

Riparian Conservation Objectives Analysis

The Forest Plan Direction (USDA Forest Service 2005a) describes management goals and strategies for aquatic, riparian, and meadow ecosystems. The aquatic, riparian, and meadow ecosystem strategy contains a set of land allocations, specifically riparian conservation areas and critical aquatic refuges, that delineate aquatic, riparian, and meadow habitats, which are to be managed consistent with the following Riparian Conservation Objectives (RCOs) and associated standards and guidelines. In order to achieve the element described above, the Forest Plan Direction requires that a site-specific analysis be conducted in order to determine the type and extent of activities that can occur within Riparian Conservation Areas (RCAs) adjacent to aquatic features. Specifically, the Forest Plan Direction contains standards and guidelines that must be met for activities within RCAs. This analysis examines how the Stanislaus National Forest (STF) Motorized Travel Management EIS meets the standards and guidelines for each Riparian Conservation Objective.

Riparian Conservation Objective (RCO) Standards and Guidelines

The RCOs provide a checklist for evaluating whether a proposed activity is consistent with the desired conditions described in the Aquatic Management Strategy. There are 34 applicable standards and guidelines related to the Aquatic Management Strategy. However, since these apply to a wide variety of management activities such as vegetation management, grazing and prescribed fire, any single management activity usually has a small subset of applicable standards and guidelines. This motorized travel management project has nine. Each applicable standard and guideline and its consistency with the project is described below:

General Standards and Guidelines:

Standard and Guideline – RCA Designation

Designate riparian conservation area (RCA) widths as described above. The RCA widths displayed may be adjusted at the project level if a landscape analysis has been completed and a site-specific RCO analysis demonstrates a need for different widths.

Consistency Determination: This project utilized riparian conservation area (RCA) widths as described on page 173 of the Forest Plan Direction. There was no need to adjust those widths, thus the project is consistent with this standard and guideline.

Standard and Guideline – New Proposed Management Activities

Evaluate new proposed management activities within CARs and RCAs during environmental analysis to determine consistency with the riparian conservation objectives at the project level and the AMS goals for the landscape. Ensure that

appropriate mitigation measures are enacted to (1) minimize the risk of activity-related sediment entering aquatic systems and (2) minimize impacts to habitat for aquatic- or riparian-dependent plant and animal species.

Consistency Determination: The following management activities within CARs and RCAs were evaluated to determine their consistency with the riparian conservation objectives as part of this project;

- Prohibiting cross country travel
- Motorized trail additions to the National Forest Transportation System (NFTS)
- Changes in class of vehicle and/or season of use on existing NFTS roads

Appropriate mitigation measures were established, where needed, to (1) minimize the risk of activity-related sediment entering aquatic systems and (2) minimize impacts to habitat for aquatic- or riparian-dependent plant and animal species. These mitigation measures are specified in Chapter 2 of this EIS. Some routes were consistent with this standard and guideline assuming routine maintenance. In addition, routes deemed to be inconsistent with RCOs were not recommended for inclusion in the EIS. Thus, all routes proposed for addition to the NFTS or changes in vehicle class on existing NFTS routes were considered in relation to the above three actions. They are, with mitigation and/or maintenance, consistent with the standard and guideline.

Riparian Conservation Objective Standards and Guidelines:

RCO #1 – Ensure that identified beneficial uses for the water body are protected. Identify the specific beneficial uses for the project area, water quality goals from the Regional Basin Plan, and the manner in which the standards and guidelines will protect the beneficial uses.

Standard and Guideline – Water Temperature

Ensure that management activities do not adversely affect water temperatures necessary for local aquatic- and riparian-dependent species assemblages.

Consistency Determination: Water temperature data were available on most streams in the project area with a potential concern for altered temperature due to the proposed action. The remaining streams showed no indications of altered temperature. As described in the water resources existing condition in this EIS, water temperature is within range of natural variability. Evidence shows it is not altered by the proposed action, or as a cumulative result of other management activities (including the presence of the existing NFTS). Since the number of routes proposed for addition to the NFTS in

hydrologically sensitive areas is less than the existing condition, effects of the action alternatives will result in maintenance of existing water temperature. The project is consistent with this standard and guideline.

RCO #2 – Maintain or restore: (1) the geomorphic and biological characteristics of special aquatic features, including lakes, bogs, fens, wetlands, vernal pools, springs; (2) streams, including instream flows; and (3) hydrologic connectivity both within and between watersheds to provide for the habitat needs of aquatic-dependent species.

Standard and Guideline – Hydrologic Connectivity

Maintain and restore the hydrologic connectivity of streams, meadows, wetlands, and other special aquatic features by identifying roads and trails that intercept, divert, or disrupt natural surface and subsurface water flow paths. Implement corrective actions where necessary to restore connectivity.

Consistency Determination: Hydrologic connectivity refers to the ease of movement, or rates of exchange, with which water, energy, nutrients, and organisms pass from one area to another, unhindered in the absence of impediments, such as trails, roads, bridges and developments crossing or immediately adjacent to water bodies. This project proposes no new features that would impair hydrologic connectivity, and does not retain some existing route crossings in the action alternatives, all of which results in maintenance or enhancement of the existing connectivity. The project is consistent with this standard and guideline.

Standard and Guideline – Culverts and Stream Crossings

Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water drafting sites to avoid adverse effects to in stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.

Consistency Determination: No culverts are being installed which could create barriers to upstream or downstream passage for aquatic-dependent species as part of this project. Mitigation measures at selected crossings, as shown in Alternative 2 of this EIS, are expected to reduce stream channel disturbance so as to minimize future risk of barriers from stream bed alteration. As a result, the project is consistent with this standard and guideline.

Standard and Guideline – Stream Characteristics

Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate required long-term restoration actions and implement them according to their status among other restoration needs.

Consistency Determination: All of the action alternatives improve relevant stream characteristics by reducing adverse impacts from roads and motorized trails. Stream sedimentation, as described in the water resources existing condition section of this EIS, is currently low and thus within the range of natural variability. The action alternatives will slightly reduce sediment since they eliminate some of the existing routes proposed for addition to the NFTS. This project is expected to be consistent with this standard and guideline, and possibly slightly enhance stream characteristics.

RCO #3 – Ensure a renewable supply of large down logs that: (1) can reach the stream channel and (2) provide suitable habitat within and adjacent to the RCA

Standard and Guideline – Coarse Woody Debris

Determine if the level of coarse large woody debris (CWD) is within the range of natural variability in terms of frequency and distribution and is sufficient to sustain stream channel physical complexity and stability. Ensure proposed management activities move conditions toward the range of natural variability.

Consistency Determination: Stream survey data are available along most of the streams in the project area that have routes in hydrologically sensitive areas. Observations by forest watershed staff in other subject streams complement the data, both of which indicate that CWD is within the range of natural variability (or in some cases it may exceed the expected amount). None of the streams at issue appear to have seen CWD altered by the motorized travel management proposed in this EIS. The proposed management activity is consistent with this standard and guideline.

RCO #4 – Preserve, restore or enhance special aquatic features, such as meadows, lakes, ponds, bog, fens, and wetlands, to provide the ecological conditions and processes needed to recover or enhance the viability of species that rely on these areas.

Standard and Guideline – Bog and Fen Ecosystems

*Prohibit or mitigate ground-disturbing activities that adversely affect hydrologic processes that maintain water flow, water quality, or water temperature critical to sustaining bog and fen ecosystems and plant species that depend on these ecosystems. During project analysis, survey, map, and develop measures to protect bogs and fens from such activities as trampling by livestock, pack stock, humans, and wheeled vehicles. Criteria for defining bogs and fens include, but are not limited to, presence of: (1) sphagnum moss (*Sphagnum* spp.), (2) mosses belonging to the genus *Meesia*, and (3) sundew (*Drosera* spp.) Complete initial plant inventories of bogs and fens within active grazing allotments prior to re-issuing permits.*

Consistency Determination: Mitigation measures are specified in Alternative 2 for the proposed motorized trail additions to the National Forest Transportation System which could adversely affect hydrologic process that maintain water flow, water quality, or water temperature critical to sustaining potential fen ecosystems and plant species that depend on them. Though no fens were discovered in or near routes proposed for addition, a few routes cross small portions wetlands such as springs and seeps. To be conservative, mitigation measures have been proposed to protect or improve these special aquatic features. These mitigation measures assure consistency of all of the action alternatives with this standard and guideline.

