

Ecological Sections

This chapter contains high-level summaries of the adaptive voluntary conservation management plans for all 14 of Idaho's ecological sections (hereafter sections; Fig. 1). These plans represent a substantial advancement of the original section plans developed as part of the 2005 Idaho State Wildlife Action Plan (formerly Idaho Comprehensive Wildlife Conservation Strategy; IDFG 2005). The original plans had static descriptions of each section as well as lists of species of greatest conservation need, including priority habitats in each section. These updated plans now contain the beginnings of a true strategic plan that outlines the ecological conditions in each section as well as prioritized conservation strategies.

In each section, we summarize general species habitat associations and/or requirements and indicate habitat management priorities and opportunities. We tier these priorities and management direction to existing species management plans when possible. In addition, we indicate priorities for inventory and monitoring, applied conservation research, disease management, and other species-specific conservation priorities.

We consider the segregation of species management priorities and habitat management priorities to be important. State species management is the responsibility of the Idaho Department of Fish and Game (IDFG). The listed actions will be important for the development and monitoring of work plans and for maintaining programmatic focus and coordination. Habitat management is the responsibility of land managers and other regulatory agencies. Nevertheless, management priorities for wildlife are important to communicate, and this document provides an opportunity to articulate those priorities for important habitats and to provide opportunities for partnerships.

Overview of Methodology for Section Plans

A key premise behind the section plans presented in this report is that we view each section as a long-term “project” in which cross-organizational working groups seek to coordinate their ongoing work to achieve mutually agreed upon conservation goals and objectives. Our goal is to produce an effective plan that can frame the basis for ongoing adaptive management of conservation needs in each section.

These section plans were developed in partnership with the nonprofit Foundations of Success following the Conservation Measures Partnership's *Open Standards for the Practice of Conservation* (CMP 2013) (Fig. 2). The Open Standards provide an adaptive management framework for designing, managing, monitoring, and learning from conservation projects. Key advantages of using the Open Standards include the following:

- **A Framework for Making and Documenting Strategic Choices**—True strategic planning involves specifying and communicating not just what a project team WILL focus on, but also what the team WILL NOT do—it is about making systematic choices about how best to allocate time and funding. The Open Standards help project teams make judicious choices by helping them to strategically select focal conservation targets, assess the current viability of each target, consider and prioritize threats to these targets, identify

key leverage points in each system, and then identify and rate potential strategies to restore degraded targets and/or mitigate key threats.

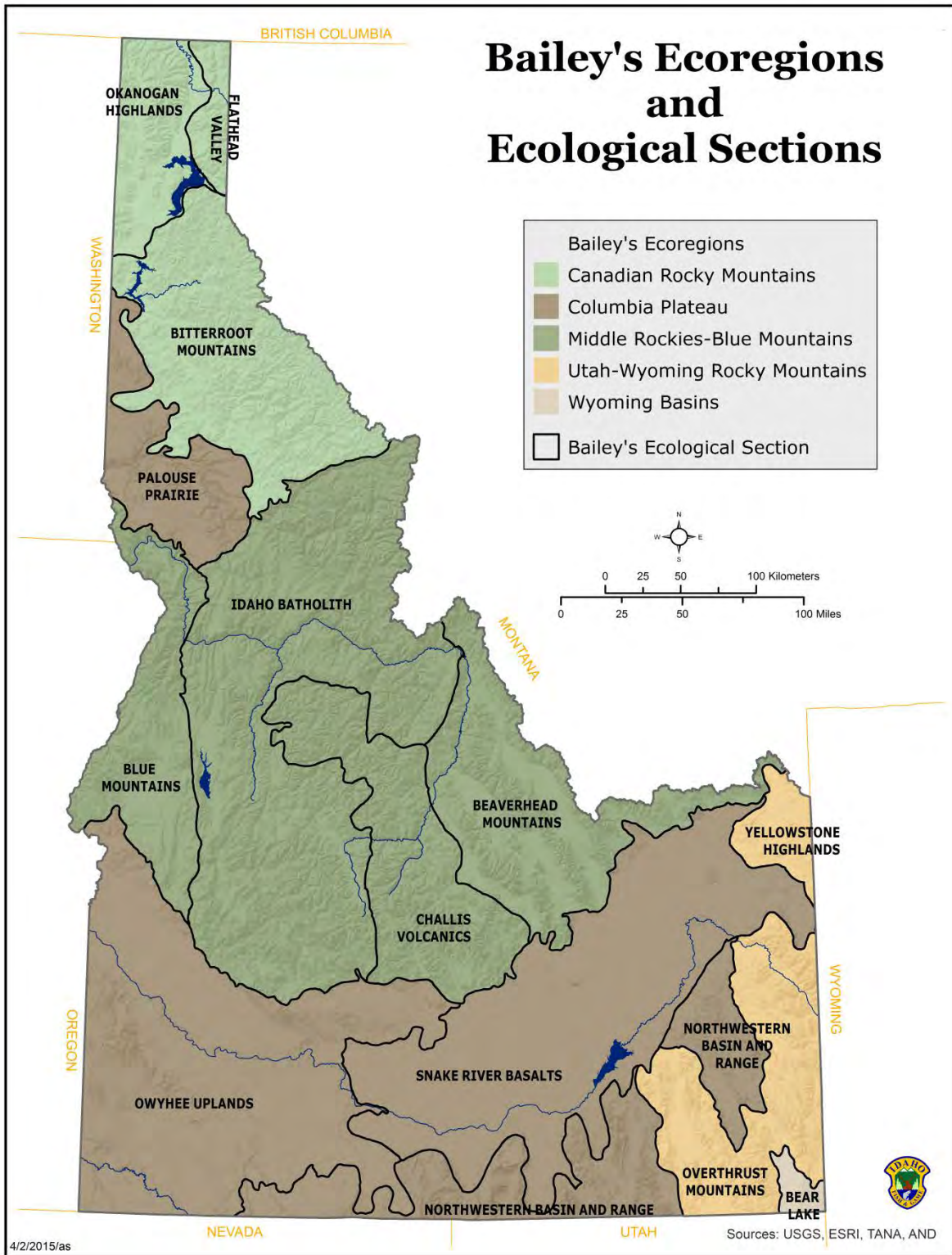


Fig. 1 Map of Idaho's 14 ecological sections

- **A Common Neutral Language**—An increasing number of conservation implementing organizations, agencies, and funders use the Open Standards and thus this growing uniformity provides a common language for sharing and coordinating conservation work across organizations and cultures. The Open Standards can also be cross-walked to other similar planning systems such as the Strategic Habitat Conservation framework used by the US Fish and Wildlife Service.
- **Collaborative Tools**—Key Open Standards tools like [Miradi Software](#) (CMP and Sitka Technology Group 2013–2016) and [Miradi Share](#) (FOS 2016) can be used to capture results in a common format and to share them electronically over the wires across the project team and with stakeholders.
- **The Ability to Harness the Wisdom of Crowds**—The Open Standards provides a common framework through which diverse groups of stakeholders can share their perspectives and mental models, discuss options, and arrive at a shared consensus of both problems and solutions. This ability to pool the collective knowledge of many different stakeholders results in a solution that is generally both robust and accurate.
- **A Platform for Iterative Adaptive Management**—Key outputs of this process are the section plans provided in the remainder of this chapter. Perhaps more importantly, however, are the groups of stakeholders who came together to create these initial plans and who will hopefully form the basis of cross-organization/interagency working groups that can practice ongoing adaptive management of these sections in the coming years.

Each section plan was developed through a multistep, metacognitive process:

1. A small working group of IDFG staff and key experts developed an initial draft of a plan for each section using the Open Standards framework.
2. This draft plan was then vetted and refined at an in-person workshop attended by a wide variety of stakeholders from key state and federal agencies, tribes, NGOs, and other partners.
3. Feedback from each workshop was then incorporated into a revised version of each plan, which was sent out within the Department for additional internal review and comment.
4. The current version of each plan represents continued work by Department staff to improve each section plan. Existing content is the sole responsibility of the Department.
5. We will continue to update and refine these plans as we receive additional comments.
6. Each plan will ultimately provide the basis for ongoing adaptive management work by the project teams established in each section.

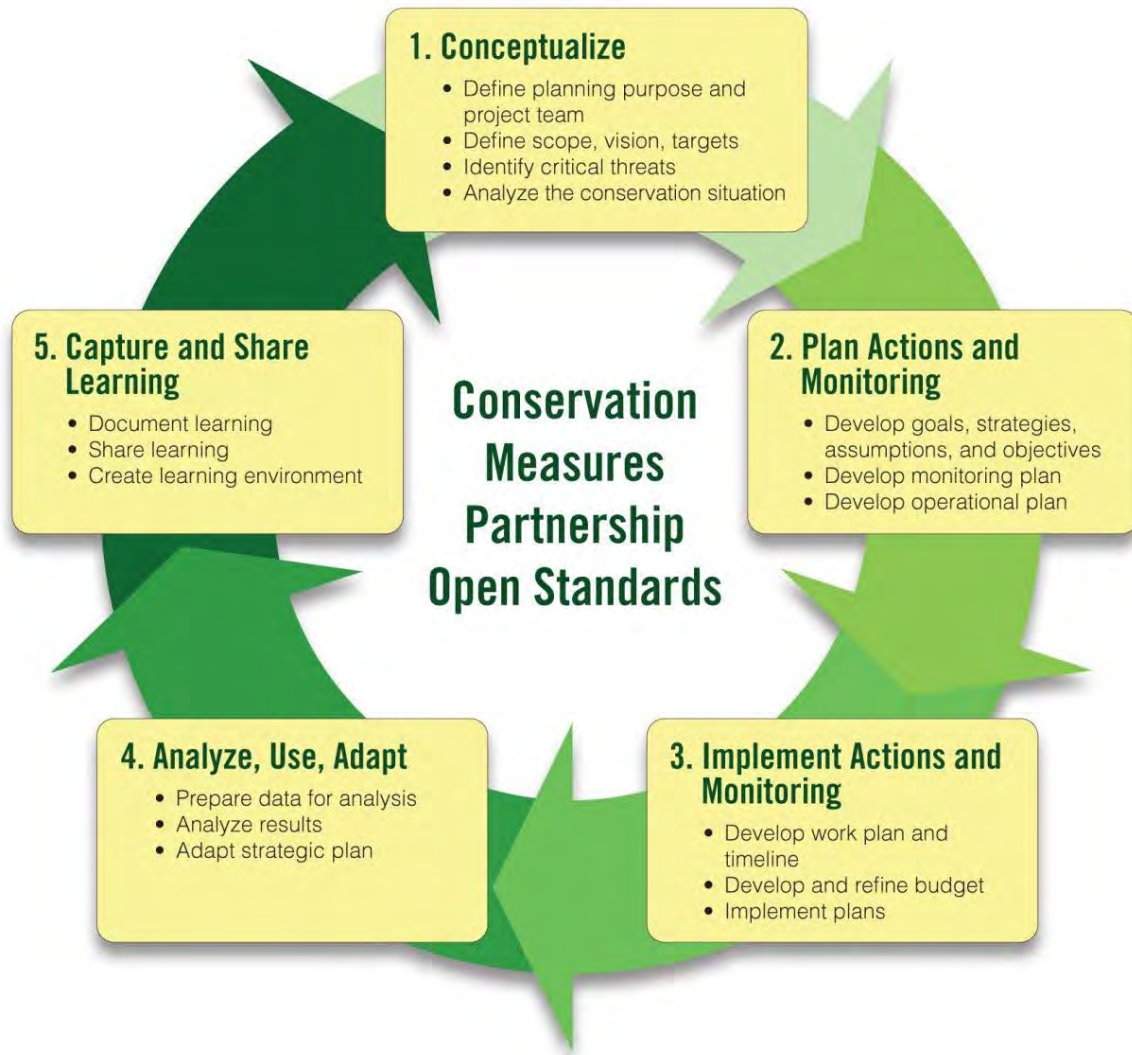


Fig. 2 The CMP Open Standards for the Practice of Conservation. Source: <http://cmp-openstandards.org/>

A User's Guide to Section Plans

The following shows a guide to the materials presented in each section. These materials represent only a high-level summary of more detailed information developed by each section's working group. Guidance to steps in the Open Standards is available in the [FOS training guide](#) (FOS 2009).

Information in this chapter summarizes an ongoing adaptive management plan for the section

The section description provides a basic overview of the section

12. Owyhee Uplands Section

Summary Plan: v. 2015-12-27

Section Description

The Owyhee Uplands Section is part of the Columbia Plateau Ecoregion. The Idaho portion, the subject of this review, comprises southwestern Idaho from the lower Payette River valley in the northwest and the Camas Prairie in the northeast, south through the Hagerman Valley and Salmon Falls Creek Drainage (Fig. 12.1, Fig. 12.2). The Owyhee Uplands spans a 1,200 to 2,561 m (4,000 to 8,402 ft) elevation range. This arid region generally receives 18 to 25 cm (7 to 10 in) of precipitation annually at lower elevations. At higher elevations, precipitation falls predominantly during the winter and often as snow.

The Owyhee Uplands has the largest human population of any region in Idaho, concentrated in a portion of the section north of the Snake River—the lower Boise and lower Payette River valleys, generally referred to as the Treasure Valley. This area is characterized by urban and suburban development as well as extensive areas devoted to agriculture. Among the conservation issues in the Owyhee Uplands include the ongoing conversion of agricultural lands to urban and suburban development, which further limits wildlife habitat values. The aridity of this region requires water management programs, including water storage, delivery, and regulation for agriculture, commercial, and residential uses. Agricultural fields are irrigated with either flood irrigation, mostly supplied



Lower Deep Creek, Owyhee Uplands, Idaho © 2011 Will Whelan

by diversion from the Snake, Boise, and Payette rivers, or sprinkler irrigation supplied by groundwater pumping. Major hydroelectric and water storage reservoirs include CJ Strike and Swan Falls reservoirs on the Snake River. Reaches of the Boise and Payette rivers within the Owyhee Uplands are controlled by upstream dams.

In stark contrast, the portion of the Owyhee Uplands to the south of the Snake River is a topographically rugged, sparsely populated, and remote area. This area is high-desert sagebrush steppe. The Owyhee Mountain Range (oriented north-south in western Owyhee County) is the dominant landform with stands of quaking aspen (*Populus tremuloides* Michx.).

Ecological sections were selected as the "unit of analysis" for this work as they represent ecologically functional units and come from an external standard framework

Focal conservation targets are selected to represent the overall wildlife values of the section; we start with “coarse-filter” **habitat targets** that contain “nested targets” within them

Habitat target names follow standard nomenclature

Some targets are mosaics of different habitat types while others represent human-created habitats that are important for wildlife

We add “fine filter” **species targets** that face specific threats and/or require separate conservation strategies beyond habitat conservation

This page contains high-level descriptions of priority threats in the section

Priority threats include those threats that have a “very high,” “high,” or “medium” impact on at least one target

Conservation Targets in the Owyhee Uplands

We selected 7 habitat targets (3 upland, 4 aquatic) that represent the highest priorities for wildlife conservation in the Owyhee Uplands as shown in Table 12.1. Species of greatest conservation need (SGCN) are associated with each habitat, i.e., “nested targets” (Table 12.2). The intent of the recommended “Objectives, Strategies, and Actions” is to direct resources toward improving the quality of these habitats for wildlife. Management of the habitat targets listed below will contribute to improving population viability for the species nested within them. Research and monitoring topics, such as species designation, ecological research, or planning, are summarized at the end of each target habitat if additional information is needed to support management programs. Such projects are often species-specific and include disease investigation and management.

Target	Target description	Target viability	Nested targets (SGCN)
Semi-Desert Shrubland & Steppe-Saltbush Scrub	Combines “Semi-Desert Shrubland & Steppe” and “Saltbush Scrub.” Xeric landscape dominated by salt desert scrub. In this section, often on ancient alkaline lacustrine deposits.	Fair to Good. In many areas, invasive weeds have affected plant diversity and created dense stands of annual grasses and forbs.	Tier 2: Ferruginous Hawk Golden Eagle Burrowing Owl Tier 3: Short-eared Owl Common Nighthawk Townsend’s Big-eared Bat Western Small-footed Myotis Great Basin Collared Lizard Bruneau Dune Tiger Beetle
Sparsely Vegetated Dune Scrub & Grassland	Bruneau Dunes, Weiser Dunes, Windmill Dunes, and other unnamed scattered dune complexes.	Fair. Large areas dominated by cheatgrass and other invasive annuals.	Tier 1: Ant-like Flower Beetle Lined June Beetle
Sagebrush Steppe	Sagebrush steppe systems at all elevations across the Owyhee Uplands. This target comprises a variety of sagebrush types, habitat structure, and seral stages.	Poor to Very Good. Habitat is intact in good ecological condition in some areas, but in others, dominated by invasive annual grasslands with an altered fire regime.	Tier 1: Greater Sage-Grouse Southern Idaho Ground Squirrel Morrison Bumble Bee Tier 2: Ferruginous Hawk Golden Eagle Burrowing Owl Sage Thrasher Sagebrush Sparrow

Viability analysis is used to systematically determine the status of each target; this draft has high-level viability estimates but subsequent drafts will have more empirically determined assessments using a common framework and set of indicators for each type of target

Target	Target description	Target viability	Nested targets (SGCN)
Bat Assemblage	The Owyhee Uplands contains the full complement of bat species found in the state (14 spp.)	Good. Main concerns include fatality associated with wind energy, AML closures, and potential incidence of white-nose syndrome (WNS).	Tier 2: Silver-haired Bat Hoary Bat Tier 3: Townsend’s Big-eared Bat Western Small-footed Myotis Little Brown Myotis

A key feature of this adaptive management approach is that additional information can always be added over time so it is okay to show uncertainty

Prioritized Threats and Strategies for Sagebrush Steppe

Very High rated threats to Sagebrush Steppe in the Owyhee Uplands

Increased frequency & severity of wildfire

The increased frequency and severity of wildfire is considered a primary threat to the sagebrush-steppe ecosystem and to the many sagebrush-steppe species that depend on it, including Sage-Grouse (Offer 2012, US Fish and Wildlife Service 2014). In the Desert and West Owyhee Greater Sage-Grouse Conservation Areas in particular (see Fig. 2-14; BLM 2015), wildfire is a more serious issue relative to other areas of the state (Offer 2012). The accelerated invasion of nonnative annual grasses—in particular cheatgrass and medusahead—and the spread of juniper into the sagebrush-steppe ecosystem (coupled with the effects of intensified drought and climate change), create conditions that lead to larger, more intense rangeland fires across the Great Basin (DOI 2015). This contributes to the ongoing fragmentation and loss of shrub-steppe habitats. Almost the entire extent of the Owyhee Uplands is rated as “very high” with respect to burn probability (DOI 2015).

Certain remote areas of the Owyhee Uplands, e.g., the intact Wyoming big sagebrush basin between the Bruneau Escarpment and the Bruneau River and the area south and west of the Owyhee River, are especially vulnerable to lightning-caused wildfire. Protection of intact sagebrush-steppe areas and restoration management of degraded areas is a priority for this key system. In terms of fire suppression, habitat management within the Greater Sage-Grouse Priority Habitat Management Area (PHMA) (BLM 2015) should be aggressive and is intended to maintain large tracts, habitat resiliency, and sustainability.

For a more detailed description of the threat rating methodology, see (FOS 2009)

This part contains a high level summary of the strategies and conservation actions either being implemented or under consideration

Strategies roll up to objectives

Objective	Strategy	Action(s)	Target SGCNs
Manage wildfires to minimize loss of sagebrush habitat.	Improve fire suppression protocols and resource allocations to limit habitat losses to wildfire.	Support development and implementation of Rangeland Fire Protection Associations (RFPAs) (e.g., Idaho Code § 38-104B and Governor's Executive Order 2015-04) (Otter 2015). During high fire danger conditions, stage initial attack and secure additional resources closer to priority areas, with particular consideration of the West Owyhee, Southern, and Desert Conservation Areas to ensure quicker response times in or near Sage-Grouse habitat (BLM 2015). Create and maintain effective fuel breaks to modify fire behavior and increase fire suppression effectiveness based on criteria outlined in the Governor's Alternative (Otter 2012).	Greater Sage-Grouse Sage Thrasher Sagebrush Sparrow Pygmy Rabbit Dark Kangaroo Mouse
Increase post-fire restoration success (DOI 2015)	Expand the use of native seeds and seedlings to accelerate efforts to improve and restore post-fire rangeland health (DOI 2015).	Reallocate use of native seed from ESR projects outside of PHMA or IHMA (or ESA-listed species habitat) to those inside it in years when preferred native seed is in short supply (BLM 2015). Collect native seed from across the distribution of the species for use in developing commercial	Greater Sage-Grouse Sage Thrasher Sagebrush Sparrow Pygmy Rabbit Dark Kangaroo Mouse

This column identifies key SGCN that will benefit from a given objective, strategy, or action

Describes the project team that was involved in creating the initial section plan; a key feature of this approach is that it integrates perspectives of many different stakeholders involved in managing each section.

Owyhee Uplands Section Team

An initial version of the Owyhee Uplands Section project plan was completed for the 2005 Idaho State Wildlife Action Plan (formerly Comprehensive Wildlife Conservation Strategy). The Owyhee Uplands was selected as one of 2 initial pilot sections for the 2015 Idaho State Wildlife Action Plan revision. A small working group developed an initial draft of the section plan (Miradi v. 0.12), which was then reviewed by a wider group of partners and stakeholders during a 2-day workshop held at the Idaho Department of Fish and Game Headquarters office, Boise, Idaho, in August 2014 (this input was captured in Miradi v. 0.14). That draft was then subsequently distributed for additional stakeholder input including a half-day meeting in December 2014. Since then, we have continued to work with key internal and external stakeholders and subject matter experts to improve upon the plan. Materials in this document are based on Miradi v. 0.##. Individuals, agencies, and organizations involved in this plan are listed in Table 12.1.

Table 12.1 Individuals, agencies, and organizations involved in developing this plan *

First name	Last name	Affiliation
Rita	Dixon*	Idaho Department of Fish and Game
Bob	Unnasch*	The Nature Conservancy in Idaho
Jon	Beals	Idaho Governor's Office of Species Conservation
Regan	Berkley	Idaho Department of Fish and Game
William R.	Bosworth	Idaho Department of Fish and Game
Jay	Carlisle	Intermountain Bird Observatory
Michelle	Commons-Kemner	Idaho Department of Fish and Game
Nicole	DeCrappeo	DOI Northwest Climate Science Center
Jim	Desmond	Owyhee County

Contact these individuals to join the team for this section going forward