
TABLE OF CONTENTS

	Page
8.10 Land Use Environmental Effects	8.10-1
8.10.1 Land Use Designation	8.10-1
8.10.1.1 Project Boundary Modifications	8.10-1
8.10.1.2 Existing Facility Modification and Construction of New Facilities	8.10-2
8.10.2 Land Ownership	8.10-7
8.10.3 Conflicts with Land Management Plans and Policies	8.10-7
8.10.4 Unavoidable Adverse Effects.....	8.10-7

8.10 LAND USE ENVIRONMENTAL EFFECTS

This section describes the potential impacts to land use under the Proposed Action for the Middle Fork American River Project (MFP or Project). Section 4.0 – Proposed Action (including Tables 4-4, 4-5, and 4-6) provides a description of routine operation and maintenance activities to be implemented under the Proposed Action compared to the No-Action Alternative. Appendix A – Modified or New Facility Construction Activities and Concept Designs includes a description of facility modification and construction activities, as well as avoidance and protection (AP) measures to be implemented under the Proposed Action.

Potential impacts to land use have been identified based on changes in routine maintenance activities, implementation of non-routine recreation facility activities, and modification of existing or construction of new facilities.

Potential impacts to land use have been identified based on activities to be implemented under the Proposed Action affecting:

- Land use designation;
- Land ownership; or
- Conflicts with land management plans and policies.

A description of potential effects to land use from implementation of the Proposed Action is provided below. Unavoidable adverse effects are also discussed at the end of this section.

8.10.1 Land Use Designation

The Placer County General Plan identifies five land uses in the Middle Fork American River Watershed (Watershed) including Agriculture, Resource Protection, Rural Residential, Timberland, and Urban uses. The Middle Fork American River Project (MFP or Project) facilities are located on lands solely designated as “Timberland.” This designation is applied to mountainous areas where the primary land uses relate to the growing and harvesting of timber and other forest products (together with limited, low-intensity public and commercial recreational uses). Necessary public utility facilities are an allowed use on lands designated as Timberland.

8.10.1.1 Project Boundary Modifications

The Federal Energy Regulatory Commission (FERC or Commission) Project boundary will be modified under the Proposed Action as follows:

- Increase the boundary to include:
 - New MFP facilities constructed as part of the Proposed Action;

- Existing facilities added to the MFP that are necessary for operation and maintenance of the MFP; and
- Footprint of all MFP recreation facilities.
- Decrease the boundary to remove excess lands currently within the existing FERC Project boundary that are not necessary for operation and maintenance of the MFP (particularly around MFP reservoirs).

These revisions are depicted on Map 4-3 (FERC Project Boundary Modifications [includes Maps 4-3a–o]). Detailed maps and specific parcel and acreage information is available in Exhibits A and G of this Application for New License (License Application).

These actions and their effects on land use designations are described below.

Addition of Project Lands

All lands to be added to the FERC Project boundary will continue to maintain the land use designation of “Timberland” as identified in the Placer County General Plan. Adjustments to the FERC Project boundary will enhance the MFP by ensuring that those lands necessary for the safe and efficient operation and maintenance of the MFP are included within the FERC Project boundary. Land use designations will not change as a result of adding land to the FERC Project boundary; therefore, there will be no impact.

Removal of Project Lands

The removal of lands from the FERC Project boundary will not result in a change in land use designation. All lands removed from the FERC Project boundary will continue to maintain the land use designation of “Timberland” as designated in the Placer County General Plan.

Adjustments to the FERC Project boundary will enhance the MFP by ensuring that only those lands necessary for the safe and efficient operation and maintenance of the MFP are included within the FERC Project boundary. Land use designations will not change as a result of removing land from the FERC Project boundary; therefore, there will be no impact.

8.10.1.2 Existing Facility Modification and Construction of New Facilities

The Proposed Action includes modification of existing and construction of new Project facilities, as described in Section 4.0 – Proposed Action. These actions and their effects on land use designations are described below.

Construction of Hell Hole Reservoir Seasonal Storage Increase Improvement

Implementation of improvements associated with the Hell Hole Reservoir Seasonal Storage Increase Improvement will occur within the existing FERC Project boundary

and will not result in a change in the land use designation for the area; therefore, there will be no impact.

The new inundation area resulting from installation of spillway crest gates will be within the existing flood pool and there are no facilities that will be impacted by the higher water surface elevation (WSE). Therefore, land use impacts related to the new inundation area associated with the higher WSE in Hell Hole Reservoir are considered negligible.

Small Diversion Modifications

The Proposed Action includes modification of Duncan Creek, North Fork Long Canyon, and South Fork Long Canyon diversion dams. Construction activities include: (1) installation of self-cleaning wedge-wire screens at the dams; (2) modification of the dams to accommodate the screens; (3) modification of the low-level outlets to release the required instream flows; and (4) modification or installation of gages. The small diversion modifications will result in diversion pools that are slightly shallower and more riverine.

Modifications to the small diversions will occur within the existing FERC Project boundary and will not result in a change in the land use designation or land uses for the area; therefore, there will be no impact.

Outlet Works Modifications

The Proposed Action includes modification of outlet works at French Meadows Dam, Hell Hole Dam, and Middle Fork Interbay Dam. The purpose of these modifications is to change the outlet works to release new instream flows requirements, and where appropriate, install new gages to collect flow data necessary for documenting compliance under the new license.

Outlet works modifications will occur within the existing FERC Project boundary and will not result in a change in the land use designation or land uses for the area; therefore, there will be no impact.

Development of New Sediment Augmentation Areas

Under the No-Action Alternative, sediment has routinely been excavated using heavy equipment on an as-needed basis (generally after episodic high-flow events) from the three small diversion pools (Duncan Creek, North Fork Long Canyon Creek, and South Fork Long Canyon Creek) and from the two medium reservoirs (Middle Fork Interbay and Ralston Afterbay). Once excavated, the sediment is hauled to approved, sediment disposal areas on United States Department of Agriculture-Forest Service (USDA-FS) land or private property.

Changes in sediment management under the Proposed Action include the use of new sediment augmentation areas associated with the medium reservoirs. These augmentation areas include: Middle Fork Interbay Augmentation Areas (new), Junction

Bar Augmentation Area (new), and Indian Bar Augmentation Area (existing, added to MFP). Refer to the Sediment Management Plan (SMP) (PCWA 2011a; Supporting Document [SD] A) for a complete description of sediment augmentation activities to be implemented as part of the MFP. The location of these augmentation areas, activities that will occur at each, and their effect on land use are summarized below.

MIDDLE FORK INTERBAY

Sediment augmentation at Middle Fork Interbay will occur at two new sites downstream of the dam (each site is approximately 0.11 acre). These sites were selected because of their sediment transport potential and proximity to sediment removal activities. Use of these two augmentation areas will follow a phased approach in consultation with resource agencies (refer to the SMP [PCWA 2011a; SD A]). The site closest to the dam will be the primary sediment augmentation area, with the second, downstream area only used after the primary area is full and after monitoring has confirmed successful sediment recruitment.

Due to access limitations at the site, sediment augmentation will be accomplished by releasing material from Middle Fork Interbay Dam and Powerhouse Road, just downstream of the dam's north abutment, allowing it to accumulate in the river channel. During augmentation activities, measures will be implemented to protect the roadway and embankment from damage, and to protect instream flows and water quality. Following each augmentation event, all protective measures (e.g., temporary bypass pipe, silt screens) will be removed.

RALSTON AFTERBAY

Sediment augmentation at Ralston Afterbay will occur at two sites: the existing Indian Bar Sediment Augmentation Area downstream of Ralston Afterbay; and at the new Junction Bar Augmentation Area (1.77 acres). Junction Bar Augmentation Area is located just downstream of Indian Bar, on the west bank, on land managed by the Bureau of Land Management (BLM).

Junction Bar will be accessed via a temporary construction bridge that will be placed at the north end of Indian Bar and span the active channel and Willow Bar. A temporary haul road will be constructed to connect the western bridge abutment to the augmentation area. Following each augmentation event, the temporary haul road, bridge, and abutments will be removed and graded to match natural contours.

Use of Middle Fork Interbay and Ralston Afterbay sediment augmentation areas as MFP facilities will not result in a change in land use designation in the area; therefore, there will be no impact.

Land uses in the area, however, could be affected and the following effects have been identified:

- The Junction Bar area has been identified as a dispersed concentrated use area, and use of a portion of Junction Bar for sediment augmentation could potentially affect recreation use at this site; and
- Installation of facilities to accommodate augmentation activities (i.e., protective measures, temporary access road, and bridge) could result in temporary effects to land uses.

The SMP includes AP measures that address potential effects on land uses from implementation of sediment augmentation activities. Applicable measures include:

- Limiting work areas to minimize disturbance; and
- Where feasible, limiting the location of staging and access routes to developed roads and previously disturbed areas.

Implementation of the AP measures included in the SMP will minimize effects of sediment augmentation on land use over the term of the new license. Impacts related to sediment augmentation are considered negligible, because the new sediment augmentation areas will encompass minimal acreage; facilities to accommodate augmentation activities will be temporarily installed; and use data collected by Placer County Water Agency (PCWA) shows that dispersed recreation use at Junction Bar is low. Furthermore, the placement of sediment downstream of the dams will enhance natural sediment delivery and transport, and enhance habitat for aquatic species and riparian species. Overall, sediment augmentation is considered a beneficial impact to the environment.

Non-Routine Recreation Facility Activities

The Proposed Action includes: (1) removal, reduction, and consolidation of select MFP recreation facilities; (2) conversion of select MFP recreation facilities to accommodate group use; and (3) improvements to select dispersed concentrated use areas. Refer to the Recreation Plan (PCWA 2011b; SD A) for a complete description of the measures/commitments related to MFP recreation facilities to be implemented as part of the MFP. These actions and their effect on land use designations are described below.

REMOVAL, REDUCTION, AND CONSOLIDATION

Based on low use levels and facility utilization, and/or to protect sensitive resources, the following actions will be implemented under the Proposed Action:

- Remove Upper Hell Hole Campground;
- Reduce the size of Poppy Campground;
- Reduce the size of Ralston Picnic Area;
- Reduce the size of Hell Hole Campground; and

- Consolidate the parking and support facilities at Poppy Campground Parking Area and McGuire Boat Ramp Parking Area.

Removal, reduction, and consolidation of Project recreation facilities will not result in a change in land use designation or land uses; therefore, there will be no impact.

CONVERSION

Recreation use and facility capacity data suggest a need for additional group camping opportunities in the MFP. Because McGuire Picnic Area and Beach is substantially underutilized as a day use facility, PCWA will convert McGuire Picnic Area to a group campground and allow the beach to return to natural conditions.

Conversion of MFP recreation facilities will not result in a change in land use designation or land uses (i.e., recreation will remain the primary land use); therefore, there will be no impact.

IMPROVEMENTS

Under the Proposed Action, PCWA will develop a primitive recreation site near the Duncan Creek Diversion Pool to address sanitation issues and reduce potential resource impacts related to dispersed recreation use and improve the Ralston Afterbay Sediment Access Point to facilitate boat launching.

Improvements at MFP recreation facilities will not result in a change in land use designation or land uses; therefore, there will be no impact.

Temporary, Short-term Construction Impacts

The Proposed Action includes modifications to existing and construction of new Project facilities, which have the potential to result in short-term effects on land use. Refer to Appendix A for detailed information on construction activities and schedule, Best Management Practices (BMPs), AP measures (as applicable), and concept design drawings for each modified/new facility.

Potential impacts could occur as a result of:

- The locations of construction work areas and staging areas for each modification/improvement; and
- Road closure or restriction during construction activities.

Each construction project includes specific AP measures and BMPs (including appropriate USDA-FS BMPs) that address potential effects from implementation of modifications to existing MFP facilities and construction of new MFP facilities on land use. The measures include:

- Limiting work areas to minimize disturbance; and

- Where feasible, limiting the location of staging and access routes to developed roads and previously disturbed areas.

Construction work areas and staging areas, and road closure or restriction during construction activities, will be developed in coordination with appropriate resource agencies, land management agencies, and public safety personnel. Construction-related impacts are considered temporary and short-term in duration. With implementation of AP measures and appropriate USDA-FS BMPs, including agency consultation, construction-related impacts on land use associated with modified/new MFP facilities are considered negligible.

8.10.2 Land Ownership

Under the Proposed Action, PCWA proposes FERC Project boundary modifications, modifications to existing MFP facilities, and construction of new MFP facilities, as described in Section 4.0 – Proposed Action. The proposed boundary changes and modified/new facilities will not result in a change in land ownership; therefore, there will be no impact.

8.10.3 Conflicts with Land Management Plans and Policies

Operations and maintenance of the MFP is an established land use that does not conflict with any other developed or planned use. PCWA's current hydroelectric facilities and the modifications included under the Proposed Action present no land use compatibility issues or policy conflicts with any applicable land management plans; therefore, there will be no impact. Refer to Section 12.5 – Consistency with Comprehensive Plans for a detailed discussion on the MFP's consistency with relevant plans.

8.10.4 Unavoidable Adverse Effects

There are no unavoidable adverse effects to land use under the Proposed Action.

LITERATURE CITED

Placer County Water Agency (PCWA). 2011a. Sediment Management Plan. Available in PCWA's Application for New License – Supporting Document A.

_____. 2011b. Recreation Plan. Available in PCWA's Application for New License – Supporting Document A.