Introduction

This section assesses the consistency of the Juncrock Planning Area project (planning area) with the Aquatic Conservation Strategy (ACS) at the White River fifth field watershed scale. Beaver Creek fifth field watershed or its two six field subwatersheds (Upper and Middle Beaver Creek subwatersheds), which, are located in the planning area will have minimum analysis done because of the lack of valuable information of existing conditions at both the fifth and sixth field watershed scale. Beaver Creek watershed is almost entirely located on Confederated Tribes of Warm Springs lands. Refer to the Aquatic Biological Evaluation for a detailed description of the planning area.

Alternative I: Consistency/Inconsistency with ACS Objectives

This section, will describe how the **No Action** alternative is either consistent/inconsistent with the nine ACS objectives.

1. **Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.**

Selection of the **No Action** alternative would maintain the distribution, diversity, and complexity of the watershed and landscape-scale features for habitat elements: off-channel habitat and refugia, as well as channel conditions/dynamics/floodplain connectivity. Historically, the planning area is considered to be in a natural mixed severity fire regime, with a return interval of 5 to 100 + years. Stand replacing fires are possible given the right conditions. Riparian reserve stands would be maintained in the range of natural conditions (RNC) with different pathogens, such as mistletoe, stem decay, insects, and over stocking, occurring. The action is consistent with this ACS objective.

2. Maintain and restore spatial and temporal connectivity within and between watersheds.

Even with timber harvesting taken place in the White River watershed from both Hilynx planning area and Path timber sale. Spatial and temporal connectivity would be maintained and restored over time in and between watersheds from the **No Action** alternative. Overall, water temperatures would be expected to slightly decrease over time as tree plantations grow in the watersheds riparian areas. Canopy closures in some mature riparian stands would be expected to temporarily decrease from trees naturally dying. Over time, changes in canopy closure would be maintained in the RNC. The action is consistent with this ACS objective.

3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

Physical integrity of all the natural streamcourses would be maintained in the watershed from the **No Action** alternative. Over time as trees fall into the floodplain and stream channel they would help create and maintain pool habitats, as well as sort stream channel substrates and maintain streambank conditions, width/depth ratio, and floodplain connectivity. The bank and bottom configuration of the Clear Creek Irrigation ditch would be compromised as a water transmission corridor. Potential mass berm failures from trees blowing down from the ditch berm itself, or into ditch berm, which could increase water velocity on the berm causing a mass failure. Water piping caused by root systems of trees and shrubs growing in the ditch berm can cause a mass berm failure if not continually monitored. The action is not consistent with this ACS objective.

4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.

Water quality for supporting healthy riparian, aquatic, and wetland ecosystems would be maintained from the **No Action** alternative. Water temperature would slightly decrease over time from increased shade in the riparian reserve plantations. The action is consistent with this ACS objective.

5. Maintain and restore the sediment regime under which aquatic ecosystems evolved.

In some areas of the fifth field watershed the sediment regime is not in the RNC. This is partly due to multiple irrigation diversions located throughout the watershed and road densities being above Forest standards. Watershed conditions for road density would remain at its existing condition of 5.13 miles per square mile in the planning area. That is 2.63 miles per square mile over the Forest standard of 2.5 miles per square mile. Existing sediment regime would be maintained under the **No Action** alternative at the watershed scale. The action is consistent with this ACS objective.

6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.

In-stream flows to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of nutrient, and wood routing would be maintained and restored over time from the **No Action** alternative. The action is consistent with this ACS objective.

7. Maintain and restore the timing, variability and duration of floodplain inundation and water table elevation in meadows and wetlands.

Conditions of timing, variability, and duration of the floodplain inundation and water table elevation in meadows and wetlands would be maintained under the **No Action** alternative. The action is consistent with this ACS objective.

8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

The riparian areas and wetlands would maintain structural diversity over time even if there were a loss of plant specie diversity. Species composition and structural diversity of plant communities in riparian areas and wetlands are presently showing signs of decline and reduced resiliency due to general over stocking and disease from dwarf mistletoe in the Douglas fir. Adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris may be sufficient from the species, which replace the individual Douglas fir trees that die out in the riparian reserve stands. The action is consistent with this ACS objective.

9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

The **No Action** alternative would maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species. Natural recruitment of large woody debris to both the floodplain and stream channel would be expected over time, which would help maintain and restore pool frequency and distribute substrate, as well as maintain channel conditions of streambank, floodplain connectivity, and width/depth ratio. This action is consistent with this ACS objective.

Conclusion

Some elements of the ACS objectives would continue to be degraded at a site scale. The **No Action** alternative would either maintain or restore all ACS objectives except objective 3 at the watershed scale. The **No Action** alternative is partially consistent with the strategy of the Northwest Forest Plan.

Alternative II (Uneven Aged Approach), III (Even Aged Approach) and IV (Uneven Aged Approach Leaving Large Trees Larger Than 21 Inches DBH with Fewer New Roads): Consistency/Inconsistency with ACS Objectives

This section, will describe how the proposed alternatives II, III, and IV are either consistent/inconsistent with the nine ACS objectives.

1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.

Alternatives II, III, and IV would accomplish the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted by maintaining habitat elements of off channel habitat and refugia, as well as floodplain connectivity of the stream channels in the planning area. The watershed conditions under alternatives II, III, and IV for the riparian reserves would be maintained and restored over time by improving stand-stocking levels to a healthier condition and by decreasing disease pathogens. Alternative II, III, and IV are consistent with this ACS objective.

2. Maintain and restore spatial and temporal connectivity within and between watersheds.

Alternatives II, III, and IV would maintain connectivity through no-cut buffers along riparian reserves. Connectivity in the uplands would be maintained under alternatives II and IV while under alternative III it would be degraded. Thinning, snag creation, and down wood creation, would restore characteristics of wildlife travel corridors in the riparian reserves. Any increase to water temperature would be negligible from Alternatives II, III, or IV. Alternatives II, III, and IV are consistent with this ACS objective.

3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

Banks, shorelines, and bottom configurations under alternatives II, III, and IV would be maintained for natural stream channels because of no-harvest buffers, located in the riparian reserves. Trees that are cut both in the riparian reserves and out side of the riparian reserves would be felled away from stream channels. Alternatives II, III, and IV are consistent with this ACS objective.

4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.

Shade canopy would not be affected in any natural stream channel. Water temperatures would be maintained in both natural stream channels and Clear Creek Irrigation ditch. Sediment delivery is not expected to increase over natural levels from Alternatives II, III, and IV. Water quality would be maintained. Alternatives II, III, and IV are consistent with this ACS objective.

5. Maintain and restore the sediment regime under which aquatic ecosystems evolved.

Alternatives II, III, and IV would maintain and improve the sediment regime by reducing road mile densities in the planning area from 5.13 to 3.46 miles per square mile. Design features, no-cut stream buffers, and no equipment buffers would maintain the sediment regime in the riparian reserves. Sediment produced by ground disturbing activities under alternatives II, III, and IV are expected to be filtered before reaching stream channels by

the no-cut buffers. Sediment regime would be maintained at the watershed scale. Alternatives II, III, and IV are consistent with this ACS objective.

6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.

Sediment, nutrient, and wood routing would not be affected at the watershed scale. Alternatives II, III, and IV are consistent with this ACS objective.

7. Maintain and restore the timing, variability and duration of floodplain inundation and water table elevation in meadows and wetlands.

Road segments to be closed or obliterated at the end of the project would increase drainage network function. No affects to floodplain inundation and water table elevations as it relates to meadows or wetlands are anticipated. Conditions would be maintained. Alternatives II, III, and IV are consistent with this ACS objective.

8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

All riparian reserve thinning is designed to encourage growth, reduce competition among trees thereby reducing risk of insect and disease infestation, and reduce fire hazard. Accelerated growth of trees in the reserves would create a future source of both terrestrial and instream LWD. Alternatives II, III, and IV are consistent with this ACS objective.

9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

The harvest/vegetation management activities under alternatives II, III, and IV would retain healthy trees. Tree canopy development, would increase future sources of terrestrial and instream large woody debris in both uplands and natural stream channels of both Clear Creek and Beaver Creek watersheds. Alternatives II, III, and IV are consistent with this ACS objective by maintaining habitat for riparian-dependent species.

<u>Conclusion</u>

Some elements of the ACS objectives would be temporarily degraded at a site scale. The ACS objectives at the watershed scale would be maintained or restored under alternatives II, III, and IV. Alternatives II, III, and IV are consistent with the ACS strategy of the Northwest Forest Plan.