

## **PROACTIVE MANAGEMENT EFFORTS TO REDUCE WOLF-LIVESTOCK INTERACTIONS IN ARIZONA**

Proactive management is used to reduce, avert or resolve wolf conflict before livestock, pets or people are injured by Mexican wolves. Proactive management may preclude the need to remove or kill the wolf or wolves in question. The methods described below have been utilized in the Blue Range Wolf Recovery Area (BRWRA) on a voluntary basis with varying degrees of success.

- *Turbo Fladry*: Electric fence with red flagging installed around livestock holding pastures and private property to discourage wolves from crossing the fence line and entering the perimeter.
- *Supplemental Feed*: Feed and/or supplements purchased for livestock owners who opt to keep livestock on private property during calving season.
- *Range Riders*: Contract employees with radio telemetry equipment to assist livestock operators in monitoring wolf movements in relation to livestock on U.S. Forest Service (USFS) grazing allotments. Range riders without telemetry equipment may provide additional human presence to deter wolves.
- *Livestock Grazing Rotation*: Moving livestock between different pastures within USFS grazing allotments in order to avoid areas of high wolf use, including den and rendezvous sites.
- *Exclusionary Fencing*: Eight-foot-high fence enclosing areas of private property for purposes of protecting especially vulnerable animals or other specific reasons.
- *Radio Telemetry Equipment*: Monitoring equipment used by the Interagency Field Team (IFT) and in some cases issued to stakeholders to facilitate their own proactive management activities and aid in the detection and prevention of depredations.
- *Diversionsary Food Cache*: Road-killed native prey carcasses or carnivore logs provided to wolves in areas so as to reduce potential conflicts with livestock.

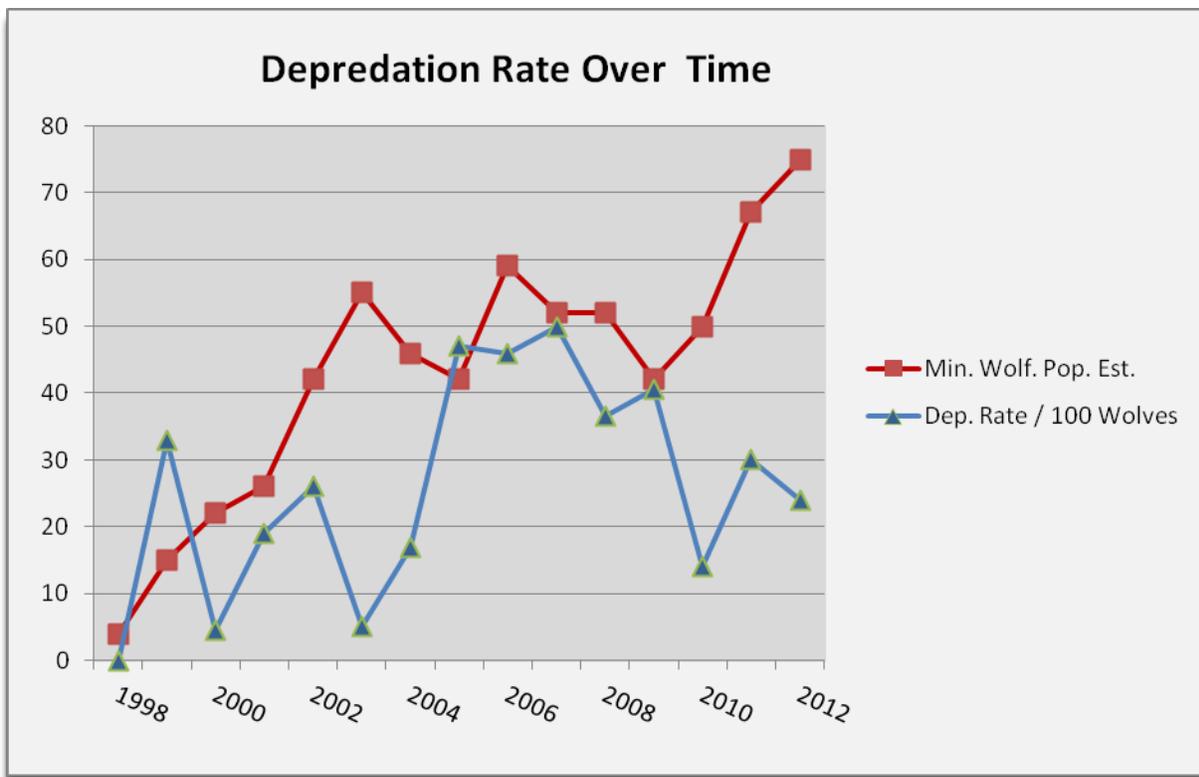
Research has shown that among apex predators, including wolves, hunting behaviors are taught by adult animals to each new generation of young. Proactive management may reduce conflicts on public and private lands by directly limiting depredations by wolves on livestock during a grazing season, as well as limiting the opportunity for wolves to learn that livestock are a viable prey source and precluding an adult wolf from teaching pups to utilize domestic livestock as a food source.

### **Anecdotal information**

Arizona Game and Fish Department (Department) IFT personnel, working closely with the USFS and livestock producers, have on more than one occasion applied a suite of proactive management activities to wolves with young pups-of-the-year, before they are large enough to travel with the adults, in order to deter them from depredating on domestic livestock on public lands. This involves several management actions, including coordination with range riders to ensure they know when wolves are close to livestock; actively hazing wolves away from livestock; and providing diversionsary food sources during the period that livestock and wolves are located in close proximity to one another.

Livestock are rotated through an allotment during a grazing season. In Arizona, intensive management during specific time periods has been documented to keep wolves away from livestock and reduce depredations. This does require additional time and effort on the part of livestock producers and the IFT. The IFT works closely with nongovernmental organizations (NGOs) that are also interested in funding these types of agreements to potentially reduce conflicts. Ultimately, this type of partnership is voluntary and working to develop these agreements is a full-time effort.

IFT personnel have also observed firsthand in the field “mother” cows band together and defend their calves to the point that cattle groups effectively chased three adult wolves out of the pasture. While this may not be a common occurrence, it is important to understand that while wolves have evolved as apex predators, making their living killing and eating ungulates, domestic livestock can and will defend themselves from predator attacks. The Department does not advocate relying on this innate instinct alone to limit wolf depredation on livestock, only to illustrate that Mexican wolves are not always able to catch and kill domestic livestock, because cattle will actively defend themselves.



The Department supports the use of a wide range of management options to manage wolf impacts to livestock producers in and adjacent to the BRWRA in Arizona, including targeted management removals as a last resort if proactive management activities have been shown ineffective. The Department believes that working together with livestock producers and NGOs

interested in wolf conservation to reduce wolf-livestock conflict before it occurs is an important management approach that has reduced livestock depredations and the need to remove wolves for depredations in Arizona.

**COSTS ASSOCIATED WITH PROACTIVE MANAGEMENT ACTIONS 2009 - 2012**

**Costs incurred by NGOs and IFT**

**Costs, hours expended and number of livestock affected in AZ**

Year	Estimated proactive funding in AZ / In-kind costs	Estimated Hours Expended in AZ (RR , Fladry, Workshop preparation)	Estimated number of livestock affected in AZ	Other expenditures
2012	\$51,500/\$0	4,400	2,927*	\$20,000 (WL waters)
2011	\$43,500/\$7000	4,400	6,720	\$10,500 (Proactive workshop; Wallow Fire issues; Lime for carcass mgt.)
2010	\$49,690/\$7000	3,500	5,140	
2009	\$51,000/\$9000	3,250	5,220	

\*Sheep operation in Arizona converted to cattle operation, thus numbers dropped  
 Compiled by C.Taylor 2/7/13