Fact Sheet 6:

Alarm or Scare Devices and Hazing to Deter Wolf Presence

Alarms or scare devices for deterring wolves include any kind of sound and/or light system that emits signals that frighten wolves away from areas where livestock are present. They are where livestock are kept in close proximity to each other or confined by some type of permanent or temporary fencing. Hazing devices may include the use of non-lethal munitions – including cracker shells, rubber bullets, paintballs and beanbags – to haze wolves near livestock. The use of these tools must be done in coordination with WDFW and/or appropriate federal authorities. In some cases, training and permits may be required. In order to achieve maximum effectiveness, work with WDFW personnel to determine which hazing and scare tactics may work best in your circumstances.

The following are the main type of alarm/scare devices for wolf deterrence:

- **Alarms – Radio Activated Guard system (RAG) and Motion-sensor devices**
- **Strobe Lighting and Fox Lights**
- **Hazing and "Less than lethal Ammunition"**
- **Biofence**

Alarms – Radio Activated Guard Systems (RAG)

Although there are a number of designs being tested, Radio Activated Guard, or "RAG" boxes consist of a receiver, a bright strobe light, two loudspeakers and is usually linked to an internal computer that collects and stores information received from transmitters on wolves' radio collars. The boxes are calibrated to be triggered when a wolf wearing a radio-activating collar approaches to within a certain distance of the box. The combination of loud, unfamiliar sounds frighten off the wolf wearing the collar and any others that may be present at the time. The noises may include sirens, gunshots, loud car noises, human voices shouting and singing and any combination that will alarm and frighten the wolf for maximum effect. The obvious drawback to this system is that only a collared wolf will trip the device. Other motion detector devices have been used with some success as well. If you are interested in discovering whether or not a RAG box might work for you and your particular operation. coordinate with WDFW. WDFW may have boxes that they can make available.

Whether you choose to use RAG boxes or motion-sensor devices, it's recommended that the placement, timing and cadence of the devices be varied frequently. Wolves may habituate to noises and lights that are predictable.

Strobe Lighting and "Fox Light"-type Lighting

Effective wolf deterrent lights need to have the following characteristics: weather resistant; built from sturdy materials; powered by long-life batteries; turn on at sunset and shut off automatically with daylight; intermittent and capable of being seen from a long distance. It is believed that the random nature of this type of lighting is responsible for frightening wolves away from livestock. It is likely that wolves associate the lights with the presence of humans and keep their distance. However, like many deterrents, unless the pattern and placement are changed up frequently, wolves may "catch on" and approach the lights and the livestock.

Hazing and "Less than Lethal" Ammunition

It is important to note that the use of these hazing tools is regulated and must be done in coordination with WDFW and federal authorities. The combination of the noise and temporary pain associated with the use of cracker shells, beanbags, paintballs or rubber bullets fired at wolves has been proven to stop them from approaching livestock. However, as with many of the other conflict deterrent methods, wolves may learn to avoid the shooter, but not the livestock or pasture. This depredation deterrence method requires the constant present of humans and absolute diligence in application. There are other drawbacks as well. Nonlethal ammunition is not reliable and can occasionally cause injury to the shooter if it jams in the firearm. It can also cause serious injury to the target animal by hitting an eye or other vulnerable body part. It goes without saying that in fire season, extreme caution must be taken, and cracker shells, which make noise like fireworks, should not be used as the high likelihood of sparks may cause fires to ignite.

Biofencing

Some research has been done on the effectiveness of creating a "biofence" to keep wolves from approaching livestock. This is a method that shows promise and merits further research. The way it works is to utilize the strong odors in wolf urine (gathered from captive wolves) to make a spray that can used to create a "biofence" around the area where livestock are present. The urine of wolves from an unknown pack creates a biological barrier that keeps other wolves from entering a specific area. Obvious drawbacks are the difficulty of production and availability, but it is a method that may hold promise for the future.