



Application for a New License
Major Project – Existing Dam

Ringtail Management Plan

Security Level: Public

Yuba River Development Project
FERC Project No. 2246

December 2016

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None.

GLOSSARY – DEFINITIONS OF TERMS, ACRONYMS AND ABBREVIATIONS

ac	acre
Cal Fish and Wildlife	California Department of Fish and Wildlife
FERC or Commission	Federal Energy Regulatory Commission
Forest Service	United States Department of Agriculture, Forest Service
MW	megawatt
NFS	National Forest System (used in association with land ownership, such as NFS land)
Plan	Ringtail Management Plan
PNF	Plumas National Forest
Project	Yuba River Development Project, FERC Project No. 2246
TNF	Tahoe National Forest
YCWA	Yuba County Water Agency

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SECTION 1.0

INTRODUCTION

In April 2014, the Yuba County Water Agency (YCWA), pursuant to Section (§) 5.18 of Title 18 of the Code of Federal Regulations (C.F.R.), filed with the Federal Energy Regulatory Commission (FERC) an Application for a New License for Major Project – Existing Dam - for YCWA’s 361.9 megawatt Yuba River Development Project, FERC No. 2246 (Project). In December 2016, YCWA amended its April 2014 Application for a New License. The initial license for the Project was issued by the Federal Power Commission (FERC’s predecessor) to YCWA on May 16, 1963, effective on May 1, 1963. The Federal Power Commission’s May 6, 1966, Order Amending License changed the license’s effective date to May 1, 1966, for a term ending on April 30, 2016.

YCWA included this Ringtail [*Bassariscus astutus*] Management Plan (Plan) in its December 2016 Amended Application for a New License.

The United States Department of Agriculture, Forest Service’s (Forest Service) Federal Power Act (FPA) Section 4(e) authority only applies in this Plan to Project facilities on National Forest System (NFS) land, and the United States Army Corps of Engineers’ (USACE) FPA Section 4(e) authority only applies in this Plan to Project facilities on federal land administered by the USACE. The Forest Service administers the Plumas National Forest (PNF) in conformance with the PNF Land and Resource Management Plan (USDA Forest Service 1988), as subsequently amended, and administers the Tahoe National Forest (TNF) in conformance with TNF Land and Resource Management Plan (USDA Forest Service 1990), as subsequently amended. When the TNF or PNF Forest Plan revisions occur, those revised plans will supersede the 1990 TNF and 1988 PNF plans.

1.1 Background

1.1.1 Yuba River Development Project

The Project is located in Yuba, Sierra and Nevada counties, California, on the main stems of the Yuba River, the North Yuba River and the Middle Yuba River, and on Oregon Creek, a tributary to the Middle Yuba River. Major Project facilities, which range in elevation from 280 feet to 2,049 feet, include: 1) New Bullards Bar Dam and Reservoir; 2) Our House and Log Cabin diversion dams; 3) Lohman Ridge and Camptonville diversion tunnels; 4) New Colgate and Narrows 2 power tunnels and penstocks; 5) New Colgate, New Bullards Minimum Flow and Narrows 2 powerhouses; and 6) appurtenant facilities and features (e.g., administrative buildings, switchyards, roads, trails and gages). The existing Project does not include any aboveground open water conduits (e.g., canals or flumes) or any transmission lines.

In addition, The Project includes 16 developed recreation facilities. These include: 1) Hornswoggle Group Campground; 2) Schoolhouse Campground; 3) Dark Day Campground; 4)

Cottage Creek Campground;¹ 5) Garden Point Boat-in Campground; 6) Madrone Cove Boat-in Campground; 7) Frenchy Point Boat-in Campground; 8) Dark Day Picnic Area; 9) Sunset Vista Point; 10) Dam Overlook; 11) Moran Road Day Use Area; 12) Cottage Creek Boat Launch;² 13) Dark Day Boat Launch, including the Overflow Parking Area; 14) Schoolhouse Trail; 15) Bullards Bar Trail; and 16) floating comfort stations.³ All of the recreation facilities are located on NFS land, with the exception of the Dam Overlook, Cottage Creek Boat Launch and small portions of the Bullards Bar Trail, which are located on land owned by YCWA. All of the developed recreation facilities are located within the existing FERC Project Boundary, except for a few short segments of the Bullards Bar Trail to the east of the Dark Day Boat Launch. In addition, the Project includes two undeveloped recreation sites at Our House and Log Cabin diversion dams, both located on NFS land and within the existing FERC Project Boundary.

Figure 1.1-1 shows the Project Vicinity,⁴ proposed Project, and proposed FERC Project Boundary.⁵

¹ Cottage Creek Campground was burned in 2011 and has not been rebuilt. YCWA is in discussions with the Forest Service regarding rebuilding the burned campground.

² Emerald Cove Marina provides visitor services at Cottage Creek Boat Launch, including houseboat and boat rentals, boat slips and moorings, fuel, parking, restrooms and a general store. The marina is operated under a lease from YCWA by a private company.

³ The Project recreation facilities included one campground that is no longer part of the Project. Burnt Bridge Campground was closed initially by the Forest Service in 1979 due to low use levels. FERC, in an August 19, 1993 Order, which approved YCWA's Revised Recreation Plan, directed YCWA to remove all improvements and restore the Burnt Bridge Campground to the condition it was in prior to development of the facility. YCWA consulted with the Forest Service and all that remains of Burnt Bridge Campground today is the circulation road and vehicle spurs; all other facilities were removed.

⁴ For the purpose of this Plan, "Project Vicinity" refers to the area surrounding the proposed Project on the order of United States Geological Survey (USGS) 1:24,000 quadrangles.

⁵ The FERC Project Boundary is the area that YCWA uses for normal Project operations and maintenance. The Boundary is shown in Exhibit G of YCWA's Application for New License, and may be changed by FERC with cause from time to time during the term of the new license.

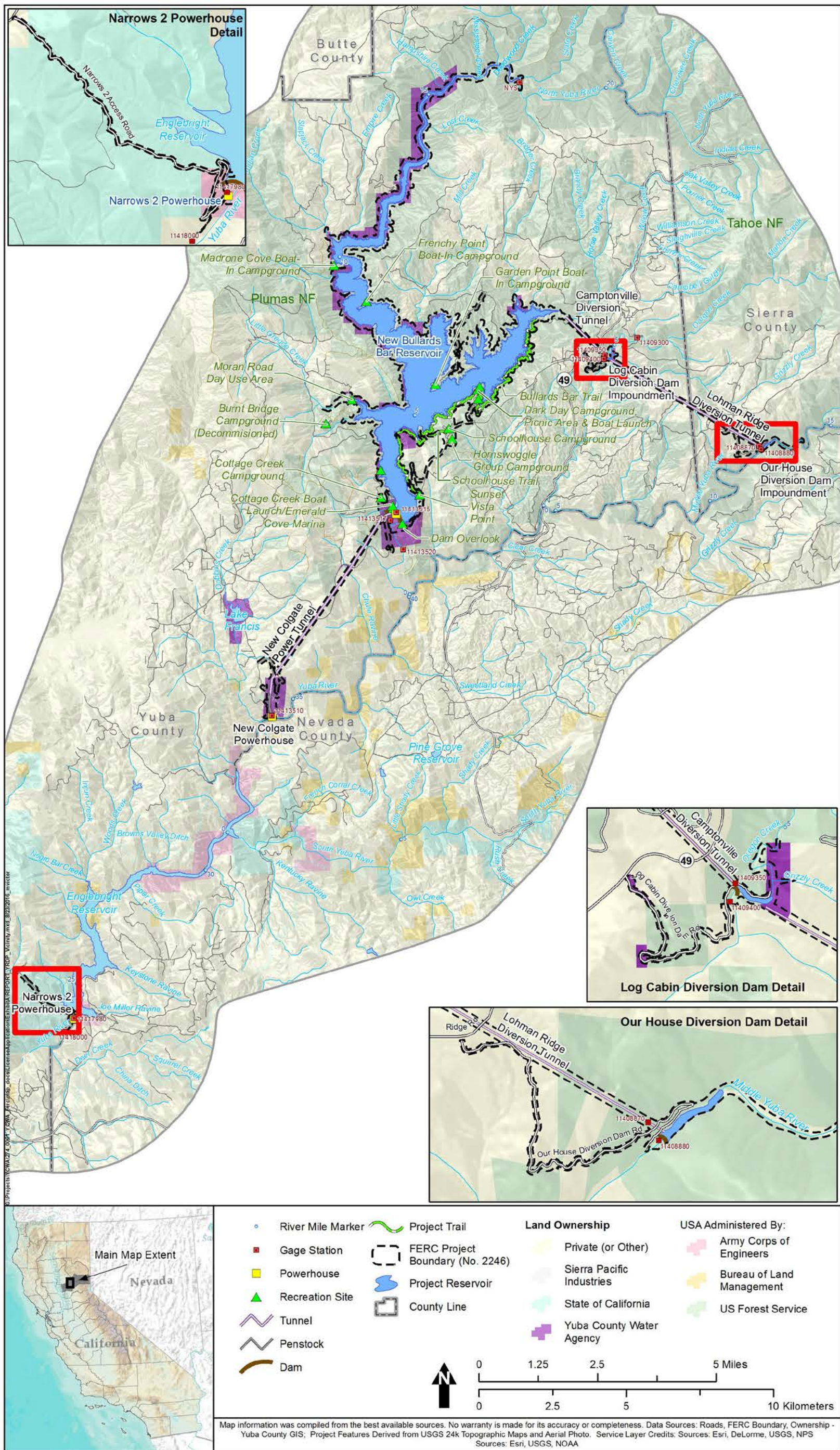


Figure 1.1-1. Yuba County Water Agency's Yuba River Development Project and Project Vicinity.

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1.2 Purpose of the Ringtail Management Plan

This Plan is intended to provide guidance for the protection of ringtail at YCWA's New Colgate Powerhouse, switchyard and administrative building adjacent to the New Colgate Powerhouse; and at the Narrows 2 Powerhouse, locations at which ringtail has been observed.⁶

YCWA will coordinate, to the extent appropriate, the efforts required under this Plan with other Project resource efforts, including implementation of other resource management plans and measures included in the new license.

1.3 Goals and Objectives of the Ringtail Management Plan

The goal of the Plan is to ensure that Project operations and maintenance are consistent with the Fully Protected status of ringtail.

The objective of the Plan is to provide necessary guidelines to meet Plan goals.

1.4 Contents of the Ringtail Management Plan

This Plan includes the following:

- Section 1. Introduction. This section includes the purpose, goals and other introductory information for the Plan.
- Section 2. Ringtail Life History and Distribution. This section provides a physical description of ringtail, its life history, and distribution throughout California and the Project area.
- Section 3. Ringtail Protection. This section describes ringtail protection measures for the Project.
- Section 4. Reporting, Consultation and Plan Review. This section describes reporting, consultation and other requirements regarding ringtail between YCWA and the California Department of Fish and Wildlife (Cal Fish and Wildlife).⁷
- Section 5. References Cited. This section provides a list of the references cited in the Plan.

⁶ Ringtail are designated as a Fully Protected Mammal by the State of California and as a result, take is expressly forbidden.

⁷ Prior to January 1, 2013, the California Department of Fish and Wildlife was referred to as California Department of Fish and Game.

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SECTION 2.0

RINGTAIL LIFE HISTORY AND DISTRIBUTION

2.1 Physical Characteristics



Ringtail⁸ is considered part of the Procyonidae family, which in the United States includes two other species, raccoons (*Procyon lotor*) and coatis (*Nasua narica*). Ringtail is a small mammal, weighing 2-2.5 pounds, with an overall length of 28-32 inches, of which the tail accounts for half of the overall length. Its long tail with whitish and blackish-brown rings is a defining characteristic of this species. Their body color is described as pale yellowish gray (Burt and Grossenheider 1976).

2.2 Status

Prior to 1967, ringtails (*Bassariscus astutus*) were harvested as furbearers. Harvest occurred in season with no bag limit. Trapping records indicate that during the 1927-28 season 4,368 ringtail were harvested, and in 1964-65 only 55 were harvested (Belluomini 1980). Belluomini (1980) attributed this decline in harvest to low demand and low prices, which was typical for most furbearers in California during the late 1950's and 1960's. In January 1968, the State of California assigned the status of Fully Protected Mammal to ringtail, which halted trapping. Section 4700 of the California Fish and Game Code (F.G.C.) states:

Except as provided in Section 2081.7 or 2835, fully protected mammals or parts thereof may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected mammal, and no permits or licenses heretofore issued shall have any force or effect for that purpose. However, the department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species.

According to Section 86 in F.G.C:

“Take” means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

Ringtail does not have any other federal or State special-status or protection.

⁸ Photo found at: bss.sfsu.edu/.../Fall02%20projects/Ringtail.htm

2.3 Life History

Ringtails are non-migratory and common to uncommon permanent residents of chaparral, rocky hillsides and riparian areas (Belluomini 1980). It is usually found within 0.5 mile (mi) of water, and uses hollow trees, logs, snags, cavities in talus and other rocky areas for cover. Grinnell et al. (1937) estimated home range to be between 109 and 1,280 acres (ac), and ringtail density between 0.2 and 6 per square mi (sq mi).

According to NatureServe (2013), ringtail breeds between February and May, but most breeding occurs in March and April. Ringtail has a gestation period of 51 to 54 days, usually giving birth in May or June to a litter of 1-4 young. However, average litter sizes of 3-4 kits have been reported (Grinnell et al. 1937). Both parents take part in young rearing, with families breaking up in early winter (Grinnell et al. 1937). Ringtail becomes sexually mature at the end of its second year (NatureServe 2013). Adults and weaned young are omnivorous, with a preference for animal matter. Key food includes small birds and mammals, eggs, reptiles, invertebrates, fruits, nuts and some carrion.

2.4 Distribution

2.4.1 California

In California, ringtail occurs in the Coast and Sierra Nevada ranges from Oregon to the Mexico border. They occupy a wide altitudinal range from sea level to 8,800 ft (Belluomini 1980). Ringtail has been reported an altitudinal average of 2,800 ft in the northern Sierra Nevada, and 3,900 ft in the southern Sierra Nevada (Belluomini 1980). However, ringtail occurrences are not strictly tied to the mountain ranges of California. Belluomini (1980) cited trapping efforts by Stone and a personal communication with Gene Trapp of the California State University System (CSUS) Biology Department, both regarding ringtails documented in the Sacramento Valley. Belluomini (1980) also summarized trapping reports from 1921 to 1967 that have confirmed ringtails in 52 of California's 58 counties.

2.4.2 Yuba River Development Project

Little is known about ringtail distribution in the Project Area,⁹ but Belluomini's (1980) summary of trapping records show ringtail has historically been present in Nevada, Sierra, and Yuba counties.¹⁰ Belluomini's summary shows the average annual harvesting, range of harvesting (minimum and maximum), and the number of seasons ringtail were harvested out of 29 seasons of trapping records (Table 2.4-1).

⁹ For the purposes of this Plan, the "Project Area" is defined as the area within the proposed FERC Project Boundary and the land immediately surrounding the FERC Project Boundary (i.e., within about 0.25 mi of the FERC Project Boundary) and includes Project-affected reaches between facilities and downstream to the next major water controlling feature or structure. The Project Boundary is shown in Exhibit G of YCWA's Application for New License.

¹⁰ Belluomini sources for trapping records included California Department of Fish and Game Furbearer Observation Reports, Swick (1974), Schempf & White (1974-1977).

Table 2.4-1. Trapping records for ringtail in Nevada, Sierra and Yuba counties from 1921 through 1967.

California County	Average Annual Harvest	Range of Harvest for all Seasons Reported	Number of Seasons Harvested
Nevada	11.0	1-53	25
Sierra	1.79	1-13	14
Yuba	6.14	1-48	22

Source: Belluomini 1980

To put these numbers in perspective: 1) the highest average annual harvest occurred in Butte and Shasta counties with 59.17 and 57.03 ringtails, respectively; 2) the lowest average annual harvest, where harvest occurred, was in Marin, San Luis Obispo, and Santa Clara counties, all with 0.03 per year; and 3) Alpine, Orange, San Benito, San Francisco, San Mateo, and Santa Cruz counties had no reports of ringtail being trapped.

In 2012, Project operations staff reported ringtails at the New Colgate Powerhouse, switchyard, and administrative building/shop, and at the Narrows 2 Powerhouse switchyard. In February 2013, Project operations staff deployed commercially available trail cameras that documented ringtails at the New Colgate Powerhouse administrative building and shop.

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SECTION 3.0

RINGTAIL PROTECTION

3.1 Ringtail Protection Guidelines

3.1.1 Installation of Wildlife Protective Devices at New Colgate and Narrows 2 Switchyards

YCWA will, during the first New Colgate Powerhouse and Narrows 2 Powerhouse outages after license issuance, install wildlife protective devices on the Project transformer and circuit breaker bushings in the switchyards. The purpose of the devices is to protect against ringtail electrocution in Project switchyards. While YCWA is not aware of any ringtail electrocutions at Project facilities in the switchyards, ringtail electrocution could occur when a ringtail touches two electrified bushings in the switchyard. As reference, in the New Colgate Switchyard, there are two transformers each with three bushings and four circuit breakers, each with six bushings, for a total of 30 bushings. In the Narrows 2 Switchyard, there is one transformer with three bushings and one circuit breakers with six bushings, for a total of nine bushings.

YCWA will purchase the wildlife protection devices from a reputable vendor that provides such devices, and coordinate with the vendor for the installation.

The devices will only be installed if, in YCWA's judgment, they can be installed with no risk to equipment safety and performance.

YCWA will advise Cal Fish and Wildlife within 30 days of installing the devices.

YCWA will maintain a list of all installed protection devices and inspect them annually. Any protection devices that are found to be damaged, have defects, or otherwise require repair shall be repaired or replaced as soon as possible.

YCWA is not required to provide wildlife exclusion fencing at the New Colgate Powerhouse and Switchyard and Narrows 2 Powerhouse and Switchyard.

3.1.2 Implementation and Inspection of Ringtail Exclusion Measures

At the New Colgate Powerhouse, Colgate Powerhouse administrative building and shop, and Narrows 2 Powerhouse, YCWA shall, in the first full calendar year after license issuance, implement ringtail exclusion devices at all known or potential ringtail access locations. YCWA will utilize suitable building materials such as wood, concrete, wire mesh, or metal siding to cover or block all known or potential ringtail access locations.

During the first year following the installation of exclusion devices, YCWA shall inspect all exclusion devices at least once quarterly (i.e., every 3 months). If during the first year of

implementation an exclusion measures is functioning properly and does not require repair or replacement, the inspection frequency of that exclusion device shall be reduced to once biannually (i.e., once every 6 months). If an exclusion devices requires repair or replacement during the first year following installation, then the inspection frequency for that repaired or replaced exclusion device shall remain quarterly for a period not to exceed one year following repair or replacement, and then shall be biannually. The goal of the inspections is to ensure that the exclusion devices remain functional and free from defect (e.g., holes or gaps). Six month inspection will occur: 1) prior to the onset of winter (i.e., early to mid-October), the season that coincides with reports of ringtails found within Project buildings; and 2) during the middle of the breeding season (i.e., late March to early April). Any exclusion measures that are found to be damaged, have defects, or otherwise require repair shall be repaired or replaced as soon as possible and within 30 days of discovery.

YCWA shall maintain a list of all exclusion devices installed that includes: 1) location; 2) material used to construct; 3) inspection findings.

3.1.3 New Evidence of Ringtails

If new evidence of ringtail activity is found within New Colgate Powerhouse, Colgate Powerhouse administrative building and shop, or Narrows 2 Powerhouse, YCWA will immediately inspect existing exclusion measures to ensure that they are functioning properly. If defects are found, they will be repaired immediately. If all existing exclusion measures are found to be free of defect, YCWA will visually inspect the building for new access points. YCWA may use commercially available game trail cameras to assist in locating access points. YCWA will immediately install exclusion measures at all access points found during the inspection that could be used for access by ringtails.

As part of the exclusion measure inspection, YCWA will make an effort to locate any items or materials (e.g., food or bedding materials) that could serve as a ringtail attractant. If found, YCWA will take corrective action to reduce or eliminate ringtail access to any items identified as attractants. Corrective action may include the repair of defective exclusion measures; installation of new exclusion measures; a change in storage practices of the attractant(s); or removal of attractants, if feasible.

3.1.4 Annual Employee Awareness Training

Each year during the term of the license, YCWA shall, as part of its Annual Environmental Training to Employees (YCWA's proposed Condition GEN3), review this Plan with Operations staff, focusing on the locations and purpose of ringtail exclusionary measures, potential signs that ringtails have entered a Project facility, attractants, reporting of ringtail, or signs of ringtails, that have entered a Project facility, and the Fully Protected status of ringtail.

It will be made clear to YCWA operations staff that in no instance may YCWA trap, relocate or otherwise handle ringtails.

SECTION 4.0

REPORTING AND PLAN REVISION

4.1 Reporting

By December 31 of each year, YCWA will provide to the Cal Fish and Wildlife a brief report via e-mail describing ringtail protection activities completed in the calendar year, and planned for the next calendar year. The report will include the following information: 1) repair to or replacement of protection devices and installation of new devices; 2) repair to or replacement of existing ringtail exclusion measures and installation of new measures; 3) any new evidence of ringtail within Project facilities and the actions taken by YCWA for exclusion.

YCWA shall notify Cal Fish and Wildlife of any injury of ringtail as soon as possible and no later than 24 hours after discovery. YCWA operations staff shall not trap, relocate, or otherwise handle injured ringtail.

4.2 Plan Revisions

YCWA, in consultation with the Cal Fish and Wildlife, will review, update, and/or revise the Plan, as needed, when significant changes in the existing conditions occur. Changes or revisions to the Plan will be expected if ringtail's Fully Protected status changes, existing Project electrical facilities that have a potential to electrocute ringtails are modified or expanded, or new Project electrical facilities that have a potential to electrocute ringtails are constructed. Any updates to the Plan will be prepared in coordination and consultation with Cal Fish and Wildlife. Sixty days will be allowed for the Cal Fish and Wildlife to provide written comments and recommendations before YCWA files the updated plan with FERC for FERC's approval. YCWA will include all relevant documentation of coordination/consultation with the updated Plan filed with FERC. If YCWA does not adopt a particular recommendation by Cal Fish and Wildlife, the filing will include the reasons for not doing so, based on Project-specific information. YCWA will implement the Plan as approved by FERC.¹¹

¹¹ The Plan will not be considered revised until FERC issues its approval.

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SECTION 5.0

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