



ODFW Area-Specific Wolf Conflict Deterrence Plan  
Umatilla River Pack  
Revised 9/20/2013

## General Situation

A pair of wolves was discovered in 2011 in the northern part of the Mt Emily Unit, north of the Umatilla River. The pair produced two pups in 2012 and was counted as a pack (Umatilla River) and a breeding pair. During May 2012, the department confirmed that the pack killed 8 and injured 1 sheep in two depredation incidents at two different locations. Non-lethal measures (fladry) were implemented and no further depredations occurred. The breeding male was radio-collared in June 2012. During May and June of 2013, the Umatilla River Pack was responsible for 2 more confirmed sheep depredation incidents on a single pasture. The June 3<sup>rd</sup>, 2013 depredation triggered the designation of an Area of Depredating Wolves (ADW) and the preparation of an Area-Specific Wolf Conflict Deterrence Plan. The pack's current depredation information, ADW and Deterrence Plan are updated as necessary and posted on the ODFW website at <http://www.dfw.state.or.us/wolves/>.

## Area Description

Land Uses and Ownership: Land use within the Umatilla River Pack ADW is predominantly forest resource management and livestock grazing. The 2012 wolf location data showed the pack using an 80 mi<sup>2</sup> area with 66% of locations on private lands, 28% public land and 6% tribal land. Most of the Umatilla River Pack Area of Known Wolf Activity (AKWA) is privately owned with the exception of a small amount of Umatilla National Forest lands in the eastern part of the AKWA. All other lands are private or owned by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). Tilled, dryland agriculture is applied on less than 20% of the AKWA on the western end in lower elevation foothills. A large number of home and cabin sites occur within in the AKWA. Many of these homes have small numbers of livestock and/or canine pets.

Habitat and Landscape Conditions: The landscape is high elevation timber on the east end and remains timbered for most of the AKWA. The timber gives way to increasing grassland and eventually to tilled agriculture on the west end. The gradient of timber to tilled agriculture follows an elevation gradient of high elevation to the east to lower elevation to the west.

## Coordination

Much of the coordination and communication used to develop this Conflict Deterrence Plan occurred prior to the adoption of new rules pertaining to appropriate non-lethal measures. They are as follows.

1. Coordination with area producers began in August of 2011 when wolves were first confirmed as resident within the Pine and Wildhorse Creek watersheds of the Umatilla River system in Umatilla County.
2. Following the first depredation of sheep in May 2012, ODFW personnel identified 5 landowners/producers with similar type of livestock operations (small-medium sized sheep operations) within the area. Each was directly contacted and the best non-lethal options were discussed.

3. Over a 6-week period following the 2012 sheep depredation incidents, approximately 900 yards of fladry and 1 Radio-Activated-Guard device (after collaring the breeding male on June 20, 2012) were provided by ODFW to two other sheep producers in the area at the producers' request.
4. Between May and early July, 2012, 12 area cattle producers were contacted directly and options to minimize conflict were discussed.
5. Landowners and livestock producers were also asked to make ODFW contact information available to anyone they knew who might have been missed by ODFW staff that would benefit from information and nonlethal protection. Referrals from the public generated a number of additional contacts.
6. At the time of the May 2012 depredations, the Umatilla County Wolf Compensation Committee (UCWCC) was newly convened and having meetings. This body was made aware of the depredations and provided with the final reports. Over the next several months UCWCC meetings addressed appropriate expenditures associated with nonlethal measures for both cattle and sheep/goat livestock operations.
7. The UCWCC made payments of \$1,692.38 for removal of attractants (bone pile clean-up) and for additional human presence on dispersed livestock operations.
8. A message notification system was set up for producers in the Umatilla River Pack area in July 2012 to alert producers when the collared wolf was in their area. As of July 22, 2013 there are thirteen producers receiving text or email notifications for the Umatilla River Pack.
9. Since the confirmed depredations on May 21 and June 3, 2013, coordination has continued with potentially affected landowners and livestock producers within the Umatilla River Pack AKWA and ADW regarding implementation of appropriate non-lethal measures per the 2013 Rule (OAR 635-110-0010).
10. This plan was shared with the Umatilla County extension office, UCWCC and affected landowners and livestock producers for their comments 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](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), the 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.

**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.

#### **List of non-lethal measures for small acreage landowners with mixed livestock species**

Description: These are fairly numerous within the ADW and consist of various residential or part-time residential and recreational dwellings, and other small acreages. Livestock are within both fenced and unfenced areas, and are usually close to the residence in a single pasture or pen. Because of the small 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-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.
- Experimental practices: Consult with ODFW for applicability.

#### **List of non-lethal measures for small-to-mid size acreages with sheep or cattle.**

Description: These are usually medium acreages with generally higher numbers and more dispersed livestock. They may have more than one pasture. In some cases, however, they are small ownerships with some remote portions, or because of habitat or landscape features (i.e., heavy timber or ravine areas), are less accessible than a backyard pasture. Several livestock operations within this ADW occur on small to mid-sized acreages.

- Fencing or fladry: Land areas within the ADW may be large enough to render permanent fencing or fladry impractical. In these areas, night penning 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 protect livestock from wolf depredation.
- Hazing or harassment of wolves when near livestock: Only applicable when wolves are found to be near livestock. All producers are encouraged to non-injuriously 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.

**List of non-lethal measures for larger acreage landowners and occupants with dispersed or open-range cattle**

Description: Though fewer total ownerships, most of the land area within this ADW falls within this category. Private timber lands and lower elevation open farm lands. The pastures are not always associated with homes or residences, much of the grazing is leased, and most is open-range and dispersed cattle during summer and fall months.

- 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. 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.
- Hazing or harassment of wolves when near livestock: Only applicable when wolves are found to be near livestock. All producers are encouraged to non-injuriously 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.

Umatilla County Wolf Compensation Committee: The Oregon Department of Agriculture implements the Wolf Depredation Compensation and Financial Assistance Grant Program according to Oregon Administrative Rule 603-019. The UCWCC applies for grants to compensate producers for losses to depredation and provide funds and/or supplies to Umatilla 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**

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**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**

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**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**

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**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**

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**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**

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**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

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**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

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**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**

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**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.