IX. RESEARCH AND INFORMATION MANAGEMENT

Development and implementation of an ongoing research and information management program is an essential component of any successful wildlife conservation Plan. Such a program should be strategically focused on questions that will affect management decisions, both short- and long-term, by providing information that can facilitate adaptive management and process improvement over time. Future management actions will depend on accurate and complete data related to a broad range of biological and social elements of the affected areas. Systematic long-term data collection is needed for direct management applications to not only determine the number and status of wolves, but both positive and negative impacts on affected resources and human activities.

Extensive wolf-related research has been conducted for decades and continues to be conducted throughout North America and the world.[41] Up until 2004, more than 30 research projects were being conducted within the western states (Appendix N). Information from those projects already has contributed and will continue to contribute to wolf conservation and management in Oregon.

Spatial mapping information also was collected during development of this Plan in cooperation with the USFWS La Grande field office. This information was entered into a geographic information system (GIS) that enabled statewide maps to be presented and discussed in development of the Plan. Information includes land ownership at a state and regional scale (multiple states), road systems, wilderness and roadless areas, ungulate populations, livestock allotments, and Idaho wolf pack ranges. This GIS information will provide a strong base for the information system required for future monitoring and research.

To define and mitigate for future impacts it is essential to document the status quo before wolf-related impacts are realized. This requires establishment of baseline data related to such things as current wildlife populations, viewing, hunting and livestock depredation. For example, site-specific characteristics make depredation predictions based on data from other states uncertain. Oregon will require reporting and well-defined protocols to determine the number of losses, confirmed and unconfirmed, by animal type (both carnivore and livestock), age or stage, area (or region) and value. There also is a need for data regarding Wildlife Services and rancher costs associated with avoiding and control of depredation. This information is needed to provide depredation estimates specific to wolves and shifts of the larger system such as changes in depredation levels resulting from coyotes or cougars. Similar concerns need to document changes in use and values of other wildlife activities and economic systems at the appropriate spatial level. Implementation of this Plan by ODFW will involve strong support of and coordination with Wildlife Services' research program as it relates to wolves and livestock depredation.

During the course of development of the Plan and the first five years of implementation, more than two dozen topics that likely would require additional research were identified. These topics generally fall into categories that include wolf monitoring (i.e., survey techniques); home range and movements of packs and individuals, food habits, habitat use, prey population composition and dynamics, economics, livestock depredation deterrence, non-lethal control methods, human dimensions and the cost of wolves to livestock owners living in wolf country (i.e., the relationship

[41] Mech and Boitani 2003; USFWS 2003 Rocky Mountain Recovery Area Annual Report

between people and their environment). Specific, long-range research objectives that will be crucial to the Plan's success include: 1) describing and evaluating the relative importance of specific factors that determine the ability of wolves to persist in the Oregon landscape; 2) defining factors that influence confirmed and total depredation rates in the Oregon landscape; 3) quantifying mechanisms and cumulative effects of interactions between wolves and other carnivore species as regulators of wild ungulate populations and livestock depredation rates; and 4) a refinement of cost-benefit relationships based on Oregon data. This research should be initiated as wolves occupy other portions of Oregon and are captured and radio-collared. Such efforts will clarify the state's understanding of wolves in relation to their habitat use and impacts to wild ungulate populations and livestock, and will guide development of longer term, area specific management objectives for wolves.

In anticipation of wolves increasing distribution in Oregon, a preliminary research and data collection framework will be developed in the first year of Plan implementation together with a detailed monitoring plan (see Chapters II and VIII). This process will include establishing a research committee, reviewing literature and ongoing research, initiating conversations with potential cooperators and landowners/managers, collecting background data for likely research topics, establishing an information system with GIS capabilities, identifying equipment needs, and developing preliminary budgets. As funding becomes available, initial research likely will focus on habitat use, movements, pack ecology, and interactions with prey species and livestock. Support for priority research activities and provision of appropriate oversight would be assisted by the issuance of scientific take permits as currently allowed under OAR 635-043-0000 through 635-043-0045. The research committee will assist the department in reviewing the merit of requests to capture or take wolves for scientific purposes.