribes could take any
27 necessary lethal actions and wolves would be affected similar to the No Action alternative.
28 Thus, the ability of the public to potentially enjoy wolves in their natural habitat would be the
29 same as Alternative 1, No Action.

30
31 **4.2.4 Effectiveness**

32
33 Eliminating all assistance from WS would necessitate WDFW, USFWS, or tribes to direct
34 personnel away from proactive damage management and conservation and recovery efforts,
35 which would likely negatively affect wolf conservation and recovery and may result in increased
36 wolf depredation on livestock (Appendix A).

37
38 **4.3 Alternative 3 – Proposed Action: Expand the Current Wolf Assistance Program**

39
40 The Proposed Action alternative is to assist livestock producers, tribes, WDFW, and USFWS
41 with an integrated approach of technical assistance, wolf damage identification, and nonlethal
42 and, with the exception of USFWS, lethal wolf damage management approaches under the
43 WCMPW or similar guidance. WDFW, USFWS, and tribes would continue to implement
44 aspects of relevant wolf management (e.g., recovery and conservation) and WS would cooperate
45 to provide the assistance necessary to respond to wolf complaints and resolve depredation. This
46 alternative is almost identical to the No Action alternative except that WS could respond to

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1 WDFW or tribe requests to provide conservation trapping and lethal removal in accordance with
2 the WCMPW or similar guidance and assist the USFWS with conservation trapping when
3 requested and under ESA guidelines. Having WS assist WDFW or the tribes with lethal removal
4 of wolves will allow the other agencies to focus their personnel towards conservation and
5 recovery of wolves in Washington.

6
7 This alternative is an improvement over the No Action alternative with actions allowed under the
8 WCMPW, and the environmental consequences are similar to those under Alternative 1, No
9 Action, because WS would be involved with lethal and non-lethal wolf damage management,
10 instead of only WDFW, USFWS, or tribal personnel. The environmental consequences would
11 be fewer than Alternative 2 as well, because WDFW would not be required to redirect its
12 personnel from conducting wolf conservation and recovery projects. This alternative is expected
13 to have the greatest efficacy in reducing wolf damage while benefiting wolf conservation and
14 recovery in WA.

15 16 **4.3.1 Impact on wolf population**

17 Direct effect

18
19
20 Effects on the wolf population under this alternative could result in a similar or lower level of
21 wolf removal as compared with Alternatives One and Two (Appendix A). Under this alternative,
22 WS may respond to WDFW or tribal requests to remove individual problem wolves under the
23 conditions of the WCMPW or similar guidance and assist USFWS with wolf conservation efforts
24 under ESA guidelines. This alternative would allow WDFW, USFWS, and tribal personnel to
25 focus their efforts on conservation and recovery of gray wolves in Washington. It would not
26 result in more wolves removed since WDFW, USFWS, or tribes are responsible for determining
27 the number of wolves to remove and would respond if WS could not (Appendix A).

28 29 Cumulative effects on gray wolves in Washington

30
31 The cumulative effect on the gray wolf population in Washington would be similar or lower than
32 Alternatives One and Two. WDFW is already implementing the WCMPW and would continue
33 to respond to wolf damage complaints in the absence of WS assistance (Appendix A). Without
34 WS assistance, WDFW may need to take more wolves to address wolf damage (Appendix A).
35 Because WDFW or tribes must make the decision regarding individual wolf removals of wolves
36 under their jurisdiction, and because WS would be bound to the measures discussed in the
37 WCMPW (Wiles et al. 2011) or similar guidance, the discussion and findings under the No
38 Action Alternative, in which WDFW, USFWS, and tribes would act if WS did not, is expected to
39 be similar.

40
41 Under this alternative, WS would provide assistance to WDFW or tribes with lethal and non-
42 lethal wolf damage management and USFWS with non-lethal management and lethal
43 management under provisions of the ESA. By providing WDFW and tribes with lethal
44 management assistance, WDFW and tribes would be able to focus their personnel towards
45 programs to enhance wolf recovery and conservation. Therefore, when compared with the No
46 Action (current program) and Eliminate the Wolf Assistance Program alternatives, the proposed

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1 action alternative would result in the greatest overall potential for wolf conservation by allowing
2 WDFW (Appendix A), USFWS, and tribes to focus their staff time on wolf conservation and
3 recovery efforts.

4
5 Ultimately, based on WS assistance to USFWS, WDFW under the WCMPW, WDFW's public
6 education and outreach, and the cautious and conservative approach to reducing wolf
7 depredation, wolves are expected to continue to expand in Washington and establish populations
8 in suitable habitat. Based on habitat connectivity and an abundance of wolves in other regions of
9 the NRMDPS, it is reasonable to expect that wolves will expand within the foreseeable future to
10 meet state and federal delisting criteria in Washington.

11
12 The Colville Indian Tribe opened wolf hunting to its members through 28 February 2013 or until
13 3 wolves are taken in each of the 3 assigned regions on the Colville Indian Reservation. This
14 action was taken after communication with state authorities and done in order to control wolf
15 populations that threaten the deer and elk tribal members rely on. WDFW takes tribal hunting
16 into account when determining wolf recovery actions so that tribal hunting will not add adverse
17 cumulative impacts to WDFW permitted wolf removals during wolf conservation and recovery
18 processes. WDFW does not believe that this action will inhibit wolf recovery efforts in
19 Washington (*Pers. comm. Dave Ware, WDFW, July 2013*).

20
21 Because Washington wolf conservation and management is a relatively new issue, WS has
22 limited its proposed role in using lethal depredation management methods to the guidance under
23 the WCMPW, ESA, or similar guidance from tribes.

24 25 **4.3.2 Impacts on non-target animals and human safety**

26 27 Non-target animals

28
29 There would be little to no difference in the effect to non-target animals because WDFW, its
30 agents, USFWS, WS, and tribes could use the same tools. Neck snares have potential to affect
31 non-targets. The exposure of non-target animals to neck snares is mitigated through consultation
32 with the USFWS under Section 7 of the ESA (Appendix C). Neck snares would primarily be
33 used in the winter time when few non-target species are present, set in wolf trails leading
34 to/away from depredation sites, and set to avoid capturing non-target animals. While there may
35 be some risk to larger non-target animals such as bear and cougar, the level of use of lethal tools
36 would be so low as to render negative effects on non-target species unlikely. WS may apply
37 other techniques more proficiently than WDFW, so effects to non-targets could be somewhat less
38 under this alternative. WS may use neck snares when foothold traps are less effective due to
39 their mechanical nature. This tool is available to WDFW, and WS as its agent, under RCW
40 77.15.010, so it may not result in a difference in removing depredating wolves to promote wolf
41 recovery and conservation in WA.

42
43 WS Standard Operating Procedures to minimize the capture of non-target animals is discussed in
44 Section 2.3.

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Threatened and Endangered Species

During development of this EA, Wildlife Services reinitiated consultation with the USFWS (February 1, 2013), pursuant to the federal Endangered Species Act, for potential program effects on bull trout (*Salvelinus confluentus*), Canada lynx (*Lynx canadensis*), Columbian white-tailed deer (*Odocoileus virginianus leucurus*), gray wolf (*Canis lupus*), grizzly bear (*Ursus arctos horribilis*), pygmy rabbit (*Brachylagus idahoensis*), and Pacific coast population of the western snowy plover (*Charadrius nivosus nivosus*). WS determined “no effect” for marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix caurina occidentalis*), short-tailed albatross (*Phoebastria albatrus*), and woodland caribou (*Rangifer tarandus caribou*). WS determined “may affect, not likely to adversely affect” for bull trout, Columbian white-tailed deer, and pygmy rabbit. WS’ final determination for western snowy plover, gray wolf, and grizzly bear was “may affect, likely to adversely affect”. Based on meetings and discussions with USFWS, we expect USFWS to concur with these determinations. Actions relative to this EA would have no impact on western snowy plover, may adversely affect individual federally listed grays wolves (though be beneficial to the long-term recovery of the species), and may adversely affect grizzly bear if WS accidentally captured a grizzly bear during wolf trapping actions. In order to ensure that WS actions would not jeopardize federally listed gray wolves or grizzly bear, WS would implement the conservation measures proposed in Section 2.3.

Human Safety

The methods proposed by WS would be the same as those used by WDFW under the No Action alternative. WS is unaware of any impacts to public health or safety associated with agency implementation of wolf damage management methods in other states.

Aerial operations would likely occur in relatively remote areas with no or very low human presence on the ground. A formal risk assessment of methods used in wildlife damage management concluded there was very little, if any, risk to the public from WS aerial shooting activities (USDA 1997, Appendix P). Other analyses of aircraft accidents by WS concluded that the accident rate for WS pilots and aircraft is not significantly different from rates reported for general aviation and that the risk of harming any member of the public is exceedingly low (USDA 2011a, 2011b). We find no reason to believe that aerial operations used in wolf damage management would present any significant risk to public health or safety in Washington.

WS’ traps and snares are strategically placed to reduce the likelihood of exposure to the public. Appropriate warning signs are posted at access points to areas or properties where traps or snares are set to alert the public of their presence (WS Directive 2.450). In Idaho, where wolf removal efforts are relatively high compared to what is anticipated in Washington, there have been no injuries from WS wolf damage management activities reported to WS, USFWS, Idaho Fish and Game.

Humans are not likely to be exposed because of the remoteness or locations on private lands where wolf removals generally occur. WS’s use of traps and snares has not presented any safety risks to people (MIS 2012). This conclusion was made on the national WS program by a formal risk assessment of WS methods (USDA 1997, Appendix P). Similar to the No action alternative, this Alternative could provide relief from damage or threats to public health and safety for

1 people who would have no relief from such damage or threats if non-lethal methods were
2 ineffective or impractical.

3 4 **4.3.3 Social and Aesthetic Perspectives**

5 6 Humaneness

7
8 People’s perspectives on wolf damage management and on the removal of wolves under the
9 proposed action would be expected to be similar to the No Action and Non-lethal only
10 alternatives since wolves would be removed in a similar manner and number, under the same
11 criteria (Wiles et al. 2011), and for the same reasons. While WS may act as an agent to
12 landowners holding lethal removal permits, additional take is unlikely for the reasons discussed
13 under Section 4.3.1.

14
15 With regard to the humane treatment of wolves, the proposed action would be similar to the
16 other alternatives as far as lethal methods that WS would use (as discussed in Section 4.1.3). WS
17 would continue to provide non-lethal technical assistance to all who request it. The overall
18 humaneness of the wolf management program may be enhanced under the proposed action
19 alternative because by assisting WDFW and tribes with lethal depredation response efforts, they
20 can focus their personnel towards recovery and conservations actions.

21
22 With regard to the perspective of livestock producers and others who feel that domestic animals
23 should be protected from predation, this alternative would probably be considered more humane
24 than the other alternatives because WS may be able to respond to WDFW, USFWS (under ESA
25 guidelines), and tribal requests for lethal removal faster and more efficiently than their agents
26 could. WS already has personnel in the field that have the expertise to identify and resolve
27 wildlife damage. By expediting response times, the potential for continued or additional wolf
28 depredation on livestock can be reduced. Enhancing agency depredation management efficiency
29 is likely to promote social tolerance of wolves in Washington, as discussed under Section 4.1.3.

30 31 Aesthetic effects

32
33 Some individuals contend that there is an “existence value” placed on wolves: that a value exists
34 even though a large segment of the public will never actually see or hear a wolf. Because WS is
35 not proposing to remove all wolves nor would WDFW authorize the killing of all wolves as a
36 manner to recover and conserve the species in Washington, there will be wolves available to
37 continue the concept of “existence value”. The ability to view and aesthetically enjoy wolves at
38 a particular site could be temporarily limited when a wolf is removed. New animals would most
39 likely reoccupy the site in the future if suitable habitat exists, although the length of time until
40 new wolves arrive is variable, depending on the habitat type, time of year, and population density
41 of wolves in nearby areas. While non-consumptive users could be temporarily affected by
42 localized removals (especially if they recreated in areas where wolf/livestock conflicts were
43 occurring), the overall effect would be beneficial in terms of the potential for people to
44 aesthetically enjoy wolves in the wild in the long term. This alternative would provide the
45 highest level of support towards wolf conservation and recovery in Washington as identified in
46 the WMCPW (Wiles et al. 2011, Appendix A). Therefore, non-consumptive users would benefit

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1 most from this alternative. Still, there are likely to be groups and individuals who would be
2 opposed to any control of wolves, regardless of the long-term beneficial role it plays in the
3 conservation of wolves.

4
5 The likelihood of getting to see wolves is probably very low currently due to the limited numbers
6 of wolves in Washington, the remote areas they inhabit, and the lack of access to private lands
7 where wolves often occur. The ability to directly enjoy wolves in the wild will probably be
8 greatest for people who have knowledge of wolf behavior and habits and make the effort to visit
9 sites with adequate habitat outside of damage management areas.

10 11 **4.3.4 Effectiveness**

12
13 The effectiveness of the tools and techniques proposed under this alternative to manage
14 depredation would be similar to the No Action alternative since either way, non-lethal methods
15 are in use when they are effective, and agency lethal control would take place using the same
16 approach as provided by WCOMPW. However, the proposed action would likely be more
17 efficient in resolving depredation than the No Action and Eliminate the Wolf Assistance
18 Program alternatives in alleviating additional livestock damages. WS may be more efficient in
19 responding to agency or tribal orders to remove depredating wolves as prescribed and needed to
20 prevent further losses because it has personnel in the field who already assist landowners with
21 other wildlife damage conflicts. WS personnel may be more readily available to provide
22 assistance sooner than if WDFW or tribes alone implemented lethal measures on depredating
23 wolves. As WDFW stated on 11 January 2013, in a letter to WS (Appendix A),

24
25 *We anticipate continued rapid growth of Washington's wolf population and*
26 *without your help, we will not be able to adequately address or manage conflicts.*
27 *If we are unable to adequately manage conflicts, public tolerance for wolves will*
28 *decline and recovery efforts could be jeopardized. While WDFW would still*
29 *provide necessary removals of wolves in the absence of additional WS assistance,*
30 *WDFW will not be able to respond as efficiently to potential or actual*
31 *depredation events and thus producers may suffer greater levels of damages.*
32 *Additionally, without your program's expert assistance, WDFW would probably*
33 *need to redirect personnel from overall conservation and recovery to focus on*
34 *responding to damages. For these reasons, without the assistance of your*
35 *program, overall conservation and recovery may be hampered.*

36
37 The same number or fewer wolves may be removed under this alternative (Appendix A), and
38 targeting and capture of depredating wolves would be expedited under the proposed action.
39 Because repeatedly depredating wolves may continue depredating on livestock, fewer livestock
40 losses would probably occur under this alternative. Removing a depredating wolf early may also
41 result in fewer pack members learning to depredate livestock, thereby reducing future
42 depredations further.

1 **4.4 Summary and Conclusions**
2

3 This EA discusses approaches that WS could take to respond to requests from WDFW, USFWS,
4 and tribes to assist with implementing portions of the WCMPW (Wiles et al. 2011) or similar
5 guidance. The essential decision presented to WS, is not how to manage wolf damage to
6 livestock, but whether or not to assist the WDFW, USFWS, and tribes with specific actions
7 dictated by the WCMPW or similar guidance. This EA also evaluates the current non-lethal only
8 alternative (No Action). The analysis in the EA shows that results of the No Action and
9 Eliminate the Wolf Assistance Program alternatives would be similar to the proposed action
10 because WDFW and tribes would continue to take necessary actions to remove repeatedly
11 depredating/problem wolves if WS did not. The primary differences between the alternatives are
12 the probable increased efficacy of the proposed action in reducing livestock damage and
13 enhancing the ability of WDFW and the USFWS to conserve wolves to the point of recovery, as
14 compared with the No Action and Eliminate the Wolf Assistance Program alternatives. WS has
15 no decision authority over WDFW, USFWS, or tribes in regards to calling for the removal of
16 problem wolves. The decision to be made is to respond or not respond to their requests directing
17 when, where, and which wolves should be removed. The methods used to capture wolves
18 include the same methods described in Chapter 2 which WS would use in providing requested
19 assistance. The WCMPW is very specific about the criteria which call for any lethal effects on
20 wolves and if WS were to participate, it would be following such direction by WDFW or similar
21 direction from USFWS (under ESA guidelines) or tribes (under their sovereign tribal authority).

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Appendix A: WDFW Letter



RECEIVED

JAN 14 2013

BY:

State of Washington

Department of Fish and Wildlife

Mailing Address: 600 Capitol Way N, Olympia, WA 98501-1091, (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

January 11, 2013

Roger Woodruff
State Director
Wildlife Services for Washington and Alaska
USDA Animal and Plant Health Inspection Service
720 O'Leary Street Northwest
Olympia, Washington 98502

Dear Mr. Woodruff:

Thank you for your recent letter and follow up questions requesting information and clarification regarding the Washington Department of Fish and Wildlife's (WDFW) implementation of Washington's Wolf Conservation and Management Plan (Plan). The Plan was adopted by the Washington Fish and Wildlife Commission in December 2011 and implementation began immediately. WDFW has been somewhat surprised by how quickly Washington's wolf population has increased and the level of conflicts experienced over the past several months.

We are requesting the assistance of Wildlife Services (WS) in helping us address wolf conflicts and in capture and monitoring efforts for management and research as part of implementing the Plan. We request WS's participation in these activities anywhere in the state where WDFW is the lead. We also ask that WS assist us where the U.S. Fish and Wildlife Service has management authority through the Endangered Species Act, but has authorized WDFW to take management actions.

WDFW has been trapping, capturing, and monitoring wolves since 2008, and we currently have eight confirmed packs and four suspected packs being monitored by the Department and/or cooperating tribes. Wolves were killed by WDFW this year for the first time in response to chronic depredation of livestock. Our efforts to kill wolves included trapping and shooting, both from the ground and with the aid of a helicopter. These lethal removal efforts will continue by WDFW regardless of whether WS is able to assist us. WDFW is authorized and plans to implement a variety of wolf-livestock management measures including: preventative advice, deterrents, harassment, and lethal removal in cases of chronic depredation. Lethal removal authority for WDFW includes using foothold traps, shooting (including aerial techniques), and snares.

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Roger Woodruff
January 11, 2013
Page 2

We are requesting WS assistance with wolf-livestock conflict management because we do not have the capacity to adequately address the level of conflict we have already experienced. We anticipate continued rapid growth of Washington's wolf population and without your help, we will not be able to adequately address or manage conflicts. If we are unable to adequately manage conflicts, public tolerance for wolves will decline and recovery efforts could be jeopardized. While WDFW would still provide necessary removals of wolves in the absence of additional WS assistance, WDFW will not be able to respond as efficiently to potential or actual depredation events and thus producers may suffer greater levels of damages. Additionally, without your program's expert assistance, WDFW would probably need to redirect personnel from overall conservation and recovery to focus on responding to damages. For these reasons, without the assistance of your program, overall conservation and recovery may be hampered.

One of the lessons we learned this year is the need to anticipate conflicts rather than just respond to reported depredations. We want to be working with livestock producers proactively next spring and using techniques to minimize conflicts rather than responding to escalating depredation events. This proactive approach should help us minimize the number of lethal removals necessary and hopefully completely avoid the need for the removal of an entire pack.

WDFW staffing levels and resources are not adequate for such a comprehensive proactive approach, even at current wolf population levels. This shortfall will become even worse with the anticipated growth of Washington's wolf population during the coming year.

We are look forward to working with WS in completing the environmental assessment and in implementing Washington's Wolf Conservation and Management Plan. We feel these are important steps for recovery of sustainable wolf populations in this state.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nate Pamplin', with a stylized flourish at the end.

Nate Pamplin, Assistant Director
Wildlife Program

APPENDIX B

Appendix B: 2011 MOU between WS and USFS

MEMORANDUM OF
UNDERSTANDING Between
USDA ANIMAL AND PLANT HEALTH INSPECTION SERVICE-WILDLIFE
SERVICES
And The
USDA, FOREST SERVICE
NATIONAL FOREST SYSTEM

This MEMORANDUM OF UNDERSTANDING is hereby made and entered into by and between USDA, Animal and Plant Health Inspection Service-Wildlife Services, hereinafter referred to as "APHIS-WS", and the USDA, Forest Service, National Forest System, hereinafter referred to as the "U.S. Forest Service."

Background: The APHIS-WS and the Forest Service are agencies of the United States Department of Agriculture (USDA) concerned with wildlife damage management (WDM) and research on National Forest System (NFS) lands.

For the purposes of this agreement, WDM refers to actions initiated by APHIS-WS to manage indigenous and feral vertebrates causing resource damage on NFS lands, to minimize livestock losses due to predation by coyotes, mountain lions and other predators, to manage wildlife diseases, to manage invasive species like feral hogs, and to protect other wildlife, plants, and habitat from damage as requested by the Forest Service and/or State or Federal wildlife management agencies. Under the Multiple Use Sustained-Yield Act of 1960 (16 U.S.C. 528-532) and other authorities, the Forest Service conducts activities to control wildlife damage to NFS resources caused by small mammals and other animals, such as damage to timber stands by beavers. Occasionally, WDM actions may be taken on NFS lands to protect resources on adjacent federal, tribal, or non-federal land.

Title: WILDLIFE DAMAGE MANAGEMENT ACTIVITIES ON NATIONAL FOREST SYSTEM LANDS

I. PURPOSE:

The purpose of this agreement is to document the cooperation between the parties: (1) to identify responsibilities of the Parties and foster a partnership in discharging the Federal obligation under the Act of March 2, 1931 (46 Stat. 1468:7 U.S.C. 426-426b), as amended, the Act of December 22, 1987 (101 Stat. 1329-331. 7 U.S.C. 426c) Executive Order 13112, and the 2008-2012 National Invasive Species Management Plan for the management of indigenous and invasive vertebrates causing damage on NFS land; (2) to establish general guidelines to assist field personnel in carrying out their WDM responsibilities consistent with policies of the Forest Service and APHIS-WS; and (3) to strengthen the cooperative approach to WDM on NFS lands through

APPENDIX B

exchange of information and mutual program support in accordance with the following provisions.

In consideration of the above premises, the parties hereto agree as follows:

D. THE APHIS WS SHALL:

- A. Evaluate WDM needs in cooperation with the U.S. Forest Service.
- B. Develop and annually update WDM work plans in cooperation with the U.S. Forest Service and appropriate State and Federal agencies, tribes, permittees, and others. With the U.S. Forest Service, identify human health and safety zones and other areas where mitigation or restriction of WDM activities may be needed to comply with forest plans.
- C. Be responsible for NEPA compliance for wildlife damage, invasive and wildlife disease management activities initiated by APHIS-WS and other WDM activities as agreed upon by APHIS-WS on NFS lands and to coordinate with the FS and appropriate State and local agencies and tribes in completing the NEPA process for such activities. The FS will be responsible for NEPA compliance for any WDM activities not covered above.
- D. Notify the U.S. Forest Service about WDM requests prior to the execution of WDM activities.
- E. Inform the U.S. Forest Service about the results of WDM activities initiated by APHIS-WS in a timely manner. Additionally, provide the U.S. Forest Service with an annual report, by State, summarizing the results of all WDM on NFS lands. The annual report shall list the names and amounts of pesticides used.
- F. Provide the U.S. Forest Service with technical information on WDM tools and techniques.
- G. Conduct WDM training sessions for U.S. Forest Service personnel.

III. THE FOREST SERVICE SHALL:

- A. Cooperate with APHIS-WS in the development and timely review of annual WDM plans governing APHIS-WS activities, including pesticide-use proposals.
- B. Participate in APHIS-WS NEPA processes as appropriate. The U.S. Forest Service will be responsible for NEPA compliance on activities as defined in Section IV. A. below.
- C. Invite APHIS-WS participation in all applicable U.S. Forest Service training at the national, regional, and forest levels, especially NEPA and Wilderness training.

APPENDIX B

- D. Involve APHIS-WS in the amendment/revision of forest plans which may have an impact on WDM activities.
- IV. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE PARTIES THAT:
- A. The U.S. Forest Service is responsible for managing land and resources under its jurisdiction, including conducting certain routine WDM operations to protect NFS lands and resources, and for assuring NEPA compliance for WDM activities requested or initiated by the U.S. Forest Service.
 - B. APHIS-WS has been granted the authority and expertise under the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426–426b), as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c) to provide WDM services. This includes maintaining technical expertise in the science of WDM control tools and techniques, conducting WDM research, conducting management programs, conducting wildlife disease surveillance, and complying with NEPA requirements for WDM.
 - C. All WDM programs on NFS lands will be coordinated with appropriate State, Tribes, and Federal agencies prior to implementation of these programs.
 - D. WDM on NFS lands will be carried out in conformance with the Endangered Species Act, Wilderness Act and other applicable laws and regulations, USDA policy on fish and wildlife Departmental Regulation 9500-4), U.S. Forest Service policies, and applicable forest land and resource management plans.
 - E. Parties will comply with all applicable Federal, State, and local laws and regulations in the use and application of pesticides.
 - F. State WDM agreements will be developed, as needed with the appropriate State, Tribes, and Federal agencies.
 - G. Both parties will ensure interagency coordination in analyzing the effects of WDM activities by APHIS-WS on NFS lands and resources before NEPA decisions are signed. The agency responsible for implementation of a specific project will also be responsible for completion of NEPA analysis and documentation.
 - H. The WDM Programs will be evaluated on an annual basis, with emphasis on their effectiveness in reducing damage or the threat of damage by wildlife and meeting the objectives stated in this agreement and APHIS-WS relevant NEPA documents.
 - I. The APHIS-WS Deputy Administrator and the U.S. Forest Service Deputy Chief for National Forest System (or their designees) will meet annually to discuss coordination of WDM operations nationwide. APHIS-WS Regional Directors and U.S. Forest Service Regional Foresters (or their designees) will meet annually, or as needed to discuss coordination of WDM operations in their respective States or regions.

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- J. Problems regarding implementation of this agreement that arise and cannot be resolved at the field level will be reviewed and resolved by elevating to the next higher organizational level for prompt action. In the event of any issue of controversy under the Agreement, the Parties may pursue Alternate Dispute Resolution procedures to voluntarily resolve those issues. These procedures may include, but are not limited to, conciliation, facilitation, mediation, and fact-finding.
- K. The Parties will cooperate on WDM research of mutual interest.
- L. The parties shall manage their respective resources and activities in a separate, coordinated, and mutually beneficial manner to meet the purposes of this agreement. Nothing in this agreement authorizes any of the parties to obligate or transfer funds. Specific projects or activities that involve the transfer of funds, services, or property among the parties require execution of separate agreements and are contingent upon the availability of appropriated funds. Each party operates under its own laws, regulations, and policies, subject to the availability of appropriated funds.
- M. PRINCIPAL CONTACTS. Individuals listed below are authorized to act in their respective areas for matters related to this instrument.

Principal Cooperator Contacts:

Cooperator Program Contact	Cooperator Administrative Contact
Name: Deputy Administrator. Bill Clay Address: USDA Animal & Plant Health Inspection Service. Wildlife Services, Mail Stop 3402 City, State, Zip: Washington, DC 20250-3402 Telephone: (202) 720-2054 FAX: (202) 690-0053 Email: bill.clay@aphis.usda.gov	Name: Joanne Garrett Address: USDA Animal & Plant Health Inspection Service. Wildlife Services, 4700 River Rd., Unit 87. Room 2026 City, State, Zip: Riverdale, MD 20737-1234 Telephone: (301) 734-7921 FAX: (301) 734-5157 Email: joanne.p.garrett@aphis.usda.gov

Principal U.S. Forest Service Contacts:

U.S. Forest Service Program Contact	U.S. Forest Service Administrative Contact
Name: Anne Zimmermann Address: USDA Forest Service, Watershed, Fish, Wildlife, Air, and Rare Plants, 1400 Independence Ave., SW. Stop Code 1121 City, State, Zip: Washington, DC 20250-1121 Telephone: (202) 205-1167 FAX: (202) 205-1599 Email: azimmermann@fs.fed.us	Name: Felicia Lockhart Address: USDA Forest Service, Watershed, Fish, Wildlife, Air, and Rare Plants. 1400 Independence Ave., SW, Stop Code 1121 City, State, Zip: Washington, DC 20250-1121 Telephone: (202) 205-1197 F : (202) 205-1599 Email: flockhart@fs.fed.us

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- N. USE OF U.S. FOREST SERVICE INSIGNIA. In order for APHIS-WS to use the U.S. Forest Service Insignia on any published media, such as a Web page, printed publication, or audiovisual production, permission must be granted from the U.S. Forest Service's Office of Communications. A written request must be submitted and approval granted in writing by the Office of Communications prior to use of the insignia.
- O. U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATION, AUDIOVISUALS, AND ELECTRONIC MEDIA. APHIS-WS shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this instrument.
- P. NONDISCRIMINATION STATEMENT-PRINTED, ELECTRONIC, OR AUDIOVISUAL MATERIAL. APHIS-WS shall include the following statement, in full, in any printed, audiovisual material, or electronic media for public distribution developed or printed with any Federal funding.

"In accordance with Federal law and U.S. Department of Agriculture policy, this Institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)"

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD).
USDA is an equal opportunity provider and employer."

If the material is too small to permit the full statement to be included, the material must, at minimum, include the following statement, in print size no smaller than the text:

"This institution is an equal opportunity provider."

- Q. TERMINATION. Any of the parties, in writing, may terminate this MOU in whole, or in part, at any time before the date of expiration.
- R. NONBINDING AGREEMENT. This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity. The parties shall manage their respective resources and activities in a separate, coordinated and mutually beneficial manner to meet the purpose(s) of this MOU. Nothing in this MOU authorizes any of the parties to obligate or transfer anything of value.

Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate

APPENDIX B

instruments and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; cooperator availability of funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute): etc. This MOU neither provides, nor meets these criteria. If the parties elect to enter into an obligation instrument that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective instrument, each party operates under its own laws, regulations. And/or policies, and any Forest Service obligation is subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective instruments must comply with all applicable law.

Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.

- S. ALTERNATE DISPUTE RESOLUTION-INTERAGENCY. The parties to this agreement shall settle any disputes that may arise under this agreement by following direction in the Treasury Financial Manual, Volume 1, Bulletin 2007-03, Section VII ("Resolving Intragovernmental Disputes and Major Differences").
- T. MODIFICATIONS. Modifications within the scope of this instrument must be made by mutual consent of the parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change.
- U. FREEDOM OF INFORMATION ACT (FOIA). Public access to agreement records must not be limited, except when such records must be kept confidential and would have been exempted from disclosure pursuant to Freedom of Information regulations (5 U.S.C. 552).
- V. ENDORSEMENT. Any of APHIS-WS's contributions made under this agreement do not by direct reference or implication convey U.S. Forest Service endorsement of APHIS-WS's products or activities.
- W. NOTICES. Any notice given by the U.S. Forest Service or APHIS-WS will be sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:

To the U.S. Forest Service Program Manager, at the address specified in the grant.

To APHIS-WS, at the address shown in the grant or such other address designated within the grant.

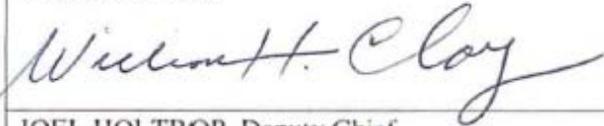
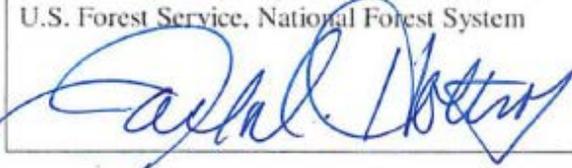
APPENDIX B

- X. PARTICIPATION IN SIMILAR ACTIVITIES. This agreement in no way restricts the U.S. Forest Service or APHIS-WS from participating in similar activities with other public or private agencies, organizations, and individuals.
- Y. COMMENCEMENT/EXPIRATION DATE. This instrument is executed as of the date of the last signature and is effective through April 15, 2016 at which time it will expire, unless extended by an executed modification signed and dated by all properly authorized, signatory officials.
- Z. CONGRESSIONAL RESTRICTION. Under 41 USC 22, no member of, or delegate to, Congress shall be admitted to any share or part of the MOU or to any benefit to arise therefrom.
- AA. LIABILITIES. APHIS will hold the Cooperator harmless from any liability arising from the negligent act or omission of the APHIS officer or employee acting within the scope of his or her employment to the extent compensation is available pursuant to the Federal Tort Claims Act (FTCA). 28 USC 2671 et. seq., except to the extent that aforesaid liability arises from the negligent acts or omissions of the Cooperator, its employees, agents or subcontractor, and employees or agents of the subcontractor(s). Such relief shall be provided pursuant to the procedures set for in the FTCA and applicable regulations.

APPENDIX B

	USDA, Forest Service	OMB 0596-0217 FS-1500-6
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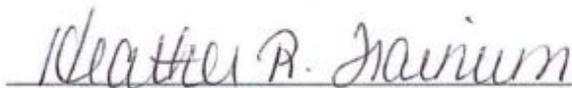
BB. **AUTHORIZED REPRESENTATIVES.** By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this instrument. In witness whereof, the parties hereto have executed this instrument as of the last date written below.

BILL CLAY, Deputy Administrator, USDA USDA, Animal and Plant Health Inspection Service – Wildlife Services 	Date 6/21/11
JOEL HOLTROP, Deputy Chief U.S. Forest Service, National Forest System 	Date 7/5/11

The authority and format of this instrument has been reviewed and approved for signature.


 ALISON LEIMAN
 U.S. Forest Service Grants & Agreements Specialist

6/7/2011
 Date


 HEATHER TRAINUM
 USDA APHIS, MRPBS-FMD-ASC, Management Analyst

6/14/2011
 Date

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APPENDIX C

Appendix C: Summary of Public Comments

To be completed after public comments are received.