TABLE OF CONTENTS

List of Tables

List of Maps

List of Appendices

7.11 AESTHETIC RESOURCES AFFECTED ENVIRONMENT

This section describes the aesthetic (visual) resources in the vicinity of the Middle Fork American River Project (MFP or Project).

7.11.1 Information Sources

The information presented in this section was developed primarily using the following information source:

- REC 5 – Visual Quality Assessment Technical Study Report (TSR) (REC 5 – TSR) (PCWA 2011), which is included in Supporting Document (SD) B.

The REC 5 – TSR (PCWA 2011; SD B) provides a detailed description of the methods and results of visual quality assessment studies completed by Placer County Water Agency (PCWA) in 2007 and 2008. Most of the MFP facilities, including the Project recreation facilities, are located within the boundaries of the Tahoe National Forest (TNF) or the Eldorado National Forest (ENF). Therefore, the REC 5 – TSR (PCWA 2011; SD B) identifies the management direction for visual resources in the vicinity of the Project as inventoried by the TNF and the ENF and as established in the current Land and Resource Management Plan (LRMP or Forest Plan) for each Forest (USDA-FS 1988; USDA-FS 1990). In addition, the REC 5 – TSR (PCWA 2011; SD B) documents the existing visual condition of Project facilities, and visual conditions at Hell Hole and French Meadows reservoirs, and at Ralston Afterbay at low and high water surface elevations (WSE). These topics are discussed below, preceded by an overview of the visual characteristics of the lands and waters affected by the MFP.

7.11.2 Visual Characteristics

The following subsections describe the visual characteristics of the MFP landscape, first at a regional level then by specific areas in the vicinity of the MFP. As required in the Federal Energy Regulatory Commission (FERC or Commission) regulations, the discussion includes a brief description of the dams in each area. Additional information about the dams and associated Project facilities is available in Exhibit A and in Section 3.0 – No-Action Alternative and Section 4.0 – Proposed Action.

7.11.2.1 Regional Setting

The MFP is situated in the foothills and mountainous uplands of the western slope of the central Sierra Nevada, within the TNF and ENF. Bypass streams downstream of the Project reservoirs and diversion pools flow from elevations ranging from a high of approximately 5,300 feet above mean sea level (msl) to approximately 1,100 feet msl at Ralston Afterbay. Surrounding ridgelines reach elevations of 7,000 feet msl.

The Middle Fork American River landscape is characterized by steep canyons and rugged terrain with dense forests and woodlands. Aesthetic resources include alpine lakes, rivers, streams, general forested areas, wilderness areas, rivers, scenic forest routes, hiking trails, and developed campgrounds, vista points, picnic areas, boat

ramps, and special interest areas. This landscape is managed for timber, grazing, fish and wildlife habitat, recreation, and hydropower generation.

The land encompassing the Project facilities and bypass streams is considered rural in nature. There are no residential or commercial developments in the immediate vicinity of the Project. The nearest population center is Foresthill (population 1,791), located approximately 4 miles west-northwest of Ralston Afterbay. Several paved roads provide the primary access to the MFP vicinity. These include: Mosquito Ridge Road (Forest Route [FR] 96), Eleven Pines Road (FR 2); Old Icehouse Road (17N02), Blacksmith Flat Road (FR 23), and Ralston Ridge Road (FR 25). These roads are shown on Map 7.11-1 with respect to the primary Project facilities, streams, reservoirs, and ENF/TNF boundaries. Access to more remote Project locations is possible using ancillary roads and trails associated with the United States Department of Agriculture-Forest Service (USDA-FS or Forest Service) Transportation System. The following describes the primary Project facilities and surrounding landscape by area. Detailed descriptions of Project facilities are available in Exhibit A and in Section 3.0 – No-Action Alternative and Section 4.0 – Proposed Action.

7.11.2.2 Duncan Creek Diversion Area

The primary Project facilities in the Duncan Creek area are the Duncan Creek Diversion Dam and Duncan Creek Diversion Pool. These facilities are located on Duncan Creek, a tributary to the Middle Fork American River. The Duncan Creek Diversion Dam is a 32-foot-high, 165-foot-long concrete, gravity structure with a crest elevation of 5,275 feet msl. The dam impounds Duncan Creek and forms the Duncan Creek Diversion Pool, which has a gross storage capacity of approximately 20 acre-feet (ac-ft) and a maximum surface area of approximately 3 acres.

The topography in the Duncan Creek area is moderately steep and predominant aspects are northwest and southeast. The Duncan Creek watershed is dominated by mixed conifer and pine species with riparian species being found along the stream channel. Rock outcrops can be seen along the immediate perimeter of the Duncan Creek Diversion Pool. In 2001, the Star Fire consumed 17,500 acres of forest on the ENF and TNF and private lands. This fire burned in the immediate vicinity of the Duncan Creek Diversion Dam destroying many of the trees and vegetation on the side slopes near the dam and altering the visual character of the landscape.

7.11.2.3 French Meadows Reservoir Area

The primary Project facilities in the French Meadows area are the French Meadows Dam and Reservoir, located on the Middle Fork American River. French Meadows Dam (also referred to as LL Anderson Dam) is a 231-foot-high, 2,700-foot-long rock and gravel filled structure with a crest elevation of 5,273 feet msl. The French Meadows Dam impounds the Middle Fork American River forming the French Meadows Reservoir, which provides 134,993 ac-ft of gross storage. The maximum surface area is about 5,262 feet and the minimum operating surface area is about 5,125 feet.

The landscape surrounding French Meadows Reservoir is characterized by moderately steep hillsides, which are densely vegetated with mixed conifer forest, interspersed with small areas dominated by white fir and huckleberry oak. Upper montane chaparral species are also present on the surrounding side slopes. The reservoir and surrounding side slopes include intermittent exposure of granitic bedrock and willow species occur along side drainages. In 2001, the Star Fire consumed 17,500 acres of forest on the ENF and TNF and private lands. This fire burned in the immediate vicinity of the French Meadows area, destroying many of the trees and vegetation in the area and altering the visual character of the landscape.

7.11.2.4 Hell Hole Reservoir Area

The primary Project facilities at Hell Hole Reservoir are the Hell Hole Dam and Reservoir located on the Rubicon River. Hell Hole Dam is a 410-foot-high, 1,570-foot-long rock fill structure with a crest elevation of 4,650 feet msl. The dam impounds the Rubicon River and Five Lakes Creek to form Hell Hole Reservoir. Hell Hole Reservoir has a gross storage capacity of 207,590 ac-ft and a maximum surface area of 4,630 feet and a minimum operating surface area of 4,340 feet.

Hell Hole Reservoir is located in the rugged Rubicon River Canyon. The surrounding landscape is characterized by steep and rocky slopes, which are covered with brush and mixed-conifer forest. Vegetation near Hell Hole Dam is comprised of upper montane chaparral species, huckleberry oak, and annual grasses and forbs. The upper hillsides are dominated by red fir and white fir, with upper montane mixed shrub species and huckleberry oak interspersed. Riparian species, primarily willow species with interspersed alders and cottonwoods, also occur along side drainages and along the streams at the upper end of the reservoir. The reservoir and surrounding side slopes are primarily composed of granite with areas of glacial deposits on the surrounding side slopes. The upper reaches of the reservoir transition into a river canyon environment.

7.11.2.5 Long Canyon Creek Area

The primary Project facilities in the Long Canyon area are the North Fork Long Canyon Diversion Dam, the South Fork Long Canyon Diversion Dam, and their associated diversion pools. The North Fork Long Canyon Diversion Dam is a 10-foot-high, 120-foot-wide concrete gravity structure with a crest elevation of 4,720 feet msl. The dam impounds the North Fork Long Canyon Creek and forms a small diversion pool with less than 1 ac-ft of storage. The South Fork Long Canyon Dam is a 27-foot-high, 145-foot-long concrete gravity structure with a crest elevation of 4,650 feet msl. The dam impounds the South Fork Long Canyon Creek and forms a diversion pool with less than 1 ac-ft of storage.

The landscape in the vicinity of the two diversion dams is characterized by U-shaped valleys created by glaciers. Vegetation along the North and South forks of Long Canyon Creek is dominated by mixed conifer, fir, and pine species. Riparian species are found along the stream channel.

7.11.2.6 Middle Fork Interbay Area

The primary Project facility in the Middle Fork Interbay area is the Interbay Dam, located on the Middle Fork American River. Interbay Dam is a 70.5-foot-high, 233-foot-long concrete gravity structure with a crest elevation of 2,536 feet msl. The dam impounds the Middle Fork American River forming the Middle Fork Interbay, where water is diverted into the Middle Fork-Ralston Tunnel. Middle Fork Interbay has a maximum operating surface area of about 7 acres and a gross storage capacity of 175 ac-ft.

The landscape in the vicinity of Middle Fork Interbay is moderately steep, entrenched, and confined by narrow V-shaped valleys. The vegetation is comprised of communities dominated by mixed conifer and pine species, including Douglas-fir and ponderosa pine. Canyon live oak, lower montane chaparral species, and California black oak also occur on the surrounding hillsides. Riparian species occur along the stream channel.

7.11.2.7 Ralston Afterbay Area

The primary Project facilities in the Ralston area include the Ralston Afterbay and Ralston Afterbay Dam. Ralston Afterbay Dam is an 89-foot-high, 560-foot-long concrete gravity structure with a crest elevation of 1,189 feet msl. The dam is located on the Middle Fork American River, about three quarters of a mile downstream of the Rubicon River confluence. The dam impounds water from the Rubicon River and the Middle Fork American River to form Ralston Afterbay, which diverts water into the Middle Fork – Ralston Tunnel and re-regulates flows at the lower end of the MFP. Ralston Afterbay has a gross storage capacity of 2,782 ac-ft and a maximum surface area of approximately 68 acres.

The landscape in the Ralston Area is characterized by moderate to steep slopes with elevations ranging from 1,600 feet msl at the Middle Fork American River, to 4,000 feet msl on top of Mosquito Ridge. The vegetation consists of mixed conifer stands interspersed with large black oaks and predominant black oak stands. Steeply sloping hillsides are characterized by mixed brush hardwood stands and scattered conifers.

7.11.3 USDA-FS VMS Inventory

The USDA-FS currently uses the Visual Management System (VMS) to address visual resources. A brief explanation of the VMS and associated definitions is included in Appendix B3. As part of the REC 5 – TSR (PCWA 2011; SD B), PCWA compiled USDA-FS VMS information relevant to the MFP. This effort primarily involved: (1) identifying USDA-FS managed viewsheds and (2) compiling USDA-FS visual management information. The results of these efforts are described below.

7.11.3.1 USDA-FS Managed Viewsheds

The USDA-FS manages visual resources with respect to viewsheds, which are based on sensitivity levels. Sensitivity levels are an indication of people's concern for the scenic quality of the landscape. The levels are based on the amount of use an area receives and the type of user. The USDA-FS has established three levels of sensitivity:

Level 1 for primary travel routes and recreation use areas, where visitors are anticipated to have a high concern for the visual quality; and Levels 2 and 3 for areas that are not heavily used and where users have a moderate or low concern for the visual quality due to a commodity orientation to the landscape. The USDA-FS manages Sensitivity Levels 1 or 2 viewsheds for visual quality.

PCWA identified all of the managed viewsheds (Sensitivity Levels 1 and 2 viewsheds) in the vicinity of the MFP in consultation with Landscape Architects from the ENF and TNF. The TNF and ENF Landscape Architects identified 37 Forest Service managed viewsheds in the vicinity of the MFP, of which 18 are within the TNF and 19 are within the ENF. The managed viewsheds include primary travel routes (Forest Routes), other forest roads, trails, waterbodies, rivers, and developed recreation sites.

All of the managed viewsheds that were identified by the ENF and TNF are presented in Table 7.11-1, organized by viewshed type. The FRs and forest roads that are designated as USDA-FS managed viewsheds are highlighted on Map 7.11-1, along with their common names and USDA-FS identification numbers. In addition, all Sensitivity Levels 1 and 2 viewsheds are shown on Map 7.11-2 (a–e).

7.11.3.2 USDA-FS Visual Management Information

PCWA compiled and documented USDA-FS VMS inventory information relevant to the MFP in consultation with ENF and TNF Landscape Architects. This effort involved:

- Summarizing and mapping the Forest Plan Visual Quality Objectives (VQO) for each forest;
- Compiling and summarizing USDA-FS Inventory information, including viewer sensitivity levels, distance zones, landscape variety classes, and resulting Inventory VQOs;
- Identifying and summarizing USDA-FS land management direction associated with Project facilities and features; and
- Mapping Project facilities and features with respect to managed viewsheds and the Forest Plan VQOs.

Table 7.11-2 summarizes the Forest Plan VQOs and inventory information for each existing Project facility and feature. Map 7.11-2 (a–e) shows the location of each existing Project facility with respect to the Forest Plan VQOs. The following discussion summarizes the VMS Inventory results by area.

Duncan Creek Diversion Area

The Duncan Creek Diversion lies in the TNF, within a Management Area (MA) identified in the LRMP as “Sunflower” (MA 91). According to the LRMP, this MA is to be managed for the Modification VQO. Forest Plan VQOs in the vicinity of the Duncan Creek Diversion are shown on Map 7.11-2a.

French Meadows Reservoir Area

Project facilities associated with French Meadows Reservoir lie within the TNF MA, "French" (MA 89), which is to be managed for the Retention VQO. Developed recreation facilities surrounding French Meadows Reservoir are to be managed for Partial Retention VQO within the site and when the site can be viewed in the middleground from other managed viewsheds. Forest Plan VQOs are shown on Map 7.11-2a, but do not depict the Partial Retention VQO within the developed recreation sites due to the small scale of the developed recreation areas.

Hell Hole Reservoir Area

Project facilities associated with Hell Hole Reservoir lie in the ENF, in an area defined as "Semiprimitive Motorized" (MA 7). This area is managed for the Retention VQO. The ENF Semiprimitive Motorized MA is essentially undisturbed, and land altering practices are to be limited in scope and duration. Developed recreation facilities surrounding Hell Hole Reservoir are to be managed to meet a VQO of Partial Retention, in accordance with MA 8 in the ENF Forest Plan (pers. comm. ENF 2009). Forest Plan VQOs in the vicinity of Hell Hole Reservoir are shown on Map 7.11-2b, but do not depict the Partial Retention VQO within the developed recreation sites due to the small scale of the developed recreation areas.

Long Canyon Creek Area

The Long Canyon Creek area includes the North Fork Long Canyon and South Fork Long Canyon diversions, each on their respective stream. These Project facilities lie within the ENF MA, "Spotted Owl" (MA18), where specific management direction is to eliminate disturbance to wildlife and protect old growth forests. All the above-ground Project facilities associated with the North Fork and South Fork Long Canyon diversions are to be managed for the Partial Retention VQO. Forest Plan VQOs in the vicinity of the North Fork Long Canyon and South Fork Long Canyon diversions are shown on Map 7.11-2c.

Middle Fork Interbay Area

The Middle Fork Interbay area spans the Middle Fork American River Canyon with the river forming the boundary between the ENF and TNF. Project facilities on the north side of the river are within the TNF, and those on the south side are within the ENF. Project facilities that span the river (such as the dam and diversion pool) are considered to have both a TNF and ENF VQO designation. Forest Plan VQOs in the vicinity of the Middle Fork Interbay are shown on Map 7.11-2d.

Middle Fork Interbay Dam and Powerhouse Road and the Passive Microwave Reflector Station above Middle Fork Interbay are the only Project facilities on the north side of the canyon and lie within the TNF MA, "End of the World" (MA 102), where the major resource emphasis is regulated intensive even-aged timber management. The Project road traverses an area that is managed predominantly for the Modification VQO and the

Passive Microwave Reflector Station above Middle Fork Interbay is in an area managed for Partial Retention.

Most of the Project facilities are located on the south side of the canyon where there are two ENF MAs: "Visual Foreground Partial Retention" (MA 21), which applies from the river to midway up slope (approximately 0.5 mile from the river); and ENF MA "High Site Timber" (MA 24), which extends up slope from MA 21. Project facilities between the river and the Middle Fork Powerhouse Penstock and butterfly valve house are within MA 21 where a Partial Retention VQO applies. Project facilities at and above the Butterfly Valve House are within MA 24 where a Modification VQO applies.

Ralston Afterbay Area

The Ralston Afterbay (also referred to by the USDA-FS as Oxbow Reservoir) spans the Middle Fork American River and Rubicon River canyons. The Middle Fork American River forms the boundary between the TNF and ENF. Accordingly, Project facilities are located in both the ENF and the TNF. Forest Plan VQOs in the vicinity of the Ralston Afterbay are shown on Map 7.11-2e.

Project facilities on the north side of the river are within the TNF MA, "Little Oak" (MA 108), where the management emphasis is on wildlife with special emphasis on recreation adjacent to Ralston Afterbay. Project facilities within this area are managed for the Partial Retention VQO since they are within the foreground view of the Ralston Picnic Area and Ralston Afterbay.

To the south of the Middle Fork American River, which includes the confluence with the Rubicon River, Project facilities are within the ENF MA, "Wild and Scenic River" (MA 2), which is to receive "interim protection of its Wild, Scenic, or Recreational values until Congress makes a formal designation by law or disposes of the proposal". Areas within MA 2 are to be managed for the Retention VQO (USDA-FS 1988, p.4-130).

The Brushy Canyon Adit and Brush Canyon Adit Access Road lie within the ENF MA, "High Site Timber" (MA 24), where the Modification VQO applies.

7.11.4 Existing Visual Condition Assessments

Existing Visual Condition (EVC) is a component of the USDA-FS VMS. A brief explanation of EVC and associated definitions is provided in Appendix B3. In general, the EVC methodology uses a five point system to rate the existing visual conditions of a Forest. EVC ratings range from EVC Type I (ecological changes only) to EVC Type V (landscape changes are strong and obvious).

PCWA conducted an EVC assessment in 2008. This effort primarily involved: (1) documenting the EVC of Project facilities that can be seen from USDA-FS managed viewsheds in coordination with ENF and TNF landscape architects; and (2) documenting visual conditions at Hell Hole and French Meadows reservoirs and at Ralston Afterbay at high and low WSEs from Key Observation Points (KOP) identified in consultation with ENF and TNF landscape architects. During consultation, the ENF and

TNF indicated that none of the Project facilities should be classified as EVC Type V. The results of these efforts are summarized below.

7.11.4.1 EVC of Existing Project Facilities

The EVC assessment establishes the existing visual condition of Project facilities as seen in the landscape from USDA-FS managed viewsheds. The first step in the EVC assessment was to determine whether Project facilities or features could be seen from USDA-FS managed viewsheds in the study area. This was accomplished by traveling through most of the managed viewsheds. If a Project facility could be seen, the assessment described the degree of visual contrast created by Project facilities or features when seen from a managed viewshed in terms of form, line, color and texture, and duration and aspect of viewing. If a facility was not seen, the facility was not assessed. If the facility was not noticeable, it was documented as such and considered to meet the EVC Type II (not visually evident). In some cases, Project facilities are not noticeable but can be seen from certain vantage points. In some of these cases, the facility was rated as EVC Type II-III or III, based on comments provided by the USDA-FS. For example, the Passive Microwave Reflector Station above Ralston Afterbay is generally not noticeable but can be seen from Blacksmith Flat Road (FR-23), particularly when it is highlighted by sunlight. Accordingly, the USDA-FS rates this facility as EVC Type III. This assessment resulted in an EVC rating for each seen or not noticeable Project facility, which was tabulated by viewshed.

Since Project facilities may be seen from more than one location within a managed viewshed, or from more than one managed viewshed, the EVC assessment considered the visibility of Project features as seen from a particular managed viewshed (travel route, recreation area, water body) with consideration to factors such as frequency of views, duration of views, and viewing distance. KOPs were not used for the EVC assessment since the visibility of Project facilities could vary depending on the managed viewshed it was being viewed from.

All of the USDA-FS managed viewsheds were visited in August and September 2008 with the three exceptions: (1) Little Crater and Big Crater viewshed; (2) portions of the Western States Trail viewshed—segment above Duncan Creek Diversion and the segment along French Meadows Reservoir west of Poppy Campground; and (3) Tevis Cup Trail viewshed. Information on the visibility of Project facilities from these viewsheds was obtained from personal communications with PCWA staff, PCWA consultants conducting other MFP relicensing studies, and USDA-FS personally familiar with the areas.

In addition to observing the Project facilities and features from managed viewsheds, each Project facility was visited to understand the specific components and configuration of each facility and to verify the facilities seen from viewsheds. During these visits, facility features and surrounding visual conditions were recorded and photo-documented.

The results of the EVC assessment of the Project facility and features are presented in Table 7.11-3, organized by viewshed. A narrative description of the EVC of the existing Project facilities is available in the REC 5 – TSR (PCWA 2011; SD B). In addition, photographs of select Project facility areas as seen from specific TNF and ENF managed viewsheds are available in the REC 5 – TSR (PCWA 2011; SD B).

7.11.4.2 Reservoir Water Levels

The WSE of French Meadows and Hell Hole reservoirs and Ralston Afterbay fluctuates throughout the year. The WSE of Middle Fork Interbay typically remains near full pool. As part of the REC 5 – TSR (PCWA 2011; SD B), PCWA photographed Hell Hole and French Meadows reservoirs and Ralston Afterbay at low and high WSEs from KOPs selected in consultation with ENF and TNF Landscape Architects. The purpose of this effort was to document visual conditions at high and low water levels. The results are summarized below along with a general description of Project operations.

Hell Hole and French Meadows Reservoirs

Typical reservoir annual operation results in the capture or diversion of water into Hell Hole and French Meadows reservoirs during the winter and spring (filling period) and drawdown of the reservoirs during the summer, fall, and early winter (release period). Operation of the MFP varies from year-to-year based on the timing and magnitude of spring runoff, which is influenced by the amount of the winter snow pack and ambient temperature conditions, as well as precipitation. Despite the year-to-year variation, both reservoirs typically reach their maximum storage for the year in late spring or early summer. Reservoir levels begin to decline in the summer and continue to decline until the late fall or winter. Reservoir levels are typically at their lowest in January.

Photographs of Hell Hole and French Meadows reservoirs at high and low WSEs indicate more shoreline is exposed when the WSE in the reservoirs recede. However, this effect is diminished from farther distances where other factors such as lighting, cloud cover, air quality, and vegetation growth influence the view. Photographs of the Hell Hole Reservoir at high and low WSE are available in Appendix E of the REC 5 – TSR (PCWA 2011; SD B). Photographs of French Meadows Reservoir at high and low WSE are available in Appendix F of the REC 5 – TSR (PCWA 2011; SD B).

Ralston Afterbay

Ralston Afterbay is primarily used as a regulating facility. As such, WSEs may fluctuate on a day-to-day or hour-to-hour basis. Ralston Afterbay does not follow a seasonal fill and release pattern like Hell Hole or French Meadows Reservoir. Fluctuations at Ralston Afterbay occur daily throughout the year; but the daily pattern varies depending upon season, water year type, electrical demand, and MFP scheduled and emergency maintenance activities. In general, daily fluctuations at Ralston Afterbay do not exceed 6 feet, except during the annual maintenance outage. During the maintenance outage, WSE is considerably lower than under normal operating conditions. Operation of the

Ralston Afterbay and resulting WSE is described in detail in the REC 5 – TSR (PCWA 2011; SD B).

Photographs of Ralston Afterbay at high, intermediate, and low WSEs indicate there is very little difference between the photographs taken at high and intermediate WSE. The lowest WSE photographs were taken during the annual maintenance outage, which typically occurs over a three-week period in the fall. These conditions would not be experienced during the rest of the year. Photographs of Ralston Afterbay at high, intermediate, and low WSE are available in Appendix G of the REC 5 – TSR (PCWA 2011; SD B).

LITERATURE CITED

Placer County Water Agency (PCWA). 2011. REC 5 – Visual Quality Assessment Technical Study Report. Available in PCWA's Application for New License – Supporting Document B.

United States Department of Agriculture-Forest Service (USDA-FS). 1988. Eldorado National Forest. Land and Resource Management Plan. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.

____. 1990. Tahoe National Forest Land and Resource Management Plan. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.

PERSONAL COMMUNICATION

Eldorado National Forest (ENF). 2009. Personal communication with Vicki Jowise, Landscape Architect, Supervisor's Office, Eldorado National Forest, Placerville, CA. Meeting and follow up telephone conversations on June 15–16.

Tahoe National Forest (TNF). 2009. Personal communication with William Davis, Landscape Architect, Supervisor's Office, Eldorado National Forest, Placerville, CA. June 18.

TABLES

Table 7.11-1. USDA-FS Managed Viewsheds in the Vicinity of the MFP.

Viewshed Type	TNF Managed Viewsheds	Common Name	Description	Sensitivity Level
Forest Routes and/or Roads	FR-96	Mosquito Ridge Road	Extends from Foresthill Road in Foresthill to Ahart Campground (and beyond)	1
	FR-22	Soda Springs Riverton Road	Extends from FR 2 to FR 96.	2
Trails	Western States Trail	-	-	1
	Tevis Cup Trail	-	-	1
Water Bodies	French Meadows Reservoir	-	-	1
Rivers & Streams	Middle Fork American River	-	From French Meadows Dam to 1.5 miles downstream.	1
Developed Recreation Sites	French Meadows Reservoir Recreation Areas • Ahart Campground • Coyote Group Campground • French Meadows Campground • French Meadows Picnic Area • French Meadows Boat Ramp • Gates Group Campground • Lewis Campground • McGuire Boat Ramp • McGuire Picnic Area • Poppy Campground	-	-	1*
	Ralston Afterbay Reservoir Recreation Areas • Ralston Picnic Area and Ralston Picnic Area Cartop Boat Ramp	-	-	1*
	Indian Bar Rafting Access and General Parking	-	-	1*

Table 7.11-1. USDA-FS Managed Viewsheds in the Vicinity of the MFP (continued).

Viewshed Type	ENF Managed Viewsheds	Common Name	Description	Sensitivity Level
Forest Routes and/or Roads	Forest Road 14N08 (Part of FR 2)	Eleven Pines Road	Extends from Wentworth Springs Road to 17N02.	2
	Forest Road 17N02 (FR 22)	Old Icehouse Road	Extends from FR 2 to FR 96.	2
	Forest Road 17N02 (Part of FR 2)	Old Icehouse Road	Extends from 14N08 (Eleven Pines Road) to Hell Hole Dam (Used to be 17N12.1)	Level 2 to eastern edge of Section 18. Level 1 east of Section 18 to HH Reservoir.
	Forest Road 14N25 (FR 23)	Blacksmith Flat Road	Extends from FR 96 to 14N08 (FR 2).	2
	Forest Road 14N09 (FR 24)	Chipmunk Ridge Road	Extends from 17N02 to Forest Road 48 located at ENF/TNF boundary	2
Trails	Hunters Trail	-	-	1
Water Bodies	Hell Hole Reservoir	-	-	1
Rivers & Streams	Rubicon River (from base of Hell Hole Dam to confluence with Middle Fork American River)	-	-	1
	Middle Fork American River (downstream of confluence with Rubicon River)	-	-	1
	South Fork Long Canyon Creek	-	-	2
Developed Recreation Sites	Hell Hole Reservoir Recreation Areas • Big Meadows Campground • Hell Hole Campground • Hell Hole Boat Ramp and Hell Hole Boat Ramp Parking Area • Hell Hole General Parking Area • Hell Hole Vista • Upper Hell Hole Campground	-	-	Not applicable**
	Middle Meadows Group Campground	-	-	Not applicable**

Table 7.11-1. USDA-FS Managed Viewsheds in the Vicinity of the MFP (continued).

Viewshed Type	ENF Managed Viewsheds	Common Name	Description	Sensitivity Level
Special Interest Areas	Big Crater Special Interest Area	-	-	1
	Little Crater Special Interest Area	-	-	1

*Developed recreation sites in the TNF are managed to meet a visual quality objective of partial retention (PR) within the developed recreation site, in accordance with direction contained in the TNF Land and Resource Management Plan. A VQO of PR allows for the development of recreation facilities and features that are visually subordinate to the characteristic landscape (pers. comm. TNF 2009).

**Not applicable. There are no sensitivity levels associated with developed recreation sites in the ENF. Developed recreation areas in the ENF are managed to meet a visual quality objective of PR, in accordance with Management Area 8 of the ENF Land and Resource Management Plan (LRMP) (pers. comm. ENF 2009).

Table 7.11-2. Existing Project Facilities and Features and Associated VQOs.

Middle Fork Project Facilities	Forest Plan VQOs	Inventory VQO Information
Dams, Reservoirs, and Diversion Pools		
Large Dams		
French Meadows Dam and Outlet Works	R	F1B
Hell Hole Dam and Outlet Works	R	F1A
Medium Dams		
Middle Fork Interbay Dam and Outlet Works	PR/M	F2A
Ralston Afterbay Dam and Outlet Works	R/PR	FIB/MIA
Small Dams		
Duncan Creek Diversion Dam	M	M2A
North Fork Long Canyon Diversion Dam	PR	F2B
South Fork Long Canyon Diversion Dam	PR	F2B
Large Reservoirs		
French Meadows Reservoir (and Shoreline)	R	F1B
Hell Hole Reservoir (and Shoreline)	R	F1A
Medium Reservoirs		
Middle Fork Interbay	PR/M	F2A
Ralston Afterbay	R/PR	FIB/MIA
Small Diversion Pools		
Duncan Creek Diversion Pool	M	M2A
North Fork Long Canyon Diversion Pool	PR	F2B
South Fork Long Canyon Diversion Pool	PR	F2B
Water Conveyance Systems		
Tunnels		
Duncan Creek - Middle Fork Tunnel	NA - Subsurface Features	
French Meadows - Hell Hole Tunnel		
Hell Hole - Middle Fork Tunnel		
Middle Fork - Ralston Tunnel		
Ralston - Oxbow Tunnel		
Diversion Pipes and Drop Inlets		
North Fork Long Canyon Diversion Pipe and Drop Inlet	PR	F2B
South Fork Long Canyon Diversion Pipe and Drop Inlet	PR	F2B
Surge Shafts and Adits		
Brushy Canyon Adit	M	M2A
Hell Hole - Middle Fork Tunnel Surge Shaft and Tank	M	F2A
Middle Fork - Ralston Tunnel Surge Shaft and Tank	R	FIA
Removable Sections and Portals		
Duncan Creek - Middle Fork Tunnel Portal	R	F1B
French Meadows - Hell Hole Tunnel Removable Section	R	F1A
Hell Hole - Middle Fork Tunnel Removable Section	M	F2A
Middle Fork - Ralston Tunnel Removable Section	R	FIA
North Fork Long Canyon Crossing Removable Section	PR	F2B
Intakes and Gatehouses		
Duncan Creek - Middle Fork Tunnel Intake	M	M2A
French Meadows - Hell Hole Tunnel Gatehouse	R	F1B
French Meadows - Hell Hole Tunnel Intake	R	F1B
Hell Hole - Middle Fork Tunnel Gatehouse	R	F1A
Hell Hole - Middle Fork Tunnel Intake	R	F1A
Middle Fork - Ralston Tunnel Intake and Gatehouse	PR	F2A
Ralston - Oxbow Tunnel Intake	PR	MIA

Table 7.11-2. Existing Project Facilities and Features and Associated VQOs (continued).

Middle Fork Project Facilities	Forest Plan VQOs	Inventory VQO Information
Water Conveyance Systems (continued)		
Penstocks and Valve Houses		
French Meadows Powerhouse Penstock and Butterfly Valve House	R	F1A
Middle Fork Powerhouse Penstock and Butterfly Valve House	PR	M2A
Ralston Powerhouse Penstock and Butterfly Valve House	R	FIA
Powerhouses, Switchyards, and Substations		
French Meadows Powerhouse and Switchyard	R	F1A
Hell Hole Powerhouse	R	F1A
Middle Fork Powerhouse and Upper and Lower Switchyards	PR	F2A
Ralston Powerhouse and Switchyard	R	FIA
Oxbow Powerhouse and Switchyard	PR	MIA
Hell Hole Substation	R	F1A
Gaging Stations and Weirs		
Stream Gages and Weirs		
Duncan Creek near French Meadows (USGS Gage No. 11427700)	M	M2A
Duncan Creek below Diversion Dam (USGS Gage No. 11427750)	M	M2A
Middle Fork American River at French Meadows (USGS Gage No. 11427500)	R	F1B
Middle Fork American River below Interbay Dam (USGS Gage No. 11427770)	PR	F2A
Middle Fork American River above Middle Fork Powerhouse (USGS Gage No. 11427760)	PR	F2A
Middle Fork American River near Foresthill (USGS Gage No. 11433300)	PR	MIA
North Fork Long Canyon Creek below Diversion Dam (USGS Gage No. 11433085)	PR	F2B
South Fork Long Canyon Creek below Diversion Dam (USGS Gage No. 11433065)	PR	F2B
Rubicon River below Hell Hole Dam (USGS Gage No. 11428800)	R	F1A
Diversion Gages		
North Fork Long Canyon Creek Diversion Tunnel (USGS Gage No. 11433080)	PR	F2B
South Fork Long Canyon Creek Diversion Tunnel (USGS Gage No. 11433060)	PR	F2B
Reservoir Gages		
French Meadows Reservoir (USGS Gage No. 11427400)	R	F1B
French Meadows Reservoir Staff Gage	R	F1B
Hell Hole Reservoir (USGS Gage No. 11428700)	R	F1A
Hell Hole Reservoir Staff Gage	R	F1A
Middle Fork Interbay Reservoir	PR	F2A
Ralston Afterbay Reservoir	PR	MIA
Powerhouse Gages		
French Meadows Powerhouse (USGS Gage No. 11427200)	R	F1A
Middle Fork Powerhouse (USGS Gage No. 11428600)	PR	F2A
Oxbow Powerhouse (USGS Gage No. 11433212)	PR	MIA
Ralston Powerhouse (USGS Gage No. 11427765)	R	FIA
Leakage Weirs		
French Meadows Dam Leakage Weirs Nos. 1-6	R	F1B
Hell Hole Dam Leakage Weir	R	F1A

Table 7.11-2. Existing Project Facilities and Features and Associated VQOs (continued).

Middle Fork Project Facilities	Forest Plan VQOs	Inventory VQO Information
Project Communication Lines and Powerlines		
French Meadows Area		
French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	R	F1B
French Meadows Dam Generator Building to French Meadows Dam Spillway Gates Powerline	R	F1B
Hell Hole Area		
French Meadows Powerhouse to French Meadows Powerhouse Penstock and Butterfly Valve House Communication Line/Powerline	R	F1A
French Meadows Powerhouse and Switchyard to Hell Hole - Middle Fork Tunnel Gatehouse, Dormitory Facility, Operator's Cottages, and Hell Hole Powerhouse Communication Line/Powerline	R	F1A
Dormitory and Cottages Water Supply Tank Powerline	R	F1A
Hell Hole Powerhouse to Rubicon River Gage below Hell Hole Dam Communication Line/Powerline	R	F1A
Middle Fork Interbay Area		
Middle Fork Powerhouse to Middle Fork Powerhouse Butterfly Valve House Communication Line/Powerline	PR/M	F2A
Middle Fork Powerhouse Butterfly Valve House to Radio Repeater near Hell Hole - Middle Fork Tunnel Surge Tank (underground) Communication Line/Powerline	PR/M	F2A
Middle Fork Powerhouse to Middle Fork - Ralston Tunnel Intake and Gatehouse Communication Line/Powerline	PR	F2A
Middle Fork Powerhouse to Middle Fork American River Gage above Middle Fork Powerhouse Communication Line/Powerline	PR/M	F2A
Ralston-Oxbow Area		
Ralston - Oxbow Tunnel Intake to Ralston Powerhouse Communication Line	R/PR	FIA/MIA
Ralston Powerhouse to Ralston Powerhouse Butterfly Valve House Communication Line/Powerline	R	FIA
Ralston Afterbay Dam Generator Building to Ralston - Oxbow Tunnel Intake Communication Line/Powerline	PR	MIA
Oxbow Powerhouse to Ralston Afterbay Dam Generator Building Communication Line/Powerline	PR	MIA
Photovoltaic Poles and Powerlines		
Photovoltaic Poles and Powerline at Duncan Creek Gage near French Meadows	M	M2A
Photovoltaic Pole and Powerline at Duncan Creek Gage below Diversion Dam	M	M2A
Photovoltaic Pole and Powerline at Middle Fork American River Gage at French Meadows	R	F1B
Photovoltaic Pole and Powerline at Middle Fork American River Gage above Middle Fork Powerhouse	PR	F2A
Photovoltaic Pole and Powerline at North Fork Long Canyon Creek Gage below Diversion Dam	PR	F2B
Photovoltaic Pole and Powerline at South Fork Long Canyon Creek Gage below Diversion Dam	PR	F2B
Photovoltaic Pole and Powerline at Middle Fork American River Gage near Foresthill	PR	MIA
Microwave Reflectors and Radio Towers		
Passive Microwave Reflector Station above Middle Fork Interbay	PR	F2A
Radio Communications Tower near French Meadows - Hell Hole Tunnel Gatehouse	R	F1B
Radio Communications Tower and Repeater near Hell Hole - Middle Fork Tunnel Surge Shaft and Tank	M	M2A
Passive Microwave Reflector Station above Ralston Afterbay	R	FIA

Table 7.11-2. Existing Project Facilities and Features and Associated VQOs (continued).

Middle Fork Project Facilities	Forest Plan VQOs	Inventory VQO Information
Disposal Areas		
Duncan Diversion Dam Sediment Disposal Area	M	M2A
North Fork Long Canyon Crossing Sediment Disposal Area	PR	F2B
Middle Fork Interbay Sediment Disposal Area	M	M1A
Ralston Ridge Sediment Disposal Area	R	FIA
Ancillary Facilities		
French Meadows Dam Generator Building	R	F1B
French Meadows Dam Staging Area	R	F1B
Dormitory Facility	R	F1A
Dormitory and Cottages Water Supply Tank	R	F1A
Hell Hole Staging Areas	R	F1A
Operator Cottages and Shop	R	F1A
Ralston Afterbay Dam Generator Building	PR	MIA
Storage Building at Middle Fork - Ralston Tunnel Surge Shaft and Tank	R	FIA
Ralston Afterbay Sediment Removal Access Point	R	FIA
Project Fences		
Slope Fences		
French Meadows Powerhouse Penstock Rock Fence	R	F1A
French Meadows Powerhouse Slope Fence	R	F1A
Long Canyon Crossing Slope Fence	PR	F2B
Middle Fork Powerhouse Upper Switchyard Slope Fence	PR	F2A
Middle Fork Interbay Dam Slope Fence	PR	F2A
Oxbow Powerhouse Slope Fence	PR	MIA
Ralston Powerhouse Penstock and Butterfly Valve House Slope Fences	R	FIA
Ralston Powerhouse Slope Fence	R	FIA
Public Safety Fences		
Dormitory Facility Barrier Fence	R	F1A
Hell Hole Dam General Parking Area Barrier Fence	R	F1A
North Fork Long Canyon Crossing Removable Section Barrier Fence	PR	F2B
Project Roads		
Duncan Creek Area		
Duncan Creek Diversion Intake Road	M	M2A
Duncan Creek Diversion Dam Road	M	M2A
Duncan Creek Diversion Pool Road	M	M2A
French Meadows Area		
Duncan Creek - Middle Fork Tunnel Portal Road	R	F1B
French Meadows - Hell Hole Tunnel Gatehouse Road	R	F1B
French Meadows Dam Outlet Works and South Leakage Weir Road	R	F1B
French Meadows Dam Staging Area and Spillway West Access Road	R	F1B
French Meadows Spillway East Access Road	R	F1B
French Meadows Dam North Leakage Weir Road	R	F1B
French Meadows Campground Water Supply Facility Access Road	R	F1B
Hell Hole Area		
Hell Hole Dam and Powerhouse Road	R	F1A
Rubicon River Gage below Hell Hole Dam Road	R	F1A
Hell Hole Dam Leakage Weir Road	R	F1A
Hell Hole Dam Spillway Northern Access Point Road	R	F1A
French Meadows - Hell Hole Tunnel Portal Road	R	F1A
French Meadows Powerhouse Road	R	F1A

Table 7.11-2. Existing Project Facilities and Features and Associated VQOs (continued).

Middle Fork Project Facilities	Forest Plan VQOs	Inventory VQO Information
Project Roads (continued)		
Hell Hole Area (continued)		
Hell Hole - Middle Fork Tunnel Gatehouse Road	R	F1A
Dormitory Facility Road	R	F1A
Operator Cottages and Shop Road	R	F1A
Spur on North Side of Operator Cottages	R	F1A
Spur on South Side of Operator Cottages	R	F1A
Hell Hole Dam Spillway Discharge Channel Road Spur to Communication Line/Powerline	R	F1A
Hell Hole Dam Spillway Discharge Channel Road	R	F1A
Big Meadows Campground Water Supply Facility Access Road	R	F1A
Long Canyon Area		
North Fork Long Canyon Diversion North Road	PR	F2B
North Fork Long Canyon Diversion South Road	PR	F2B
North Fork Long Canyon Diversion Drop Inlet Road	PR	F2B
South Fork Long Canyon Diversion and Drop Inlet Road	PR	F2B
South Fork Long Canyon Diversion and Drop Inlet Cutoff Road	PR	F2B
South Fork Long Canyon Diversion Drop Inlet Access Road	PR	F2B
North Fork Long Canyon Crossing Removable Section North Road	PR	F2B
North Fork Long Canyon Crossing Removable Section South Road	PR	F2B
Middle Meadows Group Campground Water Supply Facility Access Road	PR	F2B
Middle Fork Interbay Area		
Middle Fork Interbay Dam Road	R/PR/M	F1C/F2A/F2C/ M1A/ M1C
Middle Fork Interbay Dam to Powerhouse Road	PR	F2A
Middle Fork Powerhouse Butterfly Valve House Road	PR	3A
Middle Fork Powerhouse Penstock and Butterfly Valve House Road	PR	M2A
Middle Fork Powerhouse Upper Switchyard Road	PR	F2A
Ralston - Oxbow Area		
Brushy Canyon Adit Road	M	M2B/3A/3B
Oxbow Powerhouse Road	PR	MIA
Ralston Powerhouse Butterfly Valve House Road	R	FIA
Ralston - Oxbow Tunnel Intake Road	PR	MIA
Ralston Afterbay Private Boat Ramp Road	PR	MIA
Ralston Afterbay Dam and Access Point Road	R	FIA
Ralston Afterbay Dam Access Road	PR	MIA
Indian Bar Access Road	PR	MIA
Project Trails		
Duncan Creek Area		
Duncan Creek Diversion Dam North Trail	M	M2A
Duncan Creek Diversion Dam South Trail	M	M2A
Photovoltaic Poles and Powerline to Duncan Creek Gage near French Meadows Trail	M	M2A
Duncan Creek Gage near French Meadows Trail	M	M2A
Duncan Creek Gage below Diversion Dam Trail	M	M2A
Middle Fork Interbay Area		
Middle Fork American River Gage above Middle Fork Powerhouse Trail	PR	F2A
Passive Microwave Reflector Station above Middle Fork Interbay Trail	PR/M	M2A/F2C
Ralston Afterbay Area		
Passive Microwave Reflector Station above Ralston Afterbay Trail	R	FIA

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds.

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
TNF Managed Viewsheds						
Mosquito Ridge Road Viewshed (FR 96)						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	IV	FR 96 crosses top of dam. Travelers experience immediate foreground views of downstream dam face for a short distance (less than 0.5 mi) when approaching dam from the west. Outlet works are not seen due to view angle and intervening terrain. Dam appears as major disturbance seen in foreground distance zone.
	French Meadows Reservoir & Shoreline	Large Reservoir	Seen	R	II-IV	Reservoir and shoreline are not seen until FR 96 nears the spillway structure. Views are of short duration while crossing the spillway area and dam. Expansive panoramic views of the reservoir and shoreline are experienced when crossing the dam. There are limited, filtered views of the reservoir and shoreline through trees when traveling east along the reservoir. Reservoir appears near-natural at full pool, and visual quality declines with reservoir surface elevation and increased exposure of shoreline. Very low pool elevations dominate visual experience.
	French Meadows Reservoir Staff Gage	Reservoir Gage	Not noticed	R	II	Not noticed from FR 96 due to small scale of gage, speed of travel on road and location of gage near north shoreline.
	French Meadows Reservoir (USGS Gage No. 11427400)	Reservoir Gage	Not noticed	R	II	
	French Meadows Dam Leakage Weirs Nos. 1-6	Leakage Weir	Not noticed	R	II	
	French Meadows Dam Generator Building	Ancillary Facility	Seen	R	IV	Seen in immediate foreground, foreground and middleground from FR 96. Industrial appearance of structure in combination with spillway facilities and chain link fencing dominate view when seen in immediate foreground. Small scale and light color of building result in facilities being not readily noticed when seen in the middleground distance zone.
	French Meadows Dam Staging Area	Ancillary Facility	Seen	R	III-IV	Seen in immediate foreground, foreground and middleground from FR 96. The moderate scale, and spoil-pile-character of staging area is seen in the immediate foreground when entering the reservoir viewshed. The staging area contrasts in form and texture with the surrounding characteristic landscape.
	French Meadows Dam Generator Building to French Meadows Dam Spillway Gates Powerline	Powerline	Seen	R	III	Poles seen in immediate foreground from segment of FR 96 near spillway area. Small scale features add incrementally to industrial character of area.
	French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	Powerline	Seen	R	III	Poles seen in immediate foreground from segment of FR 96 near spillway area. Small scale features add incrementally to industrial character of area.
	Duncan Creek – Middle Fork Tunnel Portal Road	Project Road	Seen	R	II-III	Horizontal line created by road alignment visible from Westbound FR 96 when crossing dam. Bed of road not seen.
	French Meadows – Hell Hole Tunnel Gatehouse Road	Project Road	Seen	R	II-III	Entrance to road and gate seen from FR 96. Brief view while traveling road eastbound.
	French Meadows Dam Outlet Works and South Leakage Weir Road	Project Road	Seen	R	II-III	Road is seen in the foreground distance zone. Road is not readily noticeable due to low color contrasts and partial screening from vegetation.
	French Meadows Dam Staging Area and Spillway West Access Road	Project Road	Not noticed	R	II	Entrance seen from road. Not readily noticed.
	French Meadows Spillway East Access Road	Project Road	Not noticed	R	II	Road is not readily noticeable.
	French Meadows Dam North Leakage Weir Road	Project Road	Not noticed	R	II	Road is not readily noticeable.
Middle Fork Interbay Area	Middle Fork Powerhouse Penstock and Butterfly Valve House Road	Project Road	Not noticed	R	II	
	Middle Fork Powerhouse Penstock and Butterfly Valve House	Water Conveyance	Seen	PR	IV	Exposed soil associated with penstock is noticeable in background from FR 96. Butterfly valve house not seen.
	Middle Fork Powerhouse Butterfly Valve House Road	Project Road	Seen	PR	IV	Road alignment not readily seen due to vegetative screening. However exposed soils associated with road cut can be seen from FR 96 (in background distance zone of road).
	Middle Fork Powerhouse to Middle Fork Powerhouse Butterfly Valve House Communication Line/Powerline	Communication and Powerline	Seen/Not noticed	PR/M	II-III	Exposed soil associated with ROW creates contrasts in color with surrounding landscape. Exposed soil seen from Mosquito Ridge Road near Dutch Flat. Visibility of actual powerline from FR 96 is not readily noticed.

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
TNF Managed Viewsheds (continued)						
Mosquito Ridge Road Viewshed (FR 96) (continued)						
Ralston Afterbay Area	Ralston Afterbay Dam and Outlet Works	Medium Dam	Seen	R/PR	III	Views of the dam are limited from the road due to rugged terrain and vegetative screening. Angular form and light color of dam contrasts with surrounding vegetation and water.
	Ralston Afterbay	Medium Reservoir	Seen	R/PR	II-III	Views of the reservoir are limited due to rugged terrain and vegative screening. Reservoir is moderate in scale and blends with the surrounding characteristic landscape.
	Middle Fork – Ralston Tunnel Surge Shaft and Tank	Water Conveyance	Not noticed	R	II	Middleground views from above Ralston Afterbay and near intersection with 14N25. Tank is not noticeable due earth color, nearby vegetation, and viewing distance from road (in background distance zone of road).
	Ralston Afterbay Dam Generator Building	Ancillary Facility	Seen	PR	III	Limited views of area from road due to terrain and vegetative screening. Small scale of building minimizes visual effects. Light color of building blends with exposed soil of roads and dam. Angular form of building blends with form of dam.
	Storage Building at Middle Fork – Ralston Tunnel Surge Shaft and Tank	Ancillary Facility	Not noticed	R	II	Middleground views from above Ralston Afterbay and near intersection with 14N25. Due to small scale of building and distance it is not readily noticeable. Light white color of building does increase visibility since it contrasts with surrounding vegetation.
	Oxbow Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	PR	III	Opening in vegetation above powerhouse and dam area provides a near view of Ralston Afterbay Area. Exposed soil areas associated with roads is and the dam dominate the view. The powerhouse and switchyard are tucked into the hillside and partially screened by vegetation. The small scale of the powerhouse and neutral to dark colors reduce the contrasts of the building with the surrounding landscape.
	Ralston Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	R	II-III	Brief view rounding bend at junction with Blacksmith Flat Road (14N25). Facilities not readily noticed due to distance (0.5.mi) and relatively small scale of facilities as seen in context of Rubicon River corridor.
	Passive Microwave Reflector Station above Ralston Afterbay	Microwave Reflector	Not noticed	R	II	Brief view up Rubicon canyon near intersection with 14N25. Due to distance and small scale of facility relative to view of canyon, the reflector would not be noticed to most travelers on FR 96. May be more noticeable at certain times of day due to reflection. Contrast in color with surrounding vegetation enhances visibility.
	Ralston Ridge Sediment Disposal Area	Disposal Site	Seen	R	IV	Limited middleground views across river canyons to Ralston Ridge. Exposed soils and moderately large spoil area combine with exposed soil from roads and cleared transmission line corridor to create a disturbed appearance not characteristic to the surrounding landscape. Spoil pile creates contrasts primarily in color with surrounding landscape.
	Ralston Afterbay Dam Access Road	Project Road	Seen	PR	II-III	
	Ralston Powerhouse Butterfly Valve House Road	Project Road	Seen	R	IV	Brief view of exposed soil associated with road alignment when rounding bend near road intersection with 14N25. Exposed light soil contrasts with surrounding dark green vegetation.
	Oxbow Powerhouse Road	Project Road	Seen	PR	II-III	Exposed soil associated with road surface and nearby features (parking areas) attracts attention and is in contrast to the dark color of the surrounding vegetation.
	Indian Bar Access Road	Project Road	Seen	PR	II-III	
	Ralston Afterbay Dam and Access Point Road	Project Road	Seen	R	II-III	Brief, near view of Ralston Area from above. Road is not readily noticed since it is well integrated into the dam structure, and there are no expansive areas of exposed soil associated with it.
Soda Springs-Riverton Road Viewshed (FR 22)						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	IV	FR 22 intersects with FR 96 on south side of dam. Travelers experience immediate foreground views of dam near intersection with FR 96. Outlet works are not seen from FR 22.
	French Meadows Reservoir & Shoreline	Large Reservoir	Seen	R	II-IV	Reservoir and shoreline are not seen until near the intersection of FR 22 with FR 96. Immediate foreground views are of the access road to the dam base, downstream dam face, FR 96 road across dam and reservoir and shoreline. More distant foreground views (about 1 mile) are of the spillway, staging area and gatehouse structures which are not readily noticed due to the moderate scale of the features, similar colors to the surrounding characteristic landscape, and the partial screening provided by trees. Reservoir appears near-natural at full pool, and visual quality declines with reservoir surface elevation and increased exposure of shoreline. Very low pool elevations dominate visual experience.
	French Meadows Dam Leakage Weirs Nos. 1-6	Leakage Weir	Not noticed	R	II	
	French Meadows Dam Generator Building	Ancillary Facility	Not noticed	R	II	Building is generally not noticeable due to small scale and low height of building, and because light color of building is similar to surrounding exposed rock.
	French Meadows Dam Staging Area	Ancillary Facility	Not noticed	R	II	Seen in middleground from FR 22 at the intersection with FR 96. Due to viewing distance and relatively small size of staging area, it appears integrated into the characteristic landscape due to the similar colors as the surrounding granite rock.
	Duncan Creek – Middle Fork Tunnel Portal Road	Project Road	Seen	R	II-III	Horizontal line created by road alignment not readily noticed due to middleground viewing distance and trees near rock outcropping breaking up horizontal line.
	French Meadows Dam Outlet Works and South Leakage Weir Road	Project Road	Seen	R	III	Road is seen in vicinity of intersection with FR 96. Road is not highly noticed due to low contrasts in color and partial screening from vegetation.

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
TNF Managed Viewsheds (continued)						
Western States Trail Viewshed						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	IV	Most likely filtered views periodically. Dam ranges from immediate foreground to foreground.
	French Meadows Reservoir & Shoreline	Large Reservoir	Seen	R	II-IV	Reservoir appears near-natural at full pool and visual quality declines with reservoir surface elevation and increased exposure of shoreline. Very low pool elevations dominate visual experience.
	French Meadows-Hell Hole Tunnel Gatehouse	Water Conveyance	Seen	R	III	Gatehouse may be seen in middleground, across reservoir depending on screening from vegetation between trail and reservoir and screening from trees at gatehouse area.
	Middle Fork American River at French Meadows (USGS Gage No. 11427500)	Stream Gage and Weir	Not noticed	R	II	
	French Meadows Reservoir Staff Gage	Reservoir Gage	Not noticed	R	II	
	French Meadows Reservoir (USGS Gage No. 11427400)	Reservoir Gage	Not noticed	R	II	
	French Meadows Dam Leakage Weirs Nos. 1-6	Leakage Weir	Not noticed	R	II	
	French Meadows Dam Generator Building	Ancillary Facility	Seen	R	III	May be seen in immediate foreground of trail, although most views from trail appear partially screened by vegetation.
	French Meadows Dam Staging Area	Ancillary Facility	Seen	R	II-III	May be seen in immediate foreground of trail, although most views from trail appear to be partially screened by vegetation.
	French Meadows Dam Generator Building to French Meadows Dam Spillway Gates Powerline	Powerline	Seen	R	III	May be seen in immediate foreground of trail, although most views from trail appear to be partially screened by vegetation.
	French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	Powerline	Seen	R	III	May be seen in foreground of trail, although most views from trail appear to be partially screened by vegetation.
	Radio Communications Tower near French Meadows – Hell Hole Tunnel Gatehouse	Radio Tower	Not noticed	R	II	Seen in middleground, across reservoir. Screening between trail and shoreline and near radio tower may result in tower being not noticed.
	Duncan Creek – Middle Fork Tunnel Portal Road	Project Road	Seen	R	III	May be seen in immediate foreground of trail due to close proximity of road to trail.
	French Meadows Dam Outlet Works and South Leakage Weir Road	Project Road	Seen	R	III	May be seen in foreground of trail, although most views from trail appear to be partially screened by vegetation.
	French Meadows Dam Staging Area and Spillway West Access Road	Project Road	Seen	R	III	May be seen in immediate foreground of trail, although most views from trail appear to be partially screened by vegetation.
	French Meadows Spillway East Access Road	Project Road	Not noticed	R	II	May be seen in immediate foreground of trail, although most views from trail are obscured by dam.
	French Meadows Dam North Leakage Weir Road	Project Road	Not noticed	R	II	May be seen in immediate foreground of trail, although most views from trail are obscured by dam.
Tevis Cup Trail Viewshed						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	IV	Assume dam is seen in middleground from Red Star Ridge above north side of reservoir. From middleground dam is visually evident, but does not dominate due to similarity to exposed shoreline.
	French Meadows Reservoir & Shoreline	Large Reservoir	Seen	R	II-III	Assume reservoir appears near-natural from middleground views of trail. Reservoir would appear near-natural at full pool. Visual quality would decline with reservoir surface elevation and increased exposure of shoreline. Very low pool elevations would be visually evident but not dominate the visual experience from the middleground distance zone.
	French Meadows-Hell Hole Tunnel Gatehouse	Water Conveyance	Seen	R	III	Assume gatehouse can be seen in middleground. Due to small scale of feature, assume area appears as a minor disturbance.
	French Meadows Dam Staging Area	Ancillary Facility	Not noticed	R	II	Assume feature blends in with characteristic landscape as seen from middleground.
	French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	Powerline	Not noticed	R	II	
	French Meadows Dam Generator Building to French Meadows Dam Spillway Gates Powerline	Powerline	Not noticed	R	II	
	Photovoltaic Pole and Powerline at Middle Fork American River Gage at French Meadows	Photovoltaic Pole and Powerline	Not noticed	R	II	
	Radio Communications Tower near French Meadows – Hell Hole Tunnel Gatehouse	Radio Tower	Not noticed	R	II	
	French Meadows Dam Outlet Works and South Leakage Weir Road	Project Road	Seen	R	II-III	Assume exposed soil associated with road could be noticeable from middleground.

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
TNF Managed Viewsheds (continued)						
French Meadows Reservoir Viewshed						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	III-IV	Long duration views of dam due to recreational activities. Views range from immediate foreground to middleground views for water-based recreation and middleground views for land-based recreation. The dam creates contrasts in form, line and texture that vary in strength depending on water surface elevation and the degree of exposure of the dam. Outlet works are not seen.
	French Meadows Reservoir & Shoreline	Large Reservoir	Seen	R	II-IV	
	French Meadows-Hell Hole Tunnel Gatehouse	Water Conveyance	Seen	R	III-IV	Area is set back from reservoir shoreline. Area seen primarily from nearby reservoir. Views include abandoned rusting equipment and other project related materials scattered about site.
	Duncan Creek – Middle Fork Tunnel Portal	Water Conveyance	Not noticed	R	II	
	French Meadows Dam Generator Building	Ancillary Facility	Seen	R	III	Seen in foreground and middleground from reservoir. Small scale and light color of building and fencing result in facilities not dominating the view especially when seen in context with the dam face.
	French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	Powerline	Not noticed	R	II	Not noticed or seen from most of the reservoir, except immediate foreground views.
	Radio Communications Tower near French Meadows – Hell Hole Tunnel Gatehouse	Radio Tower	Seen	R	III	Small scale feature seen from reservoir area near gate house area.
	French Meadows – Hell Hole Tunnel Gatehouse Road	Project Road	Not noticed	R	II	Views of road obscured by vegetation
	Duncan Creek – Middle Fork Tunnel Portal Road	Project Road	Seen	R	II-III	Horizontal line created by road alignment is visible from reservoir locations within the immediate foreground of the dam, but is not readily noticeable from more distant locations.
Middle Fork American River Viewshed						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	IV	Immediate foreground views of dam and outlet works due to location next to river. Dam dominates view due to large scale and engineered form.
	Middle Fork American River Gage at French Meadows (USGS Gage No. 11427500)	Stream Gage and Weir	Seen	R	II-III	Immediate foreground view from the river. Small scale feature would not readily detract from the surrounding landscape character.
	French Meadows Dam Leakage Weirs Nos. 1-6	Leakage Weir	Seen	R	II-III	
	French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	Powerline	Seen	R	III	Seen in immediate foreground. Multicolor line enhances visibility. Small scale feature seen against backdrop of dam adds visual clutter to area.
	Photovoltaic Pole and Powerline at Middle Fork American River Gage at French Meadows	Photovoltaic Pole and Powerline	Seen	R	III	Small scale feature seen in immediate foreground of river.
	French Meadows Dam Outlet Works and South Leakage Weir Road	Project Road	Seen	R	III	Road seen in immediate vicinity of dam. Road is not highly noticed due to low contrasts in color and partial screening from vegetation.
French Meadows Reservoir Developed Recreation Sites Viewsheds (Ahart, French Meadows, Lewis, and Poppy CGs, Gates and Coyote Group CGs, French Meadows and McGuire Picnic Areas and Boat Ramps)						
French Meadows Reservoir Area	French Meadows Dam and Outlet Works	Large Dam	Seen	R	III-IV	Long duration, middleground views of the dam face are experienced by visitors to French Meadows Picnic Area, French Meadows Boat Ramp and French Meadows Campground. Outlet works are not seen. Dam blends well in color and texture with surrounding exposed shoreline and is not readily distinguishable from the shoreline as seen in middleground.
	French Meadows Reservoir & Shoreline	Large Reservoir	Seen	R	II-III	Reservoir and shoreline seen from French Meadows Picnic Area, Boat Ramp and Campground, McGuire Boat Ramp and Poppy Campground. Views from boat ramps are open and expansive. Views from campgrounds and picnic areas are partially to completely screened depending on the camp or picnic site.
	French Meadows-Hell Hole Tunnel Gatehouse	Water Conveyance	Seen	R	III	Not seen from developed recreation sites except Poppy Campground. Views from Poppy Campground are middleground and partially screened by vegetation. Area is not readily noticed from campground.
Ralston Afterbay Developed Recreation Sites Viewsheds (Ralston Picnic Area and Ralston Picnic Area Cartop Boat Ramp and Indian Bar Rafting Access and General Parking)						
Ralston Afterbay Area	Oxbow Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	PR	IV	Indian Bar Rafting Access and General Parking Recreation Site - near views of moderate duration during raft staging & loading activities. Powerhouse is of moderate scale and nestled into canyon wall. Switchyard, powerhouse and associated landform alterations introduce angular forms and textures in contrast to the characteristic landscape. Powerhouse colors are somewhat similar to surrounding landscape.
	Oxbow Powerhouse Gage (USGS Gage No. 11433212)	Powerhouse Gage	Seen	PR	II-III	Indian Bar Rafting Access and General Parking Recreation Site - minor structure not readily noticed compared to powerhouse and switchyard, but contributes to visual contrasts associated with the powerhouse.
	Oxbow Powerhouse Slope Fence	Fence	Seen	PR	II-III	Indian Bar Rafting Access and General Parking Recreation Site. Fencing is discernable on hillsides. Metallic color contrasts with native rock enhancing visibility of the fencing.
	Oxbow Powerhouse Road	Project Road	Seen	PR	III	Indian Bar Rafting Access and General Parking Recreation Site – immediate foreground views of road experienced by rafters to access the rafting access site.
	Indian Bar Access Road	Project Road	Seen	PR	II-III	Seen from Indian Bar Rafting Access
	Oxbow Powerhouse to Ralston Afterbay Dam Generator Building Communication Line/Powerline	Project Communication Line	Not noticed	PR	II-III	Indian Bar Rafting Access and General Parking Recreation Site. Line is discernable on hillsides. Metallic color contrasts with native rock enhancing visibility of the line.

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
ENF Managed Viewsheds						
Eleven Pines Road Viewshed (Forest Road 14N08)						
No Project facilities or features are visible from this viewshed.						
Old Icehouse Road Viewshed (Forest Road 17N02) - Extends from Eleven Pines Road (14N08) Northwest to ENF/TNF Boundary						
No Project facilities or features are visible from this viewshed.						
Old Icehouse Road Viewshed (Forest Road 17N02) - Extends from Eleven Pines Road (14N08) East to Hell Hole Dam						
North Fork Long Canyon Diversion Area	North Fork Long Canyon Diversion Drop Inlet Road	Project Road	Not noticed	PR	II	Road crosses FR 2 nearly perpendicular to it. Not readily noticed due to road alignment and forested setting.
	North Fork Long Canyon Crossing Removable Section North Road	Project Road	Not noticed	PR	II	Road crosses FR 2 nearly perpendicular to it. Not readily noticed due to road alignment and forested setting.
South Fork Long Canyon Diversion Area	South Fork Long Canyon Diversion Dam and Pool	Small Diversion Dam and Pool	Seen	PR	III	Brief views of yellow railings when traveling on FR 2.
	South Fork Long Canyon Diversion and Drop Inlet Road	Project Road	Seen	PR	III	Brief view of road, entrance sign and cleared area. Road segment down to drop inlet not seen.
	South Fork Long Canyon Diversion and Drop Inlet Cutoff Road	Project Road	Not noticed	PR	II	
Hell Hole Reservoir Area	Hell Hole Dam and Outlet Works	Large Dam	Seen	R	IV	Foreground views of upstream end of dam seen from southern terminus of road. Large scale feature dominates the view and contrasts in form and texture with the surrounding landscape.
	Hell Hole Reservoir & Shoreline	Large Reservoir	Seen	R	II-III	Short term expansive views from above Hell Hole Boat Ramp, and brief view from along ¼ mile section of road that is north of the Dormitory and Cottage Water Supply Tank. EVC rating moves from II to III as water surface elevation lowers and more shoreline is exposed.
	Hell Hole-Middle Fork Tunnel Gatehouse	Water Conveyance	Seen	R	III-IV	Foreground views of gatehouse f. Moderately small, light colored structure is highly noticed due to color contrasts with surrounding cut slopes that are moderately dark in color.
	French Meadows Powerhouse Penstock and Butterfly Valve House	Water Conveyance	Not noticed	R	II	Penstock not noticed from road due to dark color that blends with surrounding landscape. Butterfly Valve House is not noticed due to the small scale and light color that blends in with the surrounding landscape.
	French Meadows Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	R	III-IV	Powerhouse seen from road segment above boat ramp. Not seen from other road locations. Powerhouse is in middle-ground distance zone from road. Exposed soil adjacent to the powerhouse and switchyard attracts attention to the powerhouse. Powerhouse contrasts in form and texture with surrounding landscape. Switchyard is not noticed.
	Dormitory and Cottages Water Supply Tank	Ancillary Facility	Seen	R	II-III	Minor facilities located adjacent to road. Seen in immediate foreground for a brief duration. Dark siding on tank blends well with surrounding landscape. Roof of structure contrasts due to light reflective color/material.
	French Meadows Powerhouse and Switchyard to Hell Hole — Middle Fork Tunnel Gatehouse, Dormitory Facility, Operator's Cottages, and Hell Hole Powerhouse Communication Line/Powerline	Communication and Powerline	Seen	R	II-III	Power lines and poles are in the immediate foreground of the road near the cottage and dormitory. In combination with the roads and other features they are somewhat noticed. The powerline is not seen from other road locations.
	Operator Cottages and Shop	Ancillary Facility	Not noticed	R	II-III	Brief foreground views of cottage and workshop from road above boat ramp. Light tan color of buildings contrasts with surrounding forested landscape. Road entrance and gate are more noticeable than structures.
	French Meadows-Hell Hole Tunnel Portal Road	Project Road	Not noticed	R	II	Seen in middle-ground. Blends well with surrounding landscape.
	French Meadows Powerhouse Road	Project Road	Seen	R	II-III	Road blends well with surrounding landscape due to narrow road width, minor road cuts, and highly textured landscape surrounding the road.
	Hell Hole-Middle Fork Tunnel Gatehouse Road	Project Road	Not noticed	R	II	Road blends well with surrounding landscape due to narrow road width, minor road cuts, and highly textured landscape surrounding the road.
	Dormitory Facility Road	Project Road	Seen	R	II-III	Road entrance seen. Narrow road bed with vegetation close to road bed reduces visual effect of road.
	Operator Cottages and Shop Road	Project Road	Not noticed	R	II	Brief view of road when in the immediate vicinity of road.
	Spur on North Side of Operator Cottages	Project Road	Not noticed	R	II	Brief view of road when in the immediate vicinity of road.
	Spur on South Side of Operator Cottages	Project Road	Not noticed	R	II	Brief view of road when in the immediate vicinity of road.
	Hell Hole Dam Spillway Northern Access Point Road	Project Road	Not noticed	R	II	Blends in well with surrounding landscape.

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
ENF Managed Viewsheds (continued)						
Blacksmith Flat Road Viewshed (14N25, also referred to as FR 23)						
Ralston Afterbay Area	Ralston Afterbay and Shoreline	Medium Reservoir	Seen	R/PR	III	Open, near views Ralston Afterbay upper reaches on Middle Fork and Rubicon rivers. Reservoir fluctuations noticeable around shoreline.
	Ralston Afterbay Dam Access Road	Project Road	Seen	PR	III	
	Ralston Afterbay Sediment Removal Access Point	Ancillary Facility	Not noticed	R	II	Small feature, not readily noticeable.
	Ralston-Oxbow Tunnel Intake to Ralston Powerhouse Communication Line	Project Communication Line	Seen	R/PR	III	Seen in immediate foreground of road for a moderate duration of time. Seen from Middle Fork American River to Ralston Powerhouse. Cleared area of ROW increases visual contrasts associated with the power line.
	Ralston Powerhouse and Switchyard	Powerhouse and Switchyard	Seen	R	IV	Facilities seen in foreground and immediate foreground where road parallels Rubicon River. Views are short to moderate in duration. Exposed views, no screening. Facilities dominate and contrast strongly with surrounding landscape due to large scale and angular forms.
	Passive Microwave Reflector Station above Ralston Afterbay	Microwave Reflector	Not noticed	R	III	Station is visible from the road under certain lighting conditions. Trail not noticeable from the road.
	Ralston Powerhouse Butterfly Valve House Road	Project Road	Not noticed	R	II	Road appears as part of Ralston Afterbay Ridge Sediment Disposal Area and is not readily noticeable from 14N25.
	Ralston Powerhouse to Ralston Powerhouse Butterfly Valve House Communication Line/Powerline	Project Communication Line	Seen	R	III	Seen for a short duration from road along Rubicon River. Highly textured hillside reduces visual contrast of power line. Exposed soil of ROW increases visual contrasts associated with the power line.
	Ralston Powerhouse Slope Fence	Project Fence	Not noticed	R	II	Not noticeable from road.
	Ralston Powerhouse Penstock and Butterfly Valve House Slope Fences	Project Fence	Seen	R	II-III	Moderate scale feature noticeable due to immediate foreground views from the road and visual contrasts in color and texture.
	Ralston Powerhouse Penstock and Butterfly Valve House	Water Conveyance	Seen	R	III	Open view of lower portion of penstock seen in immediate foreground of road along river near Ralston Powerhouse. Dark color of penstock reduces contrasts with surrounding landscape.
	Storage Building at Middle Fork - Ralston Tunnel Surge Shaft and Tank	Ancillary Facility	Seen	R	III	Small feature seen as part of Surge Shaft and Tank. Immediate foreground views of storage facility from road for a short duration of time.
	Middle Fork - Ralston Tunnel Surge Shaft and Tank	Water Conveyance	Seen	R	IV	Immediate foreground view for short duration of large scale feature.
	Ralston Ridge Sediment Disposal Area	Disposal Area	Seen	R	IV	Large scale feature dominates view from the road for a short duration. Foreground views of open, exposed soil areas with engineered land contours.
Chipmunk Ridge Road Viewshed (14N09, also referred to as FR 24)						
No Project facilities or features are visible from this viewshed.						
Hunters Trail Viewshed (trail near spur trail from FR 96 visited only)						
No Project facilities or features are visible from this viewshed.						

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
ENF Managed Viewsheds (continued)						
Hell Hole Reservoir Viewshed						
Hell Hole Reservoir Area	Hell Hole Dam and Outlet Works	Large Dam	Seen	R	IV	Foreground and middleground views of dam from most reservoir locations, except boat ramp area and upper reservoir area. Large scale feature creates contrasts in form, line and texture depending on the extent of exposure (water surface elevation). Outlet works not seen because they are located on downstream side of dam.
	Hell Hole Reservoir & Shoreline	Large Reservoir	Seen	R	II-IV	Meets retention at full pool/ partial retention at moderate drawdown. Modification at low reservoir elevations due to dominance of exposed shoreline and color contrasts with surrounding forested landscape.
	Hell Hole – Middle Fork Tunnel Gatehouse	Water Conveyance	Seen	R	III-IV	Foreground and middleground views of gatehouse from most reservoir locations, except upper reservoir area. Moderately small, light colored structure is highly noticed due to color contrasts with surrounding moderately dark rock walls.
	French Meadows Powerhouse Penstock and Butterfly Valve House	Water Conveyance	Seen	R	III	Penstock readily noticed from foreground distance zone of reservoir, but not readily noticed from middleground viewing locations. Dark colored penstock blends well with surrounding terrain. Butterfly house may be noticed in foreground but not readily noticed from middleground due to small scale and light color of building which blends well with surrounding rock walls. Tunnel muck next to the penstock and powerhouse dominates views of the area. Area seen from foreground and middleground reservoir locations. The large area covered by the muck, and form and texture of the material create a strong contrast to the surrounding characteristic landscape.
	French Meadows Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	R	IV	Powerhouse and switchyard noticed in the foreground and middleground distance zones. Color of powerhouse and switchyard similar to surrounding terrain, reducing color contrasts. Moderate contrasts in form and texture. Tunnel muck next to the powerhouse dominates views of the area. Area seen from foreground and middleground reservoir locations. The large area covered by the muck, and form and texture of the material create a strong contrast to the surrounding characteristic landscape.
	French Meadows Powerhouse (USGS Gage No. 11427200)	Powerhouse Gage	Not noticed	R	II	Small scale feature not seen from the reservoir except in the immediate foreground of the gage.
	Hell Hole Reservoir Staff Gage	Reservoir Gage	Not noticed	R	II	Small scale feature not seen except in the immediate foreground of the gage.
	French Meadows Powerhouse to French Meadows Powerhouse Penstock and Butterfly Valve House Communication Line/Powerline	Communication and Powerline	Seen	R	II-III	Upper portion of poles and some line segments can be seen from foreground locations. However, feature is not readily noticeable from most locations due to small scale of feature and screening of the feature by topography and vegetation.
	French Meadows Powerhouse and Switchyard to Hell Hole — Middle Fork Tunnel Gatehouse, Dormitory Facility, Operator's Cottages, and Hell Hole Powerhouse Communication Line/Powerline	Communication and Powerline	Seen	R	II-III	Seen in foreground from western half of reservoir. Powerline is not readily noticeable in most locations due to vegetative screening.
	Hell Hole Substation	Substation	Not noticed	R	II-III	Substation is screened by vegetation and is not readily noticeable as seen from the south shore of the reservoir.
	Dormitory Facility	Ancillary Facility	Seen	R	II-III	Visible from some areas of reservoir but not readily noticeable.
	French Meadows Powerhouse Penstock Rock Fence	Fence	Not noticed	R	II	
	French Meadows Powerhouse Slope Fence	Fence	Seen	R	II-III	Small scale feature seen only from immediate foreground of powerhouse area. Not discernable from most other reservoir locations.
	French Meadows-Hell Hole Tunnel Portal Road	Project Road	Seen	R	II-III	Cut slope associated with road seen in foreground and middleground. Road cut is not visually evident because feature blends in with the surrounding rock reducing color contrasts.
	French Meadows Powerhouse Road	Project Road	Seen	R	II-III	Road seen in foreground, creates a line on hillside. Otherwise, is not visually evident due to a lack of road cuts, good vegetative screening and the highly textured character of the surrounding landscape.
	Hell Hole-Middle Fork Tunnel Gatehouse Road	Project Road	Seen	R	II-III	Road seen in foreground from the west end of the reservoir. Minimal road cuts and partial vegetative screening results in road being not readily noticeable.
	Hell Hole Dam and Powerhouse Road	Project Road	Seen	R	IV	Upper portion road can be seen from most reservoir locations. Road is integrated part of dam and spillway.
	Hell Hole Dam Spillway Northern Access Point Road	Project Road	Seen	R	II-III	Upper portion road can be seen from most reservoir locations. Road is integrated part of dam and spillway.
Middle Fork American River Viewshed						
Ralston Afterbay Area	Ralston Afterbay Dam and Outlet Works	Medium Dam	Seen	R/PR	IV	Due to immediate foreground views from river, dam would dominate the characteristic landscape due to contrasts in form, and color.
	Oxbow Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	PR	IV	Short term viewing by whitewater boaters putting in at Indian Bar Rafter Put-in, and by other visitors using this access point.
	Middle Fork American River near Foresthill (USGS Gage No. 11433300)	Stream Gage	Seen	PR	III	Short term viewing by rafters or anglers. Staff plate and pipe is adjacent to river and visible from river. Metal stairs are mounted on bedrock above the river. Small scale object, visually unobtrusive.
	Oxbow Powerhouse (USGS Gage No. 11433212)	Powerhouse Gage	Not noticed	PR	II	
	Photovoltaic Pole and Powerline at Middle Fork American River Gage near Foresthill	Photovoltaic Pole and Powerline	Not noticed	PR	II	Short term viewing of isolated gage in river by rafters. Due to the small scale of the object, it is visually unobtrusive.
	Oxbow Powerhouse Slope Fence	Fence	Not noticed	PR	II	

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
ENF Managed Viewsheds (continued)						
Rubicon River Wild and Scenic River Viewshed						
Hell Hole Reservoir Area	Hell Hole Dam and Outlet Works	Large Dam	Seen	R	IV	Foreground views of dam from river downstream of dam. Views of the dam dominate. Dam contrasts in scale, form, and texture with the characteristic landscape.
	Hell Hole Powerhouse	Powerhouse	Seen	R	III	Seen in immediate foreground at base of dam. Small scale structure blends in color with surrounding characteristic landscape, low contrasts in form, line and texture.
	Rubicon River below Hell Hole Dam (USGS Gage No. 11428800)	Stream Gage and Weir	Seen	R	II-III	
	Hell Hole Dam Leakage Weir	Leakage Weir	Seen	R	II-III	
	French Meadows Powerhouse and Switchyard to Hell Hole — Middle Fork Tunnel Gatehouse, Dormitory Facility, Operator's Cottages, and Hell Hole Powerhouse Communication Line/Powerline	Communication and Powerline	Seen	R	III	Poles and lines seen in immediate foreground of the river, and ascending the north slope of the canyon. Features contribute to existing visual disturbance.
	Hell Hole Powerhouse to Rubicon River Gage below Hell Hole Dam Communication Line/Powerline	Communication and Powerline	Seen	R	III	Foreground views of line and poles at river and ascending open rock slope. Poles and line are visually evident due to no vegetative screening and contribute to visually cluttered appearance of area below dam.
	Hell Hole Dam Leakage Weir Road	Project Road	Seen	R	III	In foreground of river, in immediate vicinity of dam.
	Hell Hole Dam and Powerhouse Road	Project Road	Seen	R	IV	Road seen in immediate foreground from river below dam. Road contributes to the disturbed character of the area.
	Rubicon River Gage below Hell Hole Dam Road	Project Road	Seen	R	III	Road seen in immediate foreground from river below dam. Lack of road cuts minimizes visual effects but contributes to disturbed character of the area.
	Hell Hole Dam Spillway Discharge Channel Road	Project Road	Seen	R	IV	Road seen in immediate foreground from river below dam. Road contributes to the disturbed character of the area.
Ralston Afterbay Area	Ralston Afterbay	Medium Reservoir	Seen	R/PR	II-III	Upper end of reservoir is visible from Rubicon River
	Ralston Powerhouse Penstock and Butterfly Valve House	Water Conveyance	Seen	R	IV	Penstock creates solid line on hillside in contrast to highly textured hillside. Appurtenant facilities at base add visual clutter. Penstock color blends well with surrounding characteristic landscape.
	Ralston Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	R	IV	Near views of moderate duration while traveling along Rubicon river. Facilities dominate and contrast strongly with surrounding landscape character due to large scale, angular forms and smooth man-made textures created by building and switchyard facilities.
	Ralston Powerhouse (USGS Gage No. 11427765)	Powerhouse Gage	Seen	R	III	Minor structure not readily noticed compared to powerhouse and switchyard, but contributing to visual contrasts associated with the powerhouse.
	Ralston Powerhouse to Ralston Powerhouse Butterfly Valve House Communication Line/Powerline	Communication and Powerline	Seen	R	III	Powerline is not readily discernable. Visibility of exposed soils associated with the penstock dominates.
	Ralston - Oxbow Tunnel Intake to Ralston Powerhouse Communication Line	Communication Line	Seen	R/PR	III	Powerline seen from Rubicon River along 14N25.
	Passive Microwave Reflector Station above Ralston Afterbay	Microwave Reflector	Seen	R	II-III	This feature could be seen by river users, although it may not be readily noticeable depending upon the viewing angle and time of day.
	Ralston Powerhouse Penstock and Butterfly Valve House Slope Fences	Fence	Not noticed	R	II	
	Ralston Powerhouse Slope Fence	Fence	Seen	R	III	Fencing is discernable on hillsides. Metallic color contrasts with native rock enhancing visibility of the fencing.
	Ralston Afterbay Sediment Removal Access Point	Ancillary Facility	Seen	R	II-III	Area can be seen from the river when entering the upstream tail of Ralston Afterbay. Access point appears as a put-in or ramp area and is not visually obtrusive.

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
ENF Managed Viewsheds (continued)						
South Fork Long Canyon Creek Viewshed						
South Fork Long Canyon Diversion Area	South Fork Long Canyon Diversion Dam and Pool	Small Diversion Dam and Pool	Seen	PR	IV	Project features dominate Immediate foreground views from stream locations immediately upstream and downstream of the diversion. Built features contrast in form, line, colors and textures with the characteristic landscape. Due to the relatively small scale of the features they are not readily seen beyond the immediate foreground.
	South Fork Long Canyon Diversion Pipe and Drop Inlet	Water Conveyance	Seen	PR	III	Project feature seen in immediate foreground view of stream. Due to the relatively small scale of the features they are not readily seen beyond the immediate foreground.
	South Fork Long Canyon Creek below Diversion Dam (USGS Gage No. 11433065)	Stream Gage/Weir	Seen	PR	III	Gage and weir seen in immediate foreground of stream below diversion.
	South Fork Long Canyon Creek Diversion Tunnel (USGS Gage No. 11433060)	Diversion Gage	Seen	PR	III	Gage seen in immediate foreground of stream upstream of the diversion.
	Photovoltaic Pole and Powerline at South Fork Long Canyon Creek Gage below Diversion Dam	Photovoltaic Pole and Powerline	Seen	PR	III	Seen from immediate foreground of stream upstream of the diversion.
	South Fork Long Canyon Diversion and Drop Inlet Road	Project Road	Not noticed	PR	III	Features seen in immediate foreground of stream downstream of the diversion only.
	South Fork Long Canyon Diversion and Drop Inlet Cutoff Road	Project Road	Not noticed	PR	II	
	South Fork Long Canyon Diversion Drop Inlet Access Road	Project Road	Not noticed	PR	II	
North Fork Long Canyon	North Fork Long Canyon Diversion Pipe and Drop Inlet	Water Conveyance	Seen	PR	III	Seen in immediate foreground of stream bed, otherwise not seen.
	North Fork Long Canyon Diversion Drop Inlet Road	Project Road	Seen	PR	III	May be seen, area not visited.
Hell Hole Reservoir Developed Recreation Sites Viewsheds (Big Meadows CG, Hell Hole CG, Hell Hole Boat Ramp and Hell Hole Boat Ramp Parking Area, Hell Hole General Parking Area, Hell Hole Vista, Upper Hell Hole CG)						
Hell Hole Reservoir Area	Hell Hole Dam and Outlet Works	Large Dam	Seen	R	III-IV	A portion of the dam is seen in foreground from the Hell Hole General Parking area and in middleground from Hell Hole Vista and some sites from Hell Hole Campground.
	Hell Hole Reservoir & Shoreline	Large Reservoir	Seen	R	II-III	Reservoir seen from Hell Hole Boat Ramp, parking area, general parking area, Hell Hole Vista, and campsites nearest the reservoir at Hell Hole Campground and from Upper Hell Hole Campground.
	Hell Hole – Middle Fork Tunnel Gatehouse	Water Conveyance	Seen	R	III	Foreground views of gatehouse from Hell Hole Boat Ramp, parking area and general parking area. Moderately small, light colored structure is highly noticed due to color contrasts with surrounding moderately dark rock walls.
	French Meadows Powerhouse Penstock and Butterfly Valve House	Water Conveyance	Seen	R	II-III	Seen in foreground, at an oblique angle from Hell Hole Vista. Seen in middleground from Hell Hole Boat Ramp, parking area and general parking area. Penstock and butterfly valve house are not readily noticed due to visual dominance of tunnel muck from all locations.
	French Meadows Powerhouse and Switchyard	Powerhouse/ Switchyard	Seen	R	III	Seen in foreground, at an oblique angle from Hell Hole Vista. Seen in middleground from Hell Hole Boat Ramp, parking area and general parking area. Powerhouse and switchyard are visually evident, but do not dominate the view as does the tunnel muck.
	French Meadows Powerhouse to French Meadows Powerhouse Penstock and Butterfly Valve House Communication Line/Powerline	Communication and Powerline	Seen	R	II-III	Seen in foreground from Hell Hole Vista and foreground and middleground from Hell Hole Boat Ramp area. Poles and line are not readily noticeable.
	French Meadows Powerhouse and Switchyard to Hell Hole — Middle Fork Tunnel Gatehouse, Dormitory Facility, Operator's Cottages, and Hell Hole Powerhouse Communication Line/Powerline	Communication and Powerline	Seen	R	II-III	Foreground views from above of some of the line from Hell Hole Vista. Foreground and middleground views from Hell Hole Boat Ramp, Parking Area, and General Parking Area of the powerline are not readily noticeable due to vegetative screening.
	Hell Hole Substation	Substation	Seen	R	II-III	
	French Meadows Powerhouse Penstock Rock Fence	Fence	Not noticed	R	II	
	French Meadows Powerhouse Slope Fence	Fence	Not noticed	R	II	
	French Meadows-Hell Hole Tunnel Portal Road	Project Road	Seen	R	II-III	Road cut in hillside seen, but not readily noticeable. Road blends well in color and texture with surrounding characteristic landscape. Road not noticeable from Boat Ramp, Parking, and General Parking areas, and not seen from other recreation sites.
	French Meadows Powerhouse Road	Project Road	Seen	R	II-III	Road seen in foreground, creates a line on hillside. Otherwise, is not visually evident due to a lack of road cuts, good vegetative screening and the highly textured character of the surrounding landscape.
	Hell Hole-Middle Fork Tunnel Gatehouse Road	Project Road	Seen	R	II-III	Road seen in foreground from the Boat Ramp, Parking Area, and General Parking Area. Minimal road cuts and partial vegetative screening results in road being not readily noticeable.
	Hell Hole Dam and Powerhouse Road	Project Road	Seen	R	IV	Southern access road is visible in background from Hell Hole Vista
	Hell Hole Dam Spillway Northern Access Point Road	Project Road	Seen	R	II-III	Northern access road is visible in background from Hell Hole Vista
Middle Meadows Group Campground Viewshed						
No Project facilities or features are visible from this viewshed.						

Table 7.11-3. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds (continued).

Project Area	Middle Fork Project Facilities	Project Facility Type	Visibility from Viewshed	Forest Plan VQO	EVC Rating	Discussion/Explanation
ENF Managed Viewsheds (continued)						
Big Crater Special Interest Area Viewshed (area not visited, information based on USFS communication)						
Middle Fork Interbay Area	Passive Microwave Reflector Station above Middle Fork Interbay	Microwave Reflector	Seen	PR	III	Likely view across canyon from rim of Big Crater. Small scale object, light color contrasts with surrounding vegetation.
	Middle Fork Powerhouse Penstock and Butterfly Valve House Road	Project Road	Seen	PR	III	Possible views of exposed slopes and road bed due to viewing angle and foreground viewing distance.
	Middle Fork Powerhouse Butterfly Valve House Road	Project Road	Seen	PR	III	Possible views of exposed slopes and road bed due to viewing angle and foreground viewing distance.
	Middle Fork Interbay Dam Road	Project Road	Seen	R/PR/M	III	Most likely road is fairly well screened due to heavily vegetated slope, middleground distance, and viewing angle.
Little Crater Interest Area Viewshed (area not visited, information based on USFS communication)						
No Project facilities or features are visible from this viewshed.						

MAPS