



**Draft Application for a New License**  
**Major Project – Existing Dam**

**Ringtail Management Plan**

**Security Level: Public**

**Yuba River Development Project**  
**FERC Project No. 2246**

Draft - December 2013

©2013, Yuba County Water Agency  
*All Rights Reserved*



**Table of Contents**

<b>Section No.</b>	<b>Description</b>	<b>Page No.</b>
	Glossary – Definitions of Terms, Acronyms and Abbreviations.....	GLO-1
1.0	Introduction.....	1-1
1.1	Background.....	1-1
1.1.1	Yuba River Development Project .....	1-1
1.1.2	Ringtail Status.....	1-5
1.2	Purpose of the Ringtail Management Plan.....	1-5
1.3	Goals and Objectives of the Ringtail Management Plan .....	1-5
1.4	Contents of the Ringtail Management Plan .....	1-5
2.0	Ringtail Life History and Distribution.....	2-1
2.1	Physical Characteristics .....	2-1
2.2	Life History.....	2-1
2.3	Distribution .....	2-1
2.3.1	California .....	2-1
2.3.2	Yuba River Development Project .....	2-2
3.0	Ringtail Protection .....	3-1
3.1	Ringtail Protection Guidelines.....	3-1
3.1.1	Implementation and Inspection of Ringtail Exclusion Measures .....	3-1
3.1.2	New Evidence of Ringtails .....	3-1
3.1.3	Annual Employee Awareness Training .....	3-1
4.0	Reporting and Plan Revision .....	4-1
4.1	Reporting.....	4-1
4.2	Plan Revisions.....	4-1
5.0	References Cited.....	5-1

**List of Figures**

<b>Figure No.</b>	<b>Description</b>	<b>Page No.</b>
1.1-1.	Yuba County Water Agency’s Yuba River Development Project and Project Vicinity.....	1-3

**List of Tables**

<b>Table No.</b>	<b>Description</b>	<b>Page No.</b>
2.3-1.	Trapping records for ringtail in Nevada, Sierra and Yuba counties from 1921 through 1967.....	2-2

**List of Attachments**

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
kV	kilovolt
PG&E	Pacific Gas and Electric Company
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

Page Left Blank

## 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 (CFR), filed with the Federal Energy Regulatory Commission (FERC or Commission) an Application for a New License for Major Project – Existing Dam - for YCWA’s 361.9 megawatt (MW) Yuba River Development Project (Project), FERC Project Number 2246. 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 in its Application for New License this Ringtail Management Plan (Plan).

## 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;<sup>1</sup> 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;<sup>2</sup> 13) Dark Day Boat Launch, including the Overflow Parking Area; 14) Schoolhouse Trail; 15) Bullards Bar Trail; and 16) floating comfort stations.<sup>3</sup> All of the recreation facilities are located on NFS land, with the exception of the Dam Overlook, Cottage Creek Boat Launch and small

---

<sup>1</sup> 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.

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

<sup>3</sup> 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.

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,<sup>4</sup> proposed Project, and proposed FERC Project Boundary.<sup>5</sup>

Figure 1.1-1 shows the Project Vicinity,<sup>6</sup> proposed Project, and proposed FERC Project Boundary.

---

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> For the purpose of this Exhibit E, “Project Vicinity” refers to the area surrounding the proposed Project on the order of United States Geological Survey (USGS) 1:24,000 quadrangles.



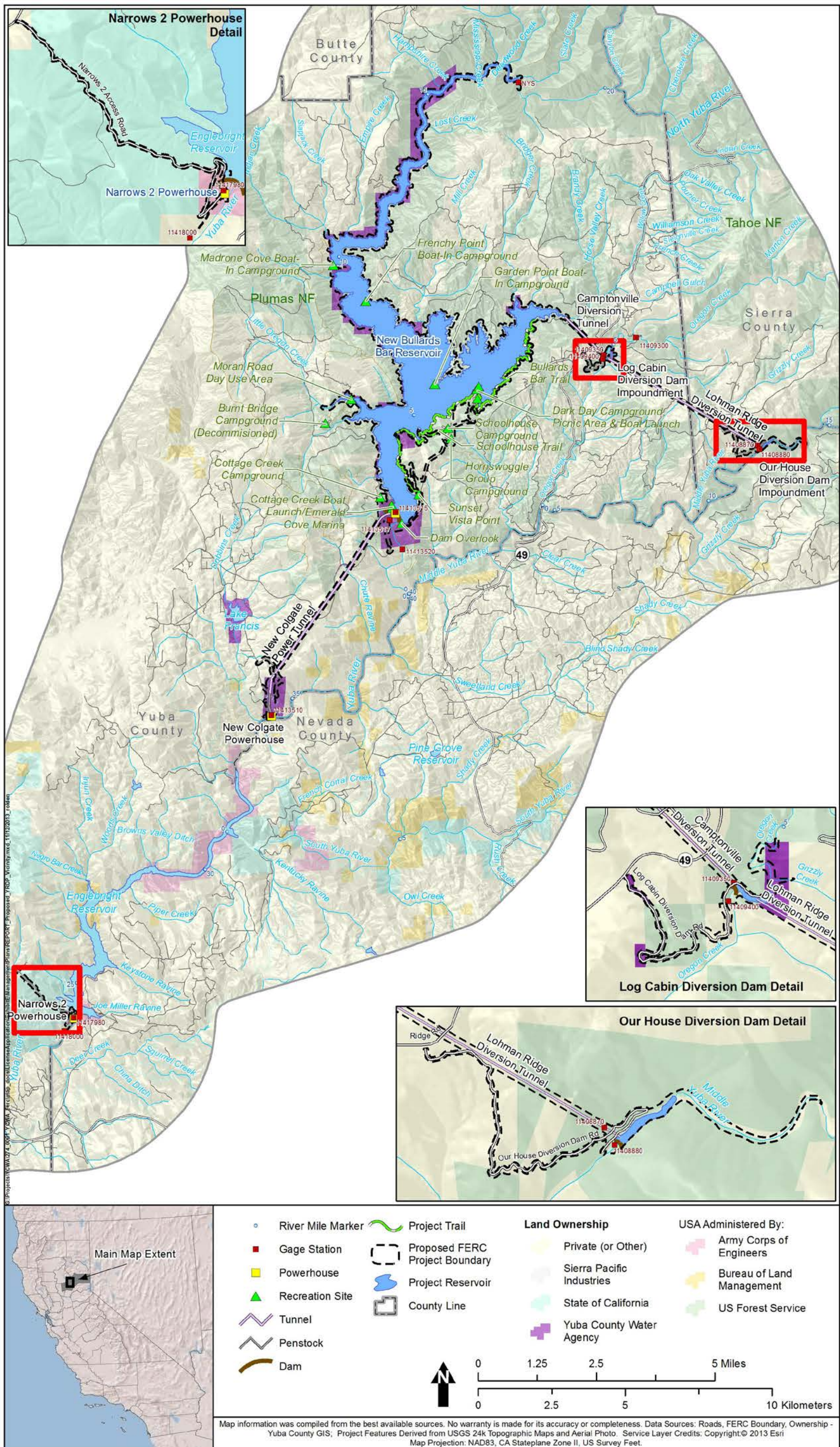


Figure 1.1-1. Yuba County Water Agency's Yuba River Development Project and Project Vicinity.

Page Left Blank

## **1.1.2 Ringtail 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 Wildlife Code 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.

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

## **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.<sup>7</sup>

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:

---

<sup>7</sup> Ringtail are designated as a Fully Protected Mammal by the State of California and as a result, take is expressly forbidden.

- 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).<sup>8</sup>
- Section 5. References Cited. This section provides a list of the references cited in the Plan.

---

<sup>8</sup> Prior to January 1, 2013, the California Department of Fish and Wildlife was referred to as California Department of Fish and Game.

## SECTION 2.0

# RINGTAIL LIFE HISTORY AND DISTRIBUTION

---

## 2.1 Physical Characteristics



Ringtail<sup>9</sup> 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 Life History

Ringtail is 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.

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.

## 2.3 Distribution

### 2.3.1 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

---

<sup>9</sup> Photo found at: [bss.sfsu.edu/.../Fall02%20projects/Ringtail.htm](http://bss.sfsu.edu/.../Fall02%20projects/Ringtail.htm)

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.

### 2.3.2 Yuba River Development Project

Little is known about ringtail distribution in the Project Area,<sup>10</sup> but Belluomini’s (1980) summary of trapping records show ringtail has historically been present in Nevada, Sierra, and Yuba counties.<sup>11</sup> 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 2.3-1).

**Table 2.3-1. 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.

<sup>10</sup> 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.

<sup>11</sup> Belluomini sources for trapping records included California Department of Fish and Game Furbearer Observation Reports, Swick (1974), Schempf & White (1974-1977).

## SECTION 3.0

# RINGTAIL PROTECTION

---

## **3.1 Ringtail Protection Guidelines**

### **3.1.1 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 measures 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.

Thereafter, YCWA shall inspect at least on a quarterly basis, and repair, as necessary, all exclusion measures. The goal of the inspections is to ensure that the exclusion measures remain functional and free from defect (e.g., holes or gaps). Inspection will occur prior to the onset of winter (i.e., early to mid-October), the season that coincides with reports of ringtails found within Project buildings. If any exclusion measures are found to have defects, they will be immediately repaired or replaced.

### **3.1.2 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.

### **3.1.3 Annual Employee Awareness Training**

Each year during the term of the license, YCWA shall, as part of its Annual Employee Awareness training (YCWA's proposed Condition GEN5), 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, 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 an oral report of ringtail protection activities completed in the previous year. The annual reports will include the following information: 1) repairs to existing ringtail exclusion measures and installation of new measures; 2) any new evidence of ringtail within Project facilities and the actions taken by YCWA for exclusion.

Regardless of the protection measures included in this Plan, it is possible that a ringtail could be injured or killed at a Project facility (e.g., electrocuted in the New Colgate Powerhouse switchyard). Within 24 hours of a confirmed injury or mortality of a ringtail at a Project facility, YCWA shall notify Cal Fish and Wildlife of the incident, including the location and suspected cause of injury or mortality.

## 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 Fully Protected status changes. Any updates to the Plan will be prepared in coordination and consultation with Cal Fish and Wildlife. A minimum of 60 days would be allowed for the Cal Fish and Wildlife to comment and make recommendations before YCWA files the updated plan with FERC for FERC's approval. YCWA would 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 would include the reasons for not doing so, based on Project-specific information. YCWA will implement the Plan as approved by FERC.

Page Left Blank

**SECTION 5.0**

**REFERENCES CITED**

---

- Belluomini. 1980. Status of the ringtail in California. Department of Fish and Game, Nongame Wildlife Investigations. June 1982.
- Burt, W. H. and R. P. Grossenheider. 1976. A field guide to the Mammals, North America north of Mexico. Third Edition. Houghton Mifflin Company. New York, New York. pp. 50-53.
- Grinnell, J., S. Dixon, and J. M. Linsdale. 1937. Furbearing mammals of California. University of California Press, Berkeley. 2 vols.
- NatureServe. 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available online: <<http://www.natureserve.org/explorer>>. Accessed: April 23, 2013.
- United States Department of Agriculture (USDA), Forest Service (Forest Service). 1988. Land and Resource Management Plan. USDA Forest Service. Pacific Southwest Region. Plumas National Forest.
- \_\_\_\_\_. 1998. Land and Resource Management Plan. USDA Forest Service. Pacific Southwest Region. Tahoe National Forest.

Page Left Blank