



Oregon Department of Fish and Wildlife
Area-Specific Wolf Conflict Deterrence Plan
Imnaha Pack

November 14, 2013

General Situation

An Idaho wolf identified as B300 was found to be in northeastern Oregon in January, 2008. The female wolf established a territory within the Imnaha Wildlife Management Unit, and subsequently produced pups in the spring of 2009. She was captured by Oregon Department of Fish and Wildlife (ODFW) personnel in July of 2009 and refitted with a VHF radio-collar. ODFW documented 10 wolves for the Imnaha pack in the fall of 2009. Additional pack members, including the breeding male, were captured and radio-collared during the winter of 2010. The pack produced at least four surviving pups in 2010, one pup in 2011, and six pups in 2012. Currently the breeding male and a young female are the only pack members with functioning radio-collars. From October 21, 2012 to October 24, 2013 ODFW recorded 3,202 locations from collared pack members. Public lands represented 67.3% of the locations, while private lands represented 32.7%. Most locations (80.9%) occurred within the Imnaha Unit, 9.7% within the Chesnimnus Unit, 8.6% within the Pine Creek Unit, and less than 1% in each the Sled Springs and Keating units.

In May of 2010 ODFW confirmed the first livestock depredation associated with the Imnaha pack, and by early June 2010 ODFW had confirmed seven livestock depredations by the pack. ODFW worked with local ranchers to remove attractants such as bone piles and to implement non-lethal deterrent measures. Depredations have continued and from May 2010 to November 2013 a total of thirty-three incidents of depredation attributed to the Imnaha pack have been confirmed by ODFW or USFWS. In May 2011 two Imnaha pack wolves were lethally removed by ODFW in an effort to reduce livestock losses. In September 2011 ODFW again initiated lethal control efforts for two additional pack members. However, that action was halted in October 2011 when three wolf advocacy groups filed a lawsuit and the Oregon Court of Appeals stayed the agency's implementation of Oregon Administrative Rule (OAR) 635-110-0010 regarding lethal control of an endangered species. In May 2013 the litigating parties (excepting one) entered into a mediated settlement agreement, which had the ultimate effect of resolving the lawsuit. One outcome of the settlement was a new OAR which governs agency lethal take of wolves in Oregon. In addition, a separate temporary rule was established for the Imnaha pack which allowed three confirmed wolf depredations that had occurred between January 28 and May 15, 2013 to count toward lethal control. The conditions of the temporary rule end on November 15, 2013, and ODFW will then implement the full measure of the new OAR which requires designation of an Area of Depredating Wolves (ADW) and the preparation of an Area Specific Wolf Conflict Deterrence Plan (Deterrence Plan). The pack's current depredation information, ADW and Deterrence Plan will be updated as necessary and posted on the ODFW website at <http://www.dfw.state.or.us/wolves/>.

In an effort to assist area producers within the area of the Imnaha pack, an automated notification system was developed by ODFW and made available to producers in the Imnaha Pack area in May 2012. The new system allows individual producers to receive information (via text or email) regarding general area use by collared wolves in their area of operation. There are currently 79 producers receiving text or email notifications for the Imnaha Pack.

Area Description

Habitat and Landscape Conditions: Radio-collar data from October 21, 2012 through October 24, 2013 shows the Imnaha Pack using a 657 square mile area with a highly varied landscape; a much reduced area from previous years. The ADW includes a large bunchgrass prairie in the northern portion and a valley with irrigated farmland in the west-central portion. The remainder of the ADW is mostly timbered and has large drainages with rugged, open canyons that flow to the Imnaha River. The Imnaha pack wolves also use steep, high elevation peaks in the Imnaha River headwater area and a portion of the Eagle Cap Wilderness, primarily during the summer. The ADW for this pack was delineated using Imnaha wolf location data over the last year (same as the AKWA), but with areas of the Eagle Cap Wilderness that do not have active grazing allotments removed.

Land Uses, Ownership, and Wolf Use: The bunchgrass prairie in the northern portion of the ADW consists of mid to large-sized tracts of private land and livestock use is primarily dispersed cattle and sheep grazing during the summer and fall months. Much of this area is inaccessible during the winter. Wolf use of this portion of the ADW, and most depredations, have occurred primarily during winter through late spring months. There are no data locations of radio-collared Imnaha wolves north of the Imnaha highway between April 1, 2012 and Dec 31, 2012 or between June 1, 2013 and November 14, 2013. Thus, depredation is less likely in this area during the summer-fall months.

The upper valley (west-central) portion of the ADW is privately owned, in small to midsize acreages, and with many year-round residences. The area is used primarily for irrigated crops, pasture, and winter feeding/calving areas. Like the bunchgrass prairie portion of the ADW, most Imnaha wolf use and depredations have occurred during winter and spring months. Depredation has been limited to cattle; mostly calves and some adult cows. However, sheep and other livestock animals, where they occur, are vulnerable to depredation in this area of the ADW.

The southern and eastern portion of the ADW is primarily forested and comprises more than half of the area used by the Imnaha wolves. There are scattered tracts of private land, but most of the land in this portion of the ADW is managed by the Wallowa Whitman National Forest. Livestock use is predominantly cattle grazing during the summer and fall seasons, though some pastures are used during the winter. This portion of the ADW is the primary area used by the Imnaha pack during the summer and fall seasons. Within this portion of the ADW depredation has occurred on both private and public lands – primarily on open-range or dispersed grazing systems. There have also been winter depredations on the eastern edge of the ADW (near the Imnaha River) in medium size pastures. The elevation is highest in the southwest portion of the AKWA and includes a portion of the Eagle Cap Wilderness. Cattle grazing is permitted on a small portion of the Wilderness and this area is included within this ADW.

Coordination

Much of the coordination and communication used to develop this Deterrence Plan occurred prior to the adoption of new rules pertaining to appropriate non-lethal measures. Since 2010 ODFW has coordinated regularly with Wallowa County officials, Wallowa County Stockgrowers Association representatives, Oregon Cattlemen Association representatives, Wallowa County Compensation Committee representatives, individual livestock producers and landowners, and other interested parties regarding the Imnaha pack. Information has been shared about changes affecting producers

including federal endangered status, the Wolf Plan and associated new OARs. There is ongoing communication with these groups regarding current knowledge about Oregon wolves and reporting and documenting wolf activity. Non-lethal measures to reduce depredation have been discussed and implemented by many producers and ODFW within the Imnaha pack area since 2010.

ODFW has developed a website to provide information resources to potentially affected livestock producers and relevant interests within this and other ADW's. The website also shows maps of AKWAs, ADWs, conflict deterrence plans, depredation investigations and lethal take orders. Individuals can also sign up to receive email update messages when new general information is available, or to receive specific information regarding the issue of wolf/livestock conflict.

Prior to public posting and implementation, this Deterrence Plan was shared with the Wallowa County extension office, Wallowa County Wolf Compensation Committee (WCWCC), potentially affected landowners and livestock producers, Oregon Cattlemen's Association, Oregon Department of Agriculture, U.S. Forest Service, Nez Perce Tribe, Oregon Wild, Cascadia Wildlands, Defenders of Wildlife and a local wolf advocate for review and input.

Appropriate Non-Lethal Measures (by general livestock operation type)

The following is a list of appropriate non-lethal measures according to which measures are likely to be most effective in a given circumstance including the nature of livestock operations, habitat, landscape conditions specific to the area, and particular times of year of livestock production. This plan is based on information compiled by ODFW before and during the planning effort on potentially successful conflict deterrence techniques, scientific research, and available financial resources and/or partnerships that may aid in the successful implementation of the plan.

For more detailed description of each non-lethal standard please reference *Non-lethal measures to minimize wolf-livestock conflict document (attached to this Plan)* or at website address http://www.dfw.state.or.us/Wolves/non-lethal_methods.asp

Removing Attractants (applicable to all operations and seasons): If a wolf depredation occurs within an Area of Known Wolf Activity (AKWA) or Area of Wolf Depredation (ADW), OAR 635-110-0010 requires that for the depredation to qualify toward lethal control options a landowner or lawful occupant of the land must have removed, treated or disposed of all intentionally placed or known and reasonably accessible unnatural attractants for a period of at least 7 days prior to the depredation.

Additional Non-Lethal Measures: In addition to the removal of attractants, for a depredation in an ADW to qualify, at least one non-lethal measure from the appropriate list below must be implemented prior to and on the day of the depredation. The conflict deterrence plan measure implemented by a landowner or lawful occupant must address wolf-livestock conflict in open range situations when that situation exists.

Small pastures or penned areas

Description: Smaller pastures are fairly common within the west-central portion (upper valley area) of the Imnaha ADW. Often these are associated with various residential or part-time residential and recreational dwellings, and other small acreages. They include fenced and unfenced areas and livestock are often close to the residence in a single pasture or pen. Because of the smaller area associated with these small pastures and pens they are generally more protectable than other, more dispersed situations.

- Fencing or Fladry: Includes night penning or putting animals into an existing protected area at night when depredation is likely to occur. Multiple strand electric fencing is especially effective, and cost may be ameliorated over time. Especially applicable during lambing or calving periods.
- Human Presence: See attached document titled “**Non-lethal measures to minimize wolf-livestock conflict**” for appropriate application of human presence.
- Livestock protection dogs: Use of specific breeds of guarding dogs or other animals to protect livestock from wolf depredation.
- Alarm or scare devices: Radio-Activated-Guard (RAG) devices may be limited in availability and are only appropriate where radio-collared wolves are in the area. Other scare devices may be experimental and producers should coordinate with ODFW for applicable use.
- Hazing or harassment of wolves when near livestock: Only applicable when wolves are found to be near livestock. All producers are encouraged to non-injurious haze wolves from livestock when observed. See attached document titled “**Non-lethal measures to minimize wolf-livestock conflict**” for considerations and regulations when applying hazing or harassment.
- Experimental practices: Consult with ODFW for applicability.

Medium-sized (single or multiple) pastures

Description: This type generally consists of medium acreages with higher numbers of livestock; primarily sheep or cattle but other species as well. It also may include smaller pastures with landscape features (i.e., heavy timber or ravines) which are less protectable than a backyard pasture. Multiple pastures are common and livestock may be dispersed using different pastures during some seasons, and more confined during others. Many pastures within this type serve as seasonal “home” pastures for winter and spring feeding and/or calving, often with relatively large numbers of livestock. They may also be used during fall months as gathering and holding areas prior to shipping or sale. In these situations, livestock may be more protectable than at other times when livestock are more dispersed on pasture.

Most of the operations within this type occur on private lands in the west-central (upper valley) portion of the ADW. Historical location data from collared wolves shows that wolf use in this area is highest during the winter and spring months. This corresponds to the period when game species are wintering in lower-elevation open areas. Thus, use of non-lethal measures for this type may often be seasonal or temporary based on known wolf use of the area.

- Fencing or fladry: Many land areas within this type may be large enough to render permanent fencing or fladry impractical. However, in situations where livestock are

concentrated into smaller areas such as during calving, lambing, night penning (sheep) with fencing or fladry may be the best option.

- Human presence: See attached document titled “**Non-lethal measures to minimize wolf-livestock conflict**” for appropriate application of human presence.
- Alarm or scare devices: Radio-Activated-Guard (RAG) devices may be limited in availability and are only appropriate where radio-collared wolves are in the area. Other scare devices may be experimental and producers should coordinate with ODFW for applicable use.
- Livestock protection dogs: Use of specific breeds of guarding dogs or other animals to help protect livestock from wolf depredation or warn of wolf presence.
- Hazing or harassment of wolves when near livestock: Only applicable when wolves are found to be near livestock. All producers are encouraged to non-injuriouly haze wolves from livestock when observed. See attached document titled “**Non-lethal measures to minimize wolf-livestock conflict**” for considerations and regulations when applying hazing or harassment.
- Livestock management or husbandry changes: Night feeding near homes, night penning near homes, or shifting pasture use to avoid wolves where appropriate.
- Experimental practices: Consult with ODFW for applicability.

Large pasture areas with dispersed or open-range livestock

Description: Much of the land area within this ADW fits this category – mostly private bunchgrass prairie and private and federal timber lands. The pastures are large and are generally not associated with homes or residences. Much of the grazing is leased or federally permitted, and most is open-range and dispersed cattle during summer and fall months with a few sheep bands on the bunchgrass prairie.

- Human presence: See attached document titled “**Non-lethal measures to minimize wolf-livestock conflict**” for appropriate application of human presence.
- Fencing or fladry: Usually only applicable in particular (and smaller) portions of pastures where specific protection is needed and possible (e.g., night penning sheep). Not expected to be practical across larger areas.
- Alarm or scare devices: Usually only applicable in particular (and smaller) portions of pastures where specific protection is needed (e.g., night-penning or herded sheep).
- Hazing or harassment of wolves when near livestock: Only applicable when wolves are found to be near livestock. All producers are encouraged to non-injuriouly haze wolves from livestock when observed. See attached document titled “**Non-lethal measures to minimize wolf-livestock conflict**” for considerations and regulations when applying hazing or harassment.
- Livestock management or husbandry changes: Pasture rotation to avoid wolf activity may be helpful in some areas.
- Experimental practices: Consult with ODFW for applicability.

Available Resources

ODFW: ODFW works with livestock producers to provide technical assistance, funds and supplies to minimize wolf-livestock conflict. In appropriate circumstances ODFW can provide fladry, fencing, and RAG boxes. Financial resources are available for cooperative agreements to assist

removal of bone piles, fund range riders, and other practices. ODFW assistance is contingent upon funds and supply availability.

Wallowa County Wolf Compensation Committee (WCWCC): The Oregon Department of Agriculture implements the Wolf Depredation Compensation and Financial Assistance Grant Program according to Oregon Administrative Rule 603-019. The WCWCC applies for grants to compensate producers for losses to depredation and provide funds and/or supplies to Wallowa County livestock producers for implementing ODFW recommended non-lethal measures.



ODFW Non-Lethal Measures to Minimize Wolf-Livestock Conflict

7/19/2013

The following is a list of non-lethal or preventative measures which are intended to help landowners or livestock producers minimize the risk of wolf predation on livestock. It is not intended to be a list of mandatory prescriptions applicable to all producers or situations. Rather it is a guide for appropriate non-lethal measures which are likely to be most effective in different circumstances.

There may be other non-lethal deterrents not included on this list which may be reasonably expected to minimize wolf-livestock conflict. ODFW may periodically update this list based on new research, information, and experience in working with wolves, landowners, and situations of wolf-livestock conflict.

Reducing Attractants – Bone Piles, Carcass Disposal Sites, or Other Known Carcasses

Description and Intent: The physical removal or treatment of dead livestock carcasses (or portions of) which may attract wolves. Removal may occur by hauling carcasses to disposal in a landfill or other appropriate location, or by burying in some situations (see Considerations and Limitations below). In situations where removal or burying is not an option, treatment of carcasses may include liming, covering, or protecting by fladry or temporary fences.

Regulatory Implications: If a wolf depredation occurs within an area of known wolf activity (AKWA), the new 2013 rule (OAR 635-110-0010) requires that for the depredation to qualify toward lethal control options a landowner or lawful occupant of the land must have removed, treated or disposed of all intentionally placed or known and reasonably accessible unnatural attractants for a period of at least 7 days prior to the depredation.

Application: General Removal – Prior to Wolf Use: Wolves and many predators are attracted to dead animals and the presence of a single carcass can have the effect of attracting and keeping wolves in areas of livestock. When wolves become used to an easily attained food source they often return to the area which may increase the risk of depredation. As a general practice, carcasses should be removed prior to wolf use whenever possible.

Identified Circumstances Which Attract Wolf/Livestock Conflict: These are situations in which there is information that wolves are using a particular dead animal carcass or other attractant. It may also be a situation in which a carcass has been placed intentionally to attract other scavengers like coyotes.

Documentation: Land owners or livestock producers should document all carcass removal or treatment actions, and final disposition of carcass. All documentation should include date(s) of actions taken.

Appropriate Season & Area: Year-round in all areas where possible (see below).

Considerations and Limitations: Not all carcasses can be physically removed due to terrain or the condition of the carcass. In situations where a carcass cannot be removed, other options to discourage wolf use of these carcasses such as covering with lime, burying with lime, or barrier fencing should be considered. However, some of these measures must comply with other land-use policies (e.g., U.S. Forest Service and Oregon Department of Agriculture regulation) and may not be allowed in certain situations. In addition, some landfills may not be authorized to accept dead animal carcasses.

In some situations, weather conditions (i.e., frozen, snow covered, or extreme wet/muddy) may prevent the removal of carcasses. When this occurs, carcasses should be removed as soon as possible, and temporary barrier fencing or fladry may be appropriate as an interim measure.

Under the Oregon Wolf Conservation and Management Plan, carcasses of natural prey species (i.e., deer and elk) are not generally considered unnatural attractants. However, in some cases wildlife carcass disposal sites may be identified as attractants and these should also be removed by the appropriate entity.

Barriers – Fladry and Fencing

Description and Intent: Fencing used specifically to deter wolves from livestock, may be permanent or temporary, and may be from a variety of fencing materials, depending on each situation. In general, fencing is considered when attempting to protect livestock in a small pasture, enclosure, or when stock is gathered in a reasonably protectable area. It is generally not applied to larger, open-range type of grazing operations. The type of barriers used is highly dependent on the type of livestock and conditions, but includes two general types as follows.

Fencing: May be effective, and often a good option for small numbers of livestock and/or small acreages or pens. Types of fencing vary and may include multiple-strand electric, mesh, panels, or other hard barriers. In some cases, existing fences may be augmented (e.g., by increasing effective height or by fladry) to protect against wolves at a lower cost than new permanent fencing. Fencing may also be used to create small temporary or permanent pens to protect livestock at night and may be used in conjunction with other measures such as noisemakers, guard animals, or lighting.

Fladry and Electrified Fladry: A rope or electric wire with evenly spaced red flags. Highly portable and quickly installed, fladry can be used for a variety of livestock operations –sheep night penning, and some calving areas. It may be applied to certain open range situations but is best used as mobile protection on a short term basis. Producers are encouraged to work with ODFW managers to

determine if fladry is appropriate. Fladry requires regular maintenance for effective use. In general, fladry is not intended for use over long periods of time in the same location because wolves may become habituated, and thereby reduce effectiveness. ODFW or other organizations may develop cooperative fladry projects to assist producers with installing and maintaining fladry protection.

Application: Sheep: Electrified hard fencing is recommended for all small protectable areas that have sheep. Open range night penning of sheep in portable fenced areas or fladry fences in areas of wolf use is highly recommended. Even with herders present, fladry may reduce depredation risk. Defined areas of lambing when wolves are present would also be an appropriate application for fladry.

Cattle: Fencing options are generally used where cattle are confined to small pastures or pens. Some operators calve in smaller areas which could be appropriate for fladry or other fencing. Prioritization of fencing or fladry as a deterrent should consider wolf use of the area, and the ability to install and maintain it.

Livestock Working Animals: In areas of regular wolf use, fencing or other protective barriers to protect livestock working dogs should also be considered. This is especially important if dogs are left unattended in areas of wolf use during non-working periods.

Documentation: Producers should document the dates, areas, type, and amount of fencing used as a non-lethal measure to reduce wolf depredation.

Appropriate Season & Area: Sheep; all seasons for hard fences, but fladry is most appropriate for night penning on open range in areas of wolf use. Cattle; specific cattle pens or small pastures (often during winter months) or calving areas (calving season) within areas of wolf use.

Considerations and Limitations: Permanent fencing, though long lasting, is usually expensive and can often only be affordably applied to small areas. Fladry installation is also expensive and fladry is often limited in availability. Fladry, when determined to be an appropriate deterrent, is generally effective on a short-term basis, requiring the use of other tools for longer term deterrence. Livestock animals which are fenced may require additional feeding which can increase the cost to the producer. Some livestock may not respond well to confinement which may also increase management costs. Fencing on allotments must comply with grazing permit requirements, and may not be allowable in some cases.

Human Presence as a Non-Lethal Measure

Description and Intent: The underlying concept of increasing human presence as a deterrent to wolf depredation is that wolves tend to avoid humans. When human presence occurs in an area of simultaneous use by wolves and livestock, it is expected that wolves will move away and depredation will be reduced. Human presence actions are often conducted with the primary intent of reducing or deterring wolf depredation, though in some situations it may be passive or secondary to other

ranching operations (e.g., all-night presence for the purpose of calving while wolves are in the area would be expected to minimize wolf-livestock conflict).

Regulatory Implication: The 2013 rule (OAR 635-110-0010) requires that human presence, when used as a non-lethal measure, must; 1) occur at a proximate time prior to and in an area proximate to an ODFW confirmed depredation, and 2) indicates a timely response to wolf location information (such as text messages or other knowledge that wolves are in an area of potential conflict). By rule, human presence is defined as presence which could reasonably be expected to deter wolf-livestock conflict under the circumstances.

Application: Two approaches to using human presence as a deterrent are; 1) Regular or planned presence using range riders, herders, or other planned human guarding of livestock, and 2) Presence in response to alerts (i.e., texts, tracks, observations of wolf activity), wolf location information, or during susceptible depredation times (i.e., night, when wolves are known to be present in areas of livestock, etc.). Monitoring for signs of wolf activity, though not considered a non-lethal measure by itself, is important to help prioritize effective wolf-detering presence.

Regular or Planned Human Presence – Range riders: Generally considered to be regular or sometimes continuous presence for the specific purpose of protecting livestock, range riders should patrol areas with wolves and livestock at hours when wolves are most active (dawn, dusk, night). The rider should use any information available to patrol in livestock areas with current wolf activity and should be equipped to actively haze wolves away from livestock when found. See below for other harassment considerations. In areas of active depredation or in large areas with dispersed livestock, more than one range rider may be necessary to provide adequate protection.

Herders or other Guarding: Directly applicable to sheep operations where herding is a normal part of sheep ranching. This measure is especially useful if herders are present and active at night when sheep are gathered or in bedding areas – and effectiveness is increased if a herder is working with guarding animals and/or fladry to protect sheep. Additional herders may be needed in areas of high wolf activity to specifically work at night when depredation is most likely to occur.

Human Presence – Individual: This is human presence which may be additional to regular ranch operation and with the intent of deterring wolf-livestock conflict if wolves are present. Human presence should be flexible in approach, but should be tailored to situations when wolves are in proximity to livestock (i.e., may not be practical or expected when wolves are known to be in another area). Presence may be conducted by patrolling during active wolf periods such as dawn and dusk, and in situations such as calving or lambing periods, may be best conducted at night when depredation is most likely to occur. It should also include monitoring and responding to information of wolf activity in areas of livestock. Though increased human presence may not prevent all wolf-livestock conflicts, it should be conducted in a manner which would reasonably be expected to deter wolf-livestock conflict, and this would be determined based on frequency of wolf use in the area, depredation patterns (i.e., depredation around calving areas), seasonal patterns of

wolf and livestock use, and in conjunction with other known presence (i.e., range rider was in area last night so producer did not go out).

Documentation: Producers should document activities when human presence is used to deter wolf-livestock conflict. ODFW or other agency/individual presence which meets the above applicability standards should also be documented. Documentation could include, but is not limited to the following: dates, times, specific location, action taken, purpose or intent of action, and findings or results.

Appropriate Season and Area: All seasons, but should be tailored to livestock areas which are being used by wolves. Lambing and calving areas and periods should especially be prioritized if wolves are known to be in area.

Considerations and Limitations: With dispersed livestock grazing, range riders will need to cover as much area as possible or focus on the area where the wolves are and may not always be in the right location to protect livestock. All increased human presence activities (i.e., range riders, herders, and individual producers) should consider information of wolf activity, areas of livestock use, and recent depredation patterns to prioritize areas and times to best apply human presence. Costs associated with any kind of increased presence will have the effect of increasing production costs. Agencies and other participants should consider pooling resources to increase human presence most effectively based on the situation.

Livestock Protection Dogs and Other Guarding Animals

Description and Intent: Use of specific breeds of guarding dogs or other animals with intent to protect livestock from wolf depredation.

Application: Guard Dogs: Breeds such as Pyrenees, Anatolian, Akbash, or other established guarding breeds. Livestock protection dogs are normally used in conjunction with herded livestock such as sheep, but may be used in some situations for cattle or other livestock species. Multiple dogs are usually recommended, but may depend on the level of wolf activity in the area, size of grazing area, and behavior characteristics of the dogs. Consultation with ODFW or other professionals may be necessary to evaluate the most effective guard dog strategy.

Other Animals: This may include the use of non-guarding dog breeds used to specifically alert herders of wolf presence. With this type of use, dogs must be protected from wolf attack. Other aggressive breeds of animals (i.e., donkeys, etc.) may help protect against wolves but should be considered experimental.

Documentation: Producers should keep records of guarding dog use including numbers of animals, dates, areas, species protected, etc. Experimental use of other guarding animals should be documented and coordinated with ODFW so that their effectiveness can be evaluated.

Appropriate Season and Area: All seasons. Wolves may be more aggressive near den sites and dogs are not recommended in these areas.

Considerations and Limitations: Guard dogs and other types of guarding animals must be appropriate for each grazing application. For example, a single guard dog in a large-area dispersed grazing situation would not be expected to provide adequate protection.

Guard animals require specific training, care, and precautions. Producers should seek advice on the use of this method from other professionals or producers with experience using these animals.

Alarm or Scare Devices

Description and Intent: This includes any combination of alarm system with lights and/or loud sounds which are used for the purpose of scaring wolves from areas of livestock. Primarily used for protection of defined/enclosed areas or small pastures, but in certain situations may be used to deter wolves from using a more general area (esp. calving pastures) or to alert producer of wolves in the area.

Application: Radio-Activated-Guard (RAG) Devices: These are scare devices which are triggered by the signal from an approaching radio-collared wolf. When activated they emit strobe light flashes and varying loud sounds. RAG devices may be available through ODFW or other organizations. Coordinate with ODFW for information on placement and use.

Other Light and Sound Making Devices: These may be warranted in situations similar to above but where wolves are uncollared and could include a variety of lighting devices, radios, music players, etc. Varying the sounds and frequently changing positions of the device will increase effectiveness and reduce the chance that wolves become habituated. Techniques such as lighted pastures or pens may be considered experimental (depending on situation) and should be coordinated through ODFW to determine if applicable.

Documentation: Producers should track use of devices, dates, times, locations, etc. In addition, proper function and effects of devices (on wolves) should be monitored and documented.

Appropriate Season and Area: Any season, but generally not expected to be effective in large areas, or areas with widely dispersed livestock.

Considerations and Limitations: RAG devices require the presence of a radio-collared wolf to activate. Wolf packs do not always travel together and depredation may occur by uncollared wolves even in the presence of a properly functioning device.

Scare devices are generally only effective for short-term use in small areas. Wolves can easily become habituated to any type of fixed scare device, and devices should be varied by moving or changing the response.

Hazing or Harassment of Wolves

Description and Intent: This is direct harassment of wolves and is defined by Oregon Administrative Rule (635-110-0010). The intent is to scare wolves away from livestock and may include loud noises, firing shots in the air, spotlights or other confrontation of wolves.

Application: There are two types of harassment recognized by current rule; non-injurious and injurious.

Non-Injurious Harassment: This is harassment which does not cause injury to a wolf. It is allowed without a permit for livestock producers, agents, or grazing permittees on land they own or lawfully occupy and is encouraged any time wolves are observed testing, chasing or in close proximity to livestock. To qualify as non-injurious harassment a person must encounter the wolves unintentionally (pursuit is not allowed without a permit).

Non-lethal Injurious Harassment: This is harassment which may result in injury (not death) to a wolf and requires a permit from ODFW. May entail the same actions above but with a permit wolves may be intentionally pursued or chased. In addition, the use of non-lethal ammunition (rubber bullets, cracker shells, beanbag shells, etc.) may be used. Injurious harassment may not be used when an identified circumstance exists that attracts wolf-livestock conflict.

Documentation: Any type of harassment of wolves must be reported to ODFW within 48 hours. All types of harassment or actions taken with intent to harass (e.g., wolves were in seen in pasture of cows and producer drove out to haze them off but they left when heard vehicle...) should be documented. Record dates, times, actions taken, and results of actions.

Appropriate Season and Area: All seasons or situations when wolves are testing, chasing or in proximity to livestock. ODFW will consider the location of known den sites when permitting injurious harassment.

Considerations and Limitations: Producers must comply with requirements of OAR 635-110-0010. Coordinate with ODFW for availability and use of non-lethal ammunition.

Some types of hazing tools may not be appropriate in some seasons.

Livestock Management/Husbandry Changes

Description and Intent: These are husbandry actions taken specifically to help avoid wolf-livestock conflicts. Actions taken may be tailored to each ranching situation and thus, not all actions used will be appropriate for all. Management actions may include but are not limited to switching or changing pasture use to avoid areas of wolf activity, night feeding, reducing length of calving period, birthing earlier to have larger calves on allotments, changing herd structure, developing more

aggressive or protective livestock breeds, and possibly others. Actions should be considered individually for each producer and in some cases may be experimental.

Application: Changing pastures or grazing sites to avoid wolf use areas may be an option when wolf use data or recent depredation indicates area-specific problems. This may be most applicable when wolves show seasonal use of a particular area.

Night feeding can have the effect of bunching cows and calves into a common area where they would be less vulnerable to night predation. Night feeding may also affect birthing times of livestock (some animals do not give birth while their stomach is full).

Other techniques such as adjusting birthing seasons or shifting to more protective or aggressive breeds are typically long-term changes and may not be appropriate to solve immediate depredation situations. The purpose here is to encourage producers to explore options to better protect herds and to coordinate those efforts with ODFW so that all may continue to develop workable solutions.

Documentation: Producers should track and document changes in herd management practices and coordinate closely with ODFW on how a particular husbandry practice may reduce wolf depredation.

Appropriate Season and Area: All seasons and areas. However, practices associated with birthing livestock or management of newborn/young livestock should receive priority.

Considerations and Limitations: The effects of any particular action may be unknown in some cases and will be dependent on many factors. In some cases a practice may be experimental and close communication between producers and ODFW (for the purpose of reducing risk of wolf predation) will be important.

There may be costs associated with alternative grazing practices used to reduce wolf risk. Producers are encouraged to coordinate with ODFW and local Compensation Committees to determine resources available for implementing any changes.

Not all producers have grazing pasture options, or options may be dependent on other allotment plans. Individual producer coordination will be necessary to evaluate appropriate actions.

Experimental Practices

Description and Intent: There may be a number of non-lethal and preventative practices (i.e., bio-fencing, belling cattle, using wolf-savvy cattle, shock collars, and possibly others) which may reduce depredation risk, but are not yet known to be effective. Experimental practices are encouraged but may require additional use to determine if they are practical, useful, and the conditions in which they would be most effective.

Application: Development and implementation of any unproven non-lethal action would require close coordination with ODFW. Experimental practices will be evaluated based on their reasonable expectation to reduce depredation risk.

Documentation: Documentation of experimental practices will vary depending on the practice. Producers who implement experimental practices are encouraged to coordinate with ODFW to track use and effectiveness.

Appropriate Season and Area: May be implemented during any season or area.

Considerations and Limitations: Some experimental practices such as bio-fencing and shock collars on wolves require active involvement by ODFW to implement.

In an effort to assist with costs of implementing, ODFW or other organizations may enter into cooperative agreements to implement experimental practices.