

# Canyon Creek Watershed Analysis

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## Ecosystem Analysis at the Watershed Scale

*Prepared for*

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## PREFACE

The Canyon Creek Watershed Analysis characterizes ecological and physical processes at multiple spatial scales by systematically uncovering the interactions of biological, physical, and human processes that have created the current conditions in the watershed. The analysis provides the framework to help us understand how the land has changed and to recommend sound management options for the future.

This watershed analysis generally follows the outline described in the *Ecosystem Analysis at the Watershed Scale – Federal Guide for Watershed Analysis* (Federal Guide – Version 2.2, August 1995). Recommendations for maintaining and restoring natural processes within the watershed are made to aid in future project planning.

This watershed analysis is not intended to be a decision-making document but is intended to be useful for future planning. It is recognized, however, that new information, environmental or policy changes, and/or site-specific conditions may alter the current understanding of the watershed and, in turn, may lead to new recommendations. The process is iterative. As new information becomes available, it should be incorporated into the document. The analysis team has attempted to gather all available baseline data and to fill data gaps when feasible. The team will identify existing data gaps to assist further data analysis efforts in understanding watershed processes.

The Canyon Creek Watershed Analysis is driven by the National Fire Plan and the Aquatic Conservation Strategy. The analysis assesses fuels hazard and community vulnerability within the Wildland Urban Interface (WUI) and the potential effects of thinning and prescribed fire. The impacts of fuels treatment on wildlife, soil, water, and other resources were also considered. Special attention will be paid to riparian areas with emphasis given to riparian vegetation communities and habitat condition. The team also evaluated the connectivity of riparian areas throughout the watershed and assess the function of streams as they relate to important aquatic species.

The topographically diverse Canyon Creek watershed ranges from the Strawberry Mountain Wilderness to Canyon City and John Day, Oregon. Human uses coincide with diverse ecosystems across this landscape. The Canyon Creek watershed offers the opportunity to strike a balance between pragmatic resource management and necessary resource protection. It is with this in mind that we conduct this analysis.

The interdisciplinary team that has written this document followed the six-step process outlined in the *Ecosystem Analysis at the Watershed Scale – Federal Guide for Watershed Analysis* (Federal Guide – Version 2.2, August 1995). The six steps are:

- Characterization of the watershed – this is a summary of the key parameters and the ecological interactions occurring within the watershed.
- Identification of the key questions and conditions within the watershed.

- Investigation and description into the current conditions in the watershed.
- Description of reference conditions.
- Synthesize and interpret information gathered in the previous chapters, comparative analysis of current conditions and reference conditions.
- Recommendations and management options for future actions within the watershed.

The results of watershed analysis can be used to:

- Assist in developing ecologically sustainable programs to enhance water, timber, recreation, and other commodities.
- Facilitate program and budget development by identifying and setting priorities for social, economic, and ecological needs within and among watersheds.
- Establish a consistent, watershed-wide context for project-level National Environmental Policy Act (NEPA) analyses.
- Establish a watershed context for evaluating management activity and project consistency given existing plan objectives.
- Establish a consistent, watershed-wide context for implementing the Endangered Species Act, including conferencing and consulting under section 7.
- Establish a consistent, watershed-wide context for local government water quality efforts and for the protection of beneficial uses identified by the states and tribes in their water quality standards under the Federal Clean Water Act.