

Biological Assessment  
for the  
U. S. Army Corps of Engineers  
Ongoing Operation and Maintenance  
of Englebright Dam and Reservoir  
on the Yuba River



**US Army Corps  
of Engineers** ®  
Sacramento District

Technical Assistance Provided By:

HDR Engineering, Inc.

October 2013

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## 1.0 Introduction

The U. S. Army Corps of Engineers, Sacramento District (Corps), as the Action Agency, is submitting this Biological Assessment (BA) to the National Marine Fisheries Service (NMFS) as part of a consultation process pursuant to Section 7(a)(2) of the Endangered Species Act (ESA). This BA was prepared in accordance with legal requirements set forth in Section 7 of the ESA (16 U.S.C. 1536; see also 50 CFR Part 402). This BA defines and evaluates the potential effects of the Corps' ongoing discretionary activities at Englebright Dam and Reservoir (Englebright) on ESA-listed species and their designated critical habitats in the lower Yuba River. These specific activities, enumerated in Chapter 3, constitute the Proposed Action for purposes of this consultation and are evaluated for potential effects to listed species or critical habitat. As discussed herein, these discretionary activities at Englebright relate to: 1) ongoing maintenance of recreational facilities on and around Englebright; 2) continued administration of maintenance service contracts at Englebright and 3) continued administration of outgrants described in the 2007 Harry L. Englebright Lake Operational Management Plan (OMP).

Although previous consultations have been conducted addressing various Corps projects and their activities on the Yuba River, they encompassed activities at both Englebright Dam and Daguerre Point Dam (projects). For this consultation, separate BAs have been prepared for each of these two projects. The activities at these projects have been evaluated separately, because each dam has a separate authorization and appropriation, and because the actions at Englebright and Daguerre are wholly separate and are not dependent upon each other to operate. This BA defines the Proposed Action at Englebright, and evaluates potential effects on listed species and their designated critical habitats attributed to the Proposed Action.

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## 1.1 Englebright Dam and Reservoir

The Harry L. Englebright Dam and Reservoir is located on the Yuba River downstream of New Bullards Bar Dam, and is part of the Sacramento River and Tributaries project, which was authorized by the Rivers and Harbors Act of August 30, 1935 (P. L. 409, 74<sup>th</sup> Congress, 1<sup>st</sup> Session, 49 Stat. p. 1028-1049). Originally named the Upper Narrows Dam, Englebright Dam was constructed by the California Debris Commission in 1941, primarily to trap hydraulic mining sediments originating in upstream areas. The Rivers and Harbors Act of 1935 also authorized the development of future power at Englebright Dam. As stated in the Act, the Board of Engineers for Rivers and Harbors considered “...*that power development at the Upper Narrows Dam is practicable, but that it is not a necessary feature of the project...*” While the power development was economically justified, the California Debris Commission (1935) reported that a firm contract for the sale of the power could not be obtained at that time. The Rivers and Harbors Act of 1935 also stated that “*The development of power at the Upper Narrows Dam is practicable but the Board is of the opinion that a power plant is not a necessary feature of the project at the present time. Provision should be made in the design of the dam to permit the future development of power whenever it becomes desirable.*”

Englebright Dam is 260 feet high, and the storage capacity of Englebright Reservoir was 69,700 AF at the time of construction, as estimated by the U.S. Geological Survey (USGS) using a pre-dam elevation model (Childs et al. 2003 as cited in YCWA 2010). However, due to sediment buildup since construction, the gross storage capacity was more recently estimated at approximately 50,000 AF (USGS 2003).

Upon decommissioning of the California Debris Commission by Section 1106 of the 1986 Water Resources Development Act (P. L. 99-662, 99<sup>th</sup> Congress, 2nd Session, November 7, 1986), administration of Englebright was assumed by the Corps.

Because Englebright Dam was constructed as a sediment retention facility (debris dam), it does not contain a low-level outlet. Unregulated flood flows spill over



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Englebright Dam. Following construction of Englebright Dam in 1941 and extending until approximately 1970, controlled flow releases were made through the PG&E Narrows I Federal Energy Regulatory Commission (FERC) licensed hydropower facility. Since about 1970 to the present, controlled flow releases into the lower Yuba River have been made from the PG&E Narrows I and the YCWA Narrows II power plants, both FERC licensed facilities.

The Corps does not have authority or discretion to control water releases from Narrows I, or Narrows II, nor does the Corps regulate water rights. The water stored in Englebright Reservoir provides recreation and hydroelectric power, and YCWA and PG&E administer water releases for hydroelectric power, irrigation, and other beneficial uses (e.g., instream flow requirements). The Corps' ongoing activities of Englebright Dam infrastructure pertain to dam maintenance, safety, and security.

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## 2.0 Background

The Section 7 ESA consultation process between the Corps and NMFS associated with the Corps' activities in the Yuba River extends back to 2000. Biological opinions (BOs) were issued by NMFS in 2002, 2007, and 2012. A complete description of the project history and a detailed overview of the consultation history related to the NMFS BOs is not presented here, but is described in the BA for Daguerre Point Dam.

### 2.1 Consultation History

This section presents a brief summary of consultation history with a description of proposed actions identified. A complete description of the project history and a detailed overview of the consultation history related to the NMFS BOs are not presented here, but are described in Chapter 1 of the October 2013 BA for Daguerre Point Dam (See Enclosure).

#### 2.1.1 2002 Consultation

The Corps' proposed action for Englebright Dam and Reservoir that was evaluated in the 2000 Corps BA (Corps 2000) and the 2002 NMFS BO (NMFS 2002) included the following actions:

- ❑ Operation and maintenance of Englebright Dam and Reservoir.
- ❑ Administration of License No. DACW05-9-95-604 to the Pacific Gas & Electric Company (PG&E) granting a right-of-way for the Narrows I powerhouse, which is operated and maintained under the FERC license, near Englebright Dam.
- ❑ Administration of Easement No. DACW05-2-75-716 to the Yuba County Water Agency (YCWA) granting a right-of-way for the Narrows II

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powerhouse, which is operated and maintained under the FERC license, near Englebright Dam.

- ❑ Administration of the March 28, 1994 agreement with PG&E for the operation and maintenance of the Narrows I Hydroelectric Project. The 1994 agreement states that the Corps is responsible for maintaining Englebright Dam and the outlet facilities in good order and repair, while PG&E is responsible for the operation and maintenance of the FERC hydroelectric facility.

Although recreation at Englebright Reservoir was briefly mentioned in both the 2000 Corps BA and the 2002 NMFS BO, detailed descriptions of the Corps' specific operations and maintenance activities pertaining to recreation at Englebright Reservoir were not presented in the proposed action.

## **2.1.2 2007 Consultation**

The Corps' proposed action that was evaluated during the 2007 Corps BA and the 2007 NMFS BO included the following actions:

- ❑ Operation and maintenance of Englebright Dam and Reservoir.
- ❑ Administration of Outgrant No. DACW05-9-95-604 to PG&E granting a right-of-way for the Narrows I powerhouse to be constructed, operated, and maintained under the FERC license, near Englebright Dam.
- ❑ Administration of Easement No. DACW05-2-75-716 to YCWA granting a right-of-way for the Narrows II powerhouse to be constructed, operated, and maintained, under the FERC license, near Englebright Dam.
- ❑ Administration of the March 28, 1994 agreement with PG&E for the operation and maintenance of the Narrows I FERC Hydroelectric Project. The 1994 agreement states that the Corps is responsible for maintaining Englebright Dam and the outlet facilities in good order and repair, while

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PG&E is responsible for the operation and maintenance of the hydroelectric facility.

Recreation at Englebright Reservoir was not included in the 2007 Corps BA or the NMFS BO as part of the proposed action.

### **2.1.3 2012 Consultation**

The Corps voluntarily reinitiated formal consultation with NMFS on the Corps' ongoing operation and maintenance of Englebright Dam and Reservoir and Daguerre Point Dam and associated facilities in October 2011 with transmission of a draft BA to NMFS. In January 2012, a final BA (referred to herein as the 2012 BA) (Corps 2012a) was prepared, which, among other things, described the proposed action and analyzed the effects of that action on listed species and designated critical habitat.

The February 29, 2012 Final BO concluded that the operation and maintenance of these two projects would likely jeopardize the continued existence of spring-run Chinook salmon, steelhead, and green sturgeon, and result in the adverse modification of critical habitat for each of these species. The BO included an RPA that modified the proposed action to avoid jeopardizing the species and adversely modifying their critical habitat. The RPA was divided into eight categories containing almost 60 specific actions to be implemented by the Corps (see NMFS 2012), many of which were outside of the Corps' authority to implement.

### **2.1.4 Corps 2013 Consultation**

On July 3, 2012 the Corps transmitted a letter to NMFS memorializing the Corps' concerns regarding the 2012 BO, which were related to the description of the proposed action and action area, NMFS' approach to baseline effects, the scientific basis for the analysis and conclusions, the scope and breadth of the RPA and the RPMs associated with the incidental take statement, and the limitations of the Corps' authorities (Corps 2012b).

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On February 26, 2013, the Corps notified NMFS of its intent to reinitiate consultation to address the impacts of the Corps' discretionary activities on Central Valley spring-run Chinook salmon, Central Valley steelhead, North American green sturgeon and their associated critical habitats. The Corps' February 26, 2013 letter stated that reinitiation of consultation is appropriate when *"...new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered," as well as when "...the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion."* 50 CFR §402.16(b)(c). The Corps letter further stated that reinitiation of consultation is appropriate in order for the Corps to provide NMFS with additional information and clarification on subjects that include the following:

1. The scope of the Corps' authorities and discretion, for purposes both of appropriately defining the proposed action and ensuring that any RPMs or RPA are "within the scope of the [Corps ] legal authority and jurisdiction." *See* 50 C.F.R. § 402.02.
2. The scope of the action area and the determination of which other activities are interrelated and interdependent with the proposed action.
3. Additional information regarding the nature of the Corps' proposed activities at Englebright and Daguerre Point dams.
4. Scientific and technical information regarding the listed species and the effects of the proposed action on them.

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## 3.0 Proposed Action For Englebright Dam and Reservoir

The Proposed Action at Englebright Dam and Reservoir for this BA and consultation is comprised of a variety of actions. While there are many activities conducted by the Corps at Englebright Dam and Reservoir, many of these are non-discretionary actions. Accordingly, to clarify which of the activities are the subject of this consultation, the Corps has deconstructed the Proposed Action, then identified and discussed which are: 1) non-discretionary; 2) discretionary, but have no effect on listed species or critical habitat; and 3) discretionary, and may affect, but not likely to adversely affect listed species or critical habitat.

### 3.1 Deconstruction of the Action

NMFS uses a series of sequential analyses to assess the effects of Federal actions on endangered and threatened species and designated critical habitat (NMFS 2009). According to the document titled *An Assessment Framework for Conducting Jeopardy Analyses Under Section 7 of the Endangered Species Act* (NMFS 2004), one of the early steps in NMFS evaluation process is to “deconstruct” the Proposed Action into its constituent parts. As part of the 2013 consultation between the Corps and NMFS, it was agreed that this BA would undertake a “deconstruction” process to more clearly define the Proposed Action, and distinguish the Proposed Action from other Corps activities in the Yuba River Basin, to assist NMFS in its jeopardy analysis.

Given the suite of Corps activities in the Yuba River Basin, the "deconstruction" step in this BA clearly distinguishes between discretionary actions that may affect listed species and their critical habitat and: (1) future actions requiring separate ESA consultation; (2) non-discretionary actions; (3) discretionary actions with no effect; and (4) discretionary actions that are not likely to adversely affect listed species (**Figure 1**). This BA does not include consultation on future actions requiring

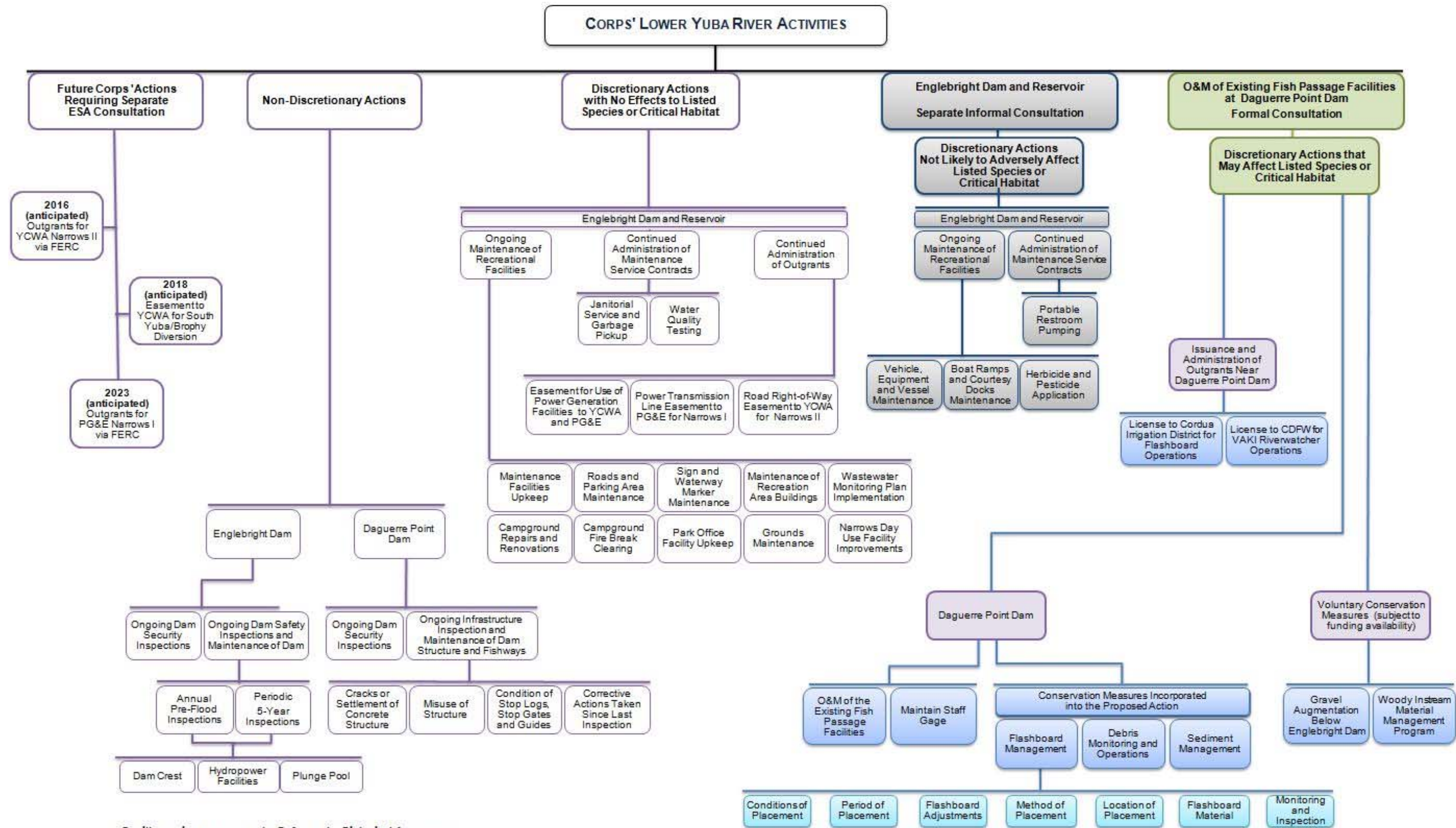
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separate ESA consultation and non-discretionary actions. Nor does the ESA require the Corps to consult with NMFS on actions that have no effect on listed species and critical habitat. When the Federal agency proposing the action determines that a proposed action may pose any effects on listed species or designated critical habitat, then it must either initiate formal consultation or seek written concurrence from NMFS that the action “is not likely to adversely affect” listed species. The ESA consultation process for discretionary actions that are not likely to adversely affect listed species or critical habitat can conclude with informal consultation.

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*For illustrative purposes only. Refer to the Biological Assessment*

Figure 1. Deconstruction of the Corps' lower Yuba River activities and the Proposed Action (i.e., discretionary actions that may affect listed species).

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## **3.2 Corps Non-Discretionary Activities Not Subject to ESA Consultation**

As stated in 50 CFR §402.03, “*Section 7 and the requirements of this part apply to all actions in which there is discretionary Federal involvement or control*”. Accordingly, non-discretionary activities at Englebright Dam and Reservoir are not subject to ESA consultation. Therefore, one of the key considerations emanating from the 2012 consultation process was the need for clear distinctions between the Corps’ discretionary and non-discretionary actions regarding Englebright Dam and Reservoir.

The responsibility to maintain Civil Works structures so that they continue to serve their Congressionally- authorized purposes is inherent in the authority to construct them and is therefore non-discretionary. Only Congressional actions to de-authorize the structures can alter or terminate this responsibility and thereby allow the maintenance of the structures to cease. Congress authorized Englebright Dam on the Yuba River to prevent hydraulic mining debris from washing downstream and blocking the navigation channel of the Sacramento River. The Corps inspects Englebright Dam to ensure its safety and integrity, and to take the minimal maintenance actions needed to ensure that the dam can continue to serve its Congressionally authorized purpose. Corps non-discretionary activities and associated authorities pertinent to Englebright Dam and Reservoir are described below.

### **3.2.1 Background Regarding Corps’ Authorities Related to Dam Inspections and Hydropower Facilities on Federal Lands**

#### **NATIONAL DAM INSPECTION ACT OF 1972**

In the early 1970s, several dam failure events prompted the passage of legislation aimed at establishing a national program to protect human life and property from the hazards of improperly constructed or poorly maintained dams (GAO 1977). Consequently, the U. S. Congress enacted Public Law 92-367, which is known as the National Dam Inspection Act of 1972. Under this law, the Secretary of the Army, acting through the Corps of Engineers, has an ongoing obligation to inspect all dams in the United States except: (1) dams under the

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jurisdiction of the Bureau of Reclamation, the Tennessee Valley Authority, and the International Boundary and Water Commission; (2) dams constructed pursuant to licenses issued under the authority of the Federal Power Act; (3) dams that had been inspected by a State agency within the 12-month period immediately preceding the enactment of the law and for which the Governor of the respective State requested exclusion; and (4) dams that the Secretary of the Army determined do not pose any threat to human life and property (GAO 1977).

Public Law 92-367 defined the term “dam” to mean any artificial barrier, including appurtenant works, which impounds or diverts water, and which: (1) is twenty-five feet or more in height from the natural base of the stream or watercourse measured at the downstream toe of the barrier, or from the lowest elevation of the outside limit of the barrier, if it is not across a stream channel or watercourse, to the maximum water storage elevation; or (2) has an impounding capacity at maximum water storage elevation of fifty acre-feet (AF) or more.

For the purpose of determining whether a dam (including the waters impounded by such dam) constitutes a danger to human life or property, the law states that the Secretary of the Army shall take into consideration the possibility that the dam might be endangered by overtopping, seepage, settlement, erosion, sediment, cracking, earth movement, earthquakes, failure of bulkheads, flashboard, gates on conduits, or other conditions which exist or which might occur in any area in the vicinity of the dam (Public Law 92-367).

The law also states that as soon as practicable after inspection of a dam, the Secretary of the Army shall notify the Governor of the State in which such dam is located the results of such investigation. The Secretary of the Army shall immediately notify the Governor of any hazardous conditions found during an inspection. The Secretary of the Army shall provide advice to the Governor, upon request, relating to timely remedial measures necessary to mitigate or obviate any hazardous conditions found during an inspection (Public Law 92-367).

#### **NATIONAL DAM SAFETY PROGRAM ACT OF 1996**

The National Dam Safety Program Act was signed into law on October 12, 1996 as part of the Water Resources Development Act of 1996 (PL 104-303) and authorized the Secretary of the Army to undertake a national program of inspection of dams.

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The objectives of the National Dam Safety Program (Program) are to: (1) ensure that new and existing dams are safe through the development of technologically and economically feasible programs and procedures for national dam safety hazard reduction; (2) encourage acceptable engineering policies and procedures to be used for dam site investigation, design, construction, operation and maintenance, and emergency preparedness; (3) encourage the establishment and implementation of effective dam safety programs in each State based on State standards. The Federal element of the Program shall incorporate the activities and practices carried out by Federal agencies under Section 7 of the Act to implement the Federal Guidelines for Dam Safety.

Public Law 109–460 (December 22, 2006; 109th Congress) amended the National Dam Safety Program Act to reauthorize the National Dam Safety Program. Section 6 of Public Law 109–460 states “*The Secretary of the Army shall maintain and update information on the inventory of dams in the United States. Such inventory of dams shall include any available information assessing each dam based on inspections completed by either a Federal agency or a State dam safety agency.*”

### **3.2.2 Englebright Dam Non-Discretionary Activities**

#### **ONGOING INFRASTRUCTURE INSPECTION AND SECURITY AT ENGLEBRIGHT DAM**

Ongoing infrastructure inspections and security at Englebright Dam includes dam safety and dam security inspections, as described below.

#### ***DAM INSPECTION***

The Corps’ general responsibilities and activities associated with dam maintenance and safety, which are applicable to Englebright Dam, are enumerated and described in the document titled USACE - Engineering and Design Safety of Dams – Policy and Procedure ER 1110-2-1156 Regulation No. 1110-2-1156 (Corps 2003). The Corps conducts two different types of regular inspections: (1) annual pre-flood inspections; and (2) periodic inspections every 5 years. These inspections are conducted to address the legal requirement that the Corps shall maintain in good order and repair Englebright Dam and outlet facilities in accordance with its authorized purposes. The purpose of the Corps’ periodic inspections is to evaluate the condition of the critical

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components of Englebright Dam in order to assure the safety, continuing structural integrity, and operational adequacy of the structure (Corps 2004).

The Corps also conducts Pre-flood Inspections for Englebright Dam. A report of the most recent of these inspections was published in 2012.

At the onset of each inspection, Englebright Reservoir water surface elevation and the maximum pool elevation attained during the season, as well as mean total outflow, weather conditions and air temperature, are recorded. Based upon Corps observations and information provided from past inspections (Corps 2004; Corps 2008a; Corps 2012c), examples of the Englebright Dam facilities and appurtenant features addressed as part of the Pre-flood Inspection process generally include the following:

**Crest**

- ❑ Overflow and non-overflow sections of the crest are checked for signs of distress, surface delamination, concrete deterioration and movement of the training wall.
- ❑ The downstream face of the dam is inspected for signs of cracking, seepage, and other structural problems that could affect the structural integrity of the dam.
- ❑ Upstream and downstream areas of the left and right abutments are checked for notable movement, instability, seepage and debris.
- ❑ Corps gatehouse interior and gate chamber, and the bulkhead gate are inspected for signs of concrete deterioration, distress, and misalignment.
- ❑ The adit portal, including internal and external examination of the concrete bulkhead wall, the projecting conduit and the riveted dished head closure of the projecting conduit are inspected for possible structural or corrosion problems.
- ❑ The reservoir rim is inspected from a Corps patrol boat.
- ❑ New and/or previously identified relief landslides are located, photographed, compared to aerial photos and occasionally identified for further monitoring to determine whether

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a landslide has the potential to present a hazard to the dam from slope-failure induced seiches or to affect nearby roadways.

### ***Hydropower Facilities***

- ❑ The PG&E Narrows I Hydropower Project intake structure, trash rack, and the first 700 feet of the conduit are regularly inspected on a 5-year cycle by the Corps.

The Corps' inspections are limited to: (1) the Narrows I intake structure; (2) the trash rack; and (3) the first 700 feet of the conduit because these three components are owned and maintained by the Corps. These three components extend to the structure known as the "adit". The remaining portion of the conduit, extending from the adit to the Narrows I power plant, including all appurtenances in the plant, is owned and maintained by PG&E. PG&E conducts separate inspections of its Narrows I facility for hydropower purposes.

- ❑ Because the Narrows II penstock extends through the abutment of the dam, the Corps also inspects the YCWA Narrows II hydropower penstock on a 5-year cycle to ensure that the penstock is in good condition and will not threaten the stability and safety of Englebright Dam. YCWA conducts separate inspections of its Narrows II facility for hydropower purposes.

### ***Plunge Pool***

- ❑ A visual inspection of the plunge pool and downstream overflow sections at Englebright Dam are conducted periodically. It was recommended that the Corps map the plunge pool area (Corps 2008a), which will be accomplished after receiving appropriations by Congress.

In addition to dam safety, the Englebright Project Safety Plan (Corps 2008b) provides a safety plan for the Englebright Reservoir recreation area to: (1) minimize employee, volunteer, contractor and visitor accidents by establishing procedures and responsibilities relative to safety; (2) assist employees, volunteers, contractors and visitors in the development of a safety attitude;

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and (3) identify precautionary measures to be taken to eliminate unsafe conditions. The Hazard Communication Program (Corps 2007b) ensures that all field offices within the Sacramento District of the Corps comply with the OSHA Hazard Communication Standard as defined by Title 29 CFR Part 1910.1200. This program provides information for the use of Material Safety Data Sheets, chemical product labeling, handling and storage, training, documentation, and record keeping requirements.

If a need for maintenance repairs or other corrective actions is identified during the inspection process, authorization and funding to conduct the repairs or corrective actions will be included in the Corps' budget two years later.

#### ***DAM SECURITY***

The baseline security posture for Corps dams will be based on the completion of project specific Vulnerability and Risk Assessments which take into account project criticality, threat (criminal or terrorist), current physical security posture, and law enforcement response capabilities. Once established, the baseline security posture will become the norm (Corps 1992).

All dams will have project-specific Physical Security Plans. The format for these plans should follow the format detailed in Appendix F of the USACE Engineering and Design Safety of Dams – Policy and Procedure ER 1110-2-1156 Regulation No. 1110-2-1156 (Corps 2003).

Inspections are conducted when no prior physical security inspection exists, at regularly scheduled intervals, and when directed by competent authority. Whenever possible, security should be included in annual, periodic, and special inspections of projects. In addition, Corps dams will have dam security systems, which also are inspected during regular dam safety inspections. Dam security inspections are conducted to determine whether the features are safe from vandalism, sabotage, acts of terrorism, or any other acts that could cause the project to fail to function properly and safely for its intended purpose.

In addition to dam security, the 2008 Englebright Lake Security Plan (Corps 2008c) provides for the physical security of Englebright Reservoir during normal operations, and during periods of increased security. Physical security threats include terrorism, natural disasters, civil disturbances, theft and vandalism.



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These Corps dam safety and security activities are non-discretionary Federally mandated actions, and are not subject to ESA consultation. Activities conducted as part of the Corps' regular inspections of infrastructure maintenance at Englebright Dam are restricted to the physical facilities at Englebright Dam and do not extend downstream to the lower Yuba River. Additionally, the continuation of these activities will have no effect on listed fish species or critical habitat in the lower Yuba River.

### **3.3 Englebright Dam and Reservoir Discretionary Activities**

#### **ONGOING MAINTENANCE OF RECREATIONAL FACILITIES ON AND AROUND ENGLEBRIGHT RESERVOIR**

Recreation-related operations and maintenance activities on and around Englebright Reservoir, as identified and described in the 2007 Harry L. Englebright Lake Operational Management Plan (Corps 2007c) are discretionary actions. The types of discretionary ongoing activities described in the 2007 Harry L. Englebright Lake Operational Management Plan (Corps 2007c) include:

- |                                                                    |                                                                   |
|--------------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Maintenance Facilities Upkeep             | <input type="checkbox"/> Grounds Maintenance                      |
| <input type="checkbox"/> Sign and Waterway Marker Maintenance      | <input type="checkbox"/> Roads and Parking Area Maintenance       |
| <input type="checkbox"/> Narrows Day Use Facility Improvements     | <input type="checkbox"/> Maintenance of Recreation Area Buildings |
| <input type="checkbox"/> Wastewater Monitoring Plan Implementation | <input type="checkbox"/> Campground Repairs and Renovations       |
| <input type="checkbox"/> Park Office Facility Upkeep               | <input type="checkbox"/> Campground Fire Break Clearing           |

Along the 24 miles of Englebright Reservoir's shoreline, the Corps has developed facilities including: (1) 96 campsites; (2) 9 picnic sites; (3) 1 group picnic shelter with 4 tables; (4) 2 boat launching ramps (Narrows and Joe Miller Ravine) maintained by the Corps; (5) a private marina operated by a concessionaire; and (6) 5 parking lots containing a total of 163 parking spaces. During the May 1 to September 30 recreation season, daily maintenance/safety inspections are

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conducted in all developed recreation areas. Facilities receiving consistent use and open to the public outside this time frame are also inspected daily (Corps 2007c). The Corps also inspects these recreation facilities during the October 1 to April 30 off-season to determine whether it needs to make repairs or rehabilitate campsites during this period.

The 800-acre Englebright Reservoir attracts large numbers boaters and campers during the summer months and has an excellent year-round trout fishery (Corps 2007c). Even though there are ten other reservoirs within a 50-mile radius, the boat-in-only style of camping and the scenic steep canyons make it a popular destination. Unlike most area reservoirs that are affected by summer draw-downs, Englebright Reservoir water surface levels remain fairly constant throughout the year. This results in an influx of park users during the late summer months, especially during drought years (Corps 2007c).

The Narrows and Joe Miller Recreation Areas are the primary visitor access points to the lake. Both have launch ramps, restrooms, and parking areas, but only Narrows has a picnic area with individual tables and a group picnic shelter that may be reserved. Privately-owned Skipper's Cove Marina is situated adjacent to these areas, and provides mooring to hundreds of houseboats and pleasure craft at its facility (Corps 2007c).

#### **CONTINUED ADMINISTRATION OF MAINTENANCE SERVICE CONTRACTS AT ENGLEBRIGHT DAM AND RESERVOIR**

According to the 2007 Harry L. Englebright Lake Operational Management Plan (Corps 2007c), the types of maintenance service contracts currently in use at Englebright Reservoir include the following:

- Garbage Pickup
- Water Quality Testing
- Janitorial Service

#### **CONTINUED ADMINISTRATION OF OUTGRANTS DESCRIBED IN THE 2007 HARRY L. ENGLEBRIGHT LAKE MANAGEMENT PLAN**

According to the 2007 Harry L. Englebright Lake Operational Management Plan (Corps 2007c), the Corps administers outgrants, which include permits, licenses, leases, and easements on project lands used to maintain public utilities and for right-of-way purposes. The administration

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of ongoing outgrants consists of monitoring for compliance of the terms and conditions of the outgrant. Outgrants monitored include the following:

- ❑ Road Right-of-Way to YCWA for Narrows II (Easement)
- ❑ Power Transmission Line Right-of-Way to PG&E for Narrows I (Easement)
- ❑ Right-of-Ways for access to FERC Power Generation Facilities to YCWA and PG&E (Easements)

### **3.3.1 Englebright Dam and Reservoir Discretionary Activities That Have No Effect on Listed Species or Critical Habitat**

Deconstruction of the proposed action has allowed the Corps to determine that several discretionary activities have no effect on listed fish species or critical habitat in the lower Yuba River. Consequently, these activities are not carried forward for Section 7 consultation. Each of these activities is further discussed below.

#### ***ONGOING MAINTENANCE OF RECREATIONAL FACILITIES ON AND AROUND ENGLEBRIGHT RESERVOIR***

Recreation-related operations and maintenance activities conducted by the Corps on and around Englebright Reservoir are restricted to the 800-acre Englebright Reservoir, the 24 miles of Englebright Reservoir shoreline, and various upland campsite areas in the vicinity of the reservoir.

Project maintenance is accomplished by using service contracts, maintenance staff and ranger staff in a variety of ways, including: (1) service contract specifications; (2) scheduled inspections of facilities, equipment, grounds, and resources; (3) specific job assignments to park staff; (4) specific assignments to park staff for inspection of contractor performance and maintenance/safety inspections; and (5) general project inspections by all employees during the course of daily activities. Work areas are cleaned at the end of each workday, with tools and materials put in their proper place. Clean, safe, and properly stored and maintained tools represent an important step toward efficient maintenance facilities.

During the May 1 to September 30 recreation season each year, daily maintenance/safety inspections are conducted by the Corps in all developed recreation areas around Englebright

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Reservoir. Facilities are cleaned, serviced, repaired, or replaced as applicable in order to maintain them in proper working condition. Facilities receiving consistent use and open to the public outside this time frame also are inspected daily.

Corps maintenance staff are responsible for miscellaneous repairs to existing roadways. Potholes, depressions and sub-grade failures to pavements are repaired promptly. With the recent addition of the computerized road inventory program at Englebright Reservoir, all roadways are inspected annually and minor repairs made and major overlay needs reported.

Campground repairs and renovations are periodically needed at the campsites around Englebright Reservoir. Common types of improvements include site leveling and pad enlargement, tie replacement, table and fire ring replacement, installing stairs, trail improvement, tree removal, and bulletin board replacement. Occasionally, campground fire breaks also need to be cleared of trees and vegetation.

With respect to grounds maintenance, most areas are mowed to minimize and prevent fire danger in and around recreation areas. Day use areas are also mowed and trimmed for visitor use and aesthetics. The Corps conducts periodic inspections of turf areas during the recreation season and maintenance is scheduled as needed for repair of holes, ruts, depressions, erosion, bare areas, overuse, weeds, disease, debris, and litter.

The Corps also conducts a project sign inventory each fall to determine signage needs for the following year. All signs are inspected for damage, vandalism, deterioration, fading, placement, secure fastening, and appropriateness. Repairs and replacements are made as necessary.

The foregoing activities are primarily conducted in upland areas around Englebright Reservoir and have limited or no potentiality to affect aquatic habitat in the reservoir. Any effects from these maintenance activities will be very localized, and thus will have no potential to transmit physical habitat alteration effects downstream to the lower Yuba River. Listed fish species do not inhabit Englebright Reservoir and there is no fisheries-related critical habitat designated in or around the reservoir. The continuation of the Corps' ongoing maintenance of recreational facilities on and around Englebright Reservoir will have no effect on listed fish species or critical habitat in the lower Yuba River. Consequently, these activities are not carried forward for Section 7 consultation. Other activities associated with ongoing maintenance of recreational

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facilities on or around Englebright Reservoir that have even a remote possibility of transmitting contaminants downstream to the lower Yuba River are addressed below.

***CONTINUED ADMINISTRATION OF MAINTENANCE SERVICE CONTRACTS AT ENGLEBRIGHT DAM AND RESERVOIR***

The Corps' discretionary activities include administration of the following maintenance service contracts at Englebright Reservoir: (1) garbage pickup; (2) janitorial service; and (3) water quality testing. Maintenance activities associated with these contracts would occur at and around Englebright Reservoir and at various upland campsite areas in the vicinity of the reservoir.

The administration of these maintenance service contracts constitutes oversight actions, and not activities that have the potential to affect listed species or their critical habitats in the lower Yuba River. These maintenance activities are primarily conducted in upland areas around Englebright Reservoir and have limited or no potentiality to affect aquatic habitat in the reservoir. Any potential effects associated with the conduct of these activities would be locally constrained, and would not extend to the lower Yuba River. The Corps' continuation of the maintenance of service contracts at and around Englebright Reservoir would have no effect on listed fish species or critical habitat in the lower Yuba River. Consequently, these activities are not carried forward for Section 7 consultation.

***CONTINUED ADMINISTRATION OF OUTGRANTS DESCRIBED IN THE 2007 HARRY L. ENGLEBRIGHT LAKE MANAGEMENT PLAN***

The Corps' discretionary activities include the continued administration of permits, licenses, leases, and easements related to the Corps' outgrants for project lands used to maintain public utilities and right-of-way purposes. Outgrants have been issued to various entities, examples of which include: (1) road right-of-way permits and easements; (2) telephone line license; (3) power transmission line easements; and (4) concessionaire lease at the Englebright Lake marina.

The Corps conducts annual compliance inspections on outgranted lands, including lands outgranted for commercial concessions. Major purposes of the inspections are to establish a good liaison with outgrantee, to provide assistance to outgrantee handling problems and planning, and to ascertain outgrantee compliance with terms of the outgrant (Corps 2007c). These inspections constitute administrative actions, and not activities that have the potential to

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affect listed species or their critical habitats in the lower Yuba River. Moreover, inspection activities conducted by the Corps are restricted to locations that do not extend to the lower Yuba River. Therefore, the Corps' continued administration of permits, licenses, leases, and easements is anticipated to have no effect on listed fish species or critical habitat in the lower Yuba River. Consequently, these activities are not carried forward for Section 7 consultation.

### **3.3.2 Englebright Dam Discretionary Activities that May Affect But Not Likely to Adversely Affect Listed Species or Critical Habitat**

The effects analysis presented in this BA indicated that the discretionary activities identified below may affect, but are not likely to adversely affect listed species or critical habitat in the lower Yuba River. The “*may affect, but is not likely to adversely affect*” conclusion is appropriate when effects to the species or critical habitat are expected to be beneficial, discountable, or insignificant. Because the Corps has determined that the following activities are not likely to adversely affect listed species or critical habitat, the Corps can request NMFS concurrence with this determination. If NMFS agrees, informal consultation on these activities is concluded with a letter concurring with the Corps' determination of “may affect, not likely to adversely affect”. Each of these activities is further discussed below.

The Corps conducts discretionary actions at and around Englebright Dam and Reservoir that have a remote possibility of transmitting contaminants downstream to the lower Yuba River, and could potentially affect listed species and their critical habitat within the Action Area of the lower Yuba River. The types of discretionary ongoing activities described in the 2007 Harry L. Englebright Lake Operational Management Plan (Corps 2007c) with the potential to transmit contaminants downstream include:

- Vehicle, Equipment, and Vessel Maintenance
- Boat Ramps and Courtesy Docks Maintenance
- Herbicide and Pesticide Application

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Additionally, regulatory buoy lines are located on the lake surface at Englebright Reservoir. Maintenance and repair of these waterway markers are performed by the Corps, as needed.

Potential effects associated with herbicide and pesticide application are addressed below in the next section titled “*Continued Administration of Maintenance Service Contracts at Englebright Dam and Reservoir*”.

#### ***ONGOING MAINTENANCE OF RECREATIONAL FACILITIES ON AND AROUND ENGLEBRIGHT RESERVOIR***

Maintenance of recreational facilities on and around Englebright Reservoir only has the potential to impact the lower Yuba River through the inadvertent release of contaminants into Englebright Reservoir. Recreation-related areas in the vicinity of Englebright Reservoir that may be subject to a contaminant spill include: (1) areas with high public visitation such as campgrounds, marinas, and launch ramps; (2) petroleum products storage and delivery points; (3) water intake points; and (4) septic distribution, pumping, and treatment systems.

Corps personnel are required to perform a walk-around inspection of their vehicle at least once a day and also to check oil, water, battery and tires when fueling the vehicle or at the start of their shift each day. When not in use, vehicles are parked inside the Corps’ secure Maintenance Shop Facility compound. Maintenance of all vehicles operated by the Corps is accomplished off-site at an authorized dealer. The maintenance of gasoline and diesel powered equipment is conducted by Corps’ contractor personnel, maintenance staff and equipment operators. All equipment is scheduled for routine maintenance by Corps maintenance personnel at prescribed intervals. Equipment operations are required to conduct equipment inspections prior to operating equipment at each use. Corps maintenance personnel also conduct periodic equipment inspections for quality of operation and safety purposes. The Corps also maintains three 20-21 foot aluminum jet boats and one 40-foot aluminum utility barge.

Boat ramps at Englebright Reservoir are located at the Narrows and Joe Miller Recreation Areas. Each boat ramp has a courtesy dock adjacent to it for visitor convenience. These ramps are inspected daily by the Corps, and kept clean of debris, driftwood and sediment. All parts are inspected and replaced or repaired as needed including decking, framing, flotation, fasteners, cables, and anchors. Docking is maintained with a slip-free surface. After flood waters recede, all launch ramps are inspected for damage or undercut concrete and repaired as needed. Signs

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are maintained at each boat ramp to prohibit parking on the ramps and swimming in their vicinity. The courtesy docks are repaired by the Corps, as necessary.

There have been few recreation-related hazardous materials release incidents at Englebright Reservoir. However, there have been minor instances including vehicles ending up in the lake during boat launching, and sinking boats. Notable spill incidents are as follows:

- ❑ On July 3, 1996, a water line on a boat broke while it was being trailered at the boat launch. The boat sank and released several quarts of oil that was contained with spill containment booms.
- ❑ On July 25, 1996, gasoline was spilled from a leaking fuel delivery line at the private Marina's fuel float. Emergency shut-off valves were quickly closed which limited the spill to approximately one gallon, which was contained at the site.
- ❑ On August 27, 1999, a Nevada County sanitation truck leaked hydraulic oil on the boat ramp and into the reservoir. Marina personnel who were first to arrive at the scene successfully deployed absorbent pads and spill containment booms.

Vehicle and equipment maintenance activities generally occur in the Corps' Maintenance Shop Facility compound, which is not proximal to Englebright Reservoir. Although vessel maintenance, and boat ramp and courtesy dock maintenance have a remote potential for hazardous materials or other hydrocarbon-based contaminants to be released and enter Englebright Reservoir, it is reasonable to expect that potential spills would be locally constrained, and the volume of contaminants resulting from a spill would be relatively minor in comparison to the total volume of water in the reservoir. For example and contextual purposes, given the descriptions of the above occurrences of minor contamination incidences, one gallon of contaminant spilled into Englebright Reservoir with an estimated storage capacity of about 50,000 AF would result in a concentration of less than about 1 part per 16 billion.

Long-term sublethal effects of oil pollution refer to interferences with cellular and physiological processes such as feeding and reproduction, and do not lead to immediate death of an organism (EPA 1986). Disruption of such behavior apparently can result from petroleum product concentrations in the range of 10 to 100 ug/L (EPA 1986). In addition to sublethal effects



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reported at the 10 to 100 ug/L level, it has been shown that petroleum products can harm aquatic life at concentrations as low as 1 ug/L (Jacobson and Boylan 1973 in EPA 1986).

For comparison purposes, 1 part per billion (ppb) is a microgram ( $\mu\text{g}$ ), or 1/1,000,000th of a gram, of a contaminant present in one liter of water or one kilogram of soil. Therefore, a petroleum product concentration of less than 1 part per 16 billion is considerably below the EPA (1986) thresholds of: (1) 10 to 100 ug/L (i.e., 10 to 100 ppb) that has been identified as having the potential to cause sublethal (e.g., behavioral) disruptions to aquatic life; and (2) 1 ug/L (1 ppb) shown to potentially harm aquatic life.

Additionally, Corps employees working at Englebright Reservoir are routinely trained in the storage and handling of hazardous materials. The Corps also implements the Harry L. Englebright Lake Operational Management Plan (Corps 2007c) for Englebright Reservoir, which includes a Hazardous Materials Plan and a Spill Prevention and Response Plan to address potential hazards associated with the accidental release of hydrocarbons into aquatic habitat in Englebright Reservoir. Although contaminants accidentally entering Englebright Reservoir would be subject to dilution, the containment procedures were developed to further restrict the movement of a spill to soil or water. Therefore, it is not reasonable to suggest that adverse effects to listed species in the lower Yuba River would occur as a result of Corps activities related to: (1) vehicle, equipment, and vessel maintenance; and (2) boat ramps and courtesy docks maintenance.

Overall, although the possibility is extremely remote given all of the above considerations, the continuation of these Corps' activities associated with ongoing maintenance of recreational facilities on and around Englebright Reservoir do have the potential to transmit contaminants downstream to the lower Yuba River. For this reason, these activities may affect, but are not likely to adversely affect listed fish species and critical habitat in the lower Yuba River.

#### ***CONTINUED ADMINISTRATION OF MAINTENANCE SERVICE CONTRACTS AT ENGLEBRIGHT DAM AND RESERVOIR***

The Corps' discretionary activities include administration of: (1) portable restroom pumping; and (2) herbicide application maintenance service contracts in areas surrounding Englebright Reservoir. These maintenance activities have a remote possibility to impact the lower Yuba River, as discussed below.

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Sewage from portable restroom pumping around the lake is recognized in the Englebright Operations Management Plan as a common hazardous material found on Corps' project lands (Corps 2007c), which could pose a threat to public and environmental health. For these reasons, portable restroom pumping is managed as part of the Corps' Wastewater Monitoring Plan, which addresses the management of wastewater from Corps' maintained facilities and monitoring of wastewater generated by houseboats on Englebright Reservoir. As described in Corps (2007c), the Corps has established a Hazardous Materials Plan and a Spill Prevention and Response Plan that provide spill response guidance and containment procedures to be implemented in the event of an emergency at or around Englebright Reservoir. Although wastewater accidentally entering Englebright Reservoir would be subject to dilution, the containment procedures were developed to further restrict the movement of a spill to soil or water.

Poison oak is a problem in day use areas, campgrounds, trails, roadsides, and operations areas. Because the presence of poison oak in high-use recreation and operations areas is an unacceptable nuisance and health hazard, exposure must be controlled or eliminated to reduce risk to visitors and Corps employees. Annual and perennial grasses, as well as assorted noxious herbaceous weeds, also are common to the area. This vegetation has the potential to grow very tall, blocking facilities, harboring insects in recreation sites and creating an extreme fire hazard when dry. Consequently, herbicide application is conducted, on an as-needed basis, around Englebright Reservoir, primarily at campsites, firebreaks and nature trails.

The areas of herbicide and pesticide application are generally located in more upland areas not proximal to Englebright Reservoir. Moreover, herbicides are applied in relative dilute quantities that would not represent significant contributions affecting water quality in Englebright Reservoir. Annual herbicide application around Englebright Reservoir is relatively minor. For example, a usage report dated January 29, 2008 indicates that 2 gallons of herbicide were used on 8 acres of land, and 3 gallons used on 10 acres of recreation and operation areas to control weeds, grasses and poison oak. Thus, any potential effects associated with the conduct of these activities would be locally constrained, and would not extend to the lower Yuba River. Also, the Corps Operations Management Plan for Englebright Reservoir includes a Hazardous Materials Plan and a Spill Prevention and Response Plan to address potential hazards associated with herbicide application. Given the minor amounts and upland areas of herbicide application, it is

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not reasonable to suggest that adverse effects to listed species in the lower Yuba River would occur.

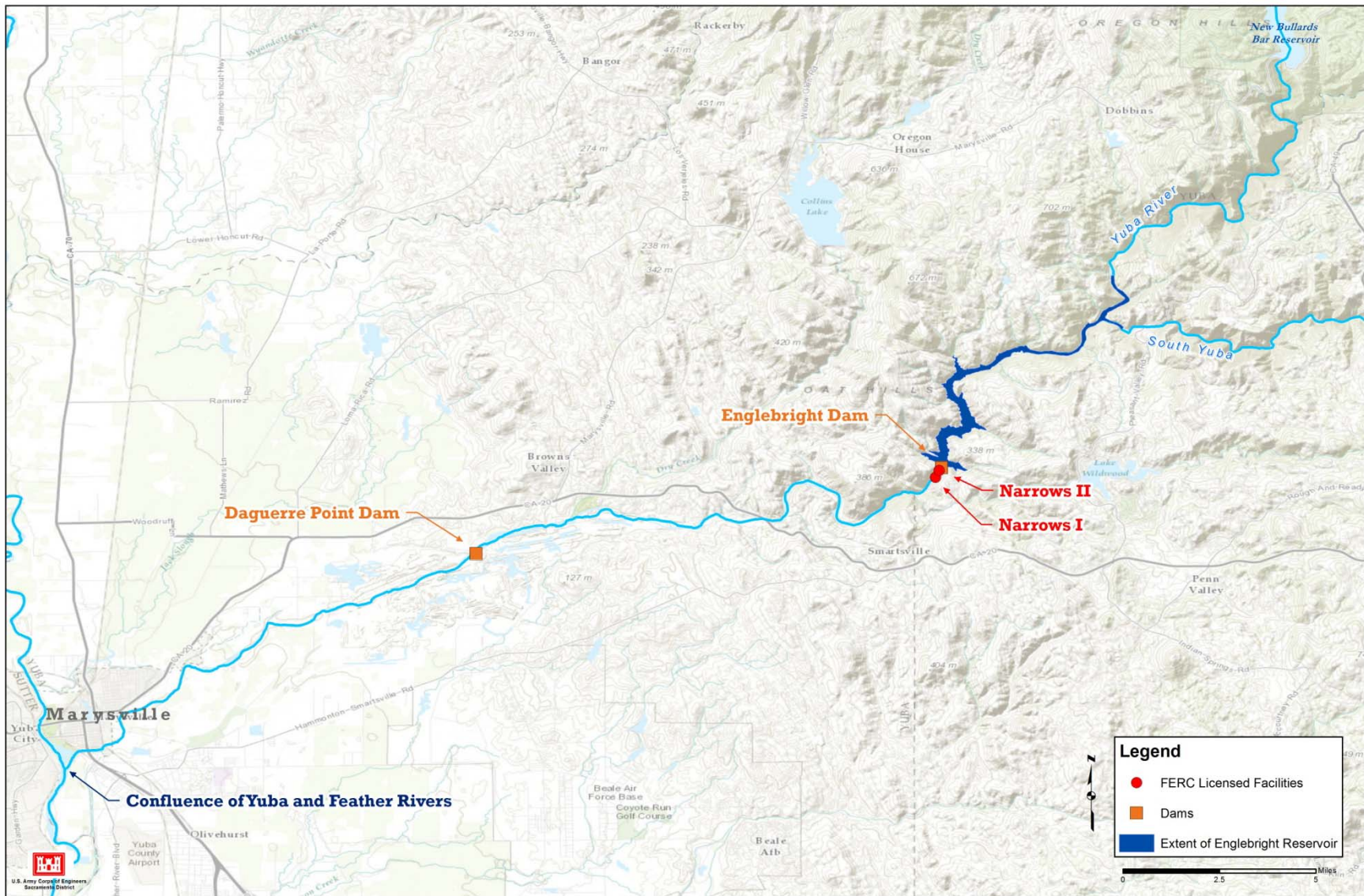
Overall, the continuation of the Corps' activities associated with continued administration of maintenance service contracts at Englebright Dam and Reservoir that have the potential to transmit contaminants downstream to the lower Yuba River may affect, but are not likely to adversely affect listed fish species or critical habitat in the lower Yuba River.

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## 4.0 Action Area

The Action Area is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 CFR §402.02). Englebright Dam is located on the Yuba River approximately 24 river miles upstream from the confluence of the Yuba River (39°14'20"N, 121°16'11"W, Yuba River river mile (RM) 23.9) with the Feather River in Yuba County, California (**Figure 2**). Englebright Dam is a concrete arch structure, 260 feet high and 1,142 feet across. The reservoir had an original storage capacity of 69,700 acre-feet (af), with a current capacity of approximately 50,000 af. It also has 800 surface acres that extends about 9 miles above the dam with 24 miles of shoreline (**Figure 3**).

The Action Area is comprised of Englebright Dam and Reservoir, in addition to the lower Yuba River, similar to the action area described in the 2013 BA for the Daguerre Point Dam (See Enclosure). For this consultation, the lower Yuba River portion starts at the base of Englebright Dam, and extends downstream to the confluence with the lower Feather River (39°07'46"N, 121°35'56"W, Yuba River mile 0). The lower Yuba River flows through the Yuba Goldfields (RM 7 to RM 15) with Daguerre Point Dam located at RM 11. Refer to Enclosure, the 2013 BA for Daguerre Point Dam (Chapter 3) for a complete description of the Action Area downstream from Englebright Dam.



**Figure 2. Area Map depicting location of the Englebright Dam and Reservoir on the Yuba River, FERC-licensed facilities downstream of Englebright, Daguerre Point Dam on the lower Yuba River, and the confluence with the Feather River.**

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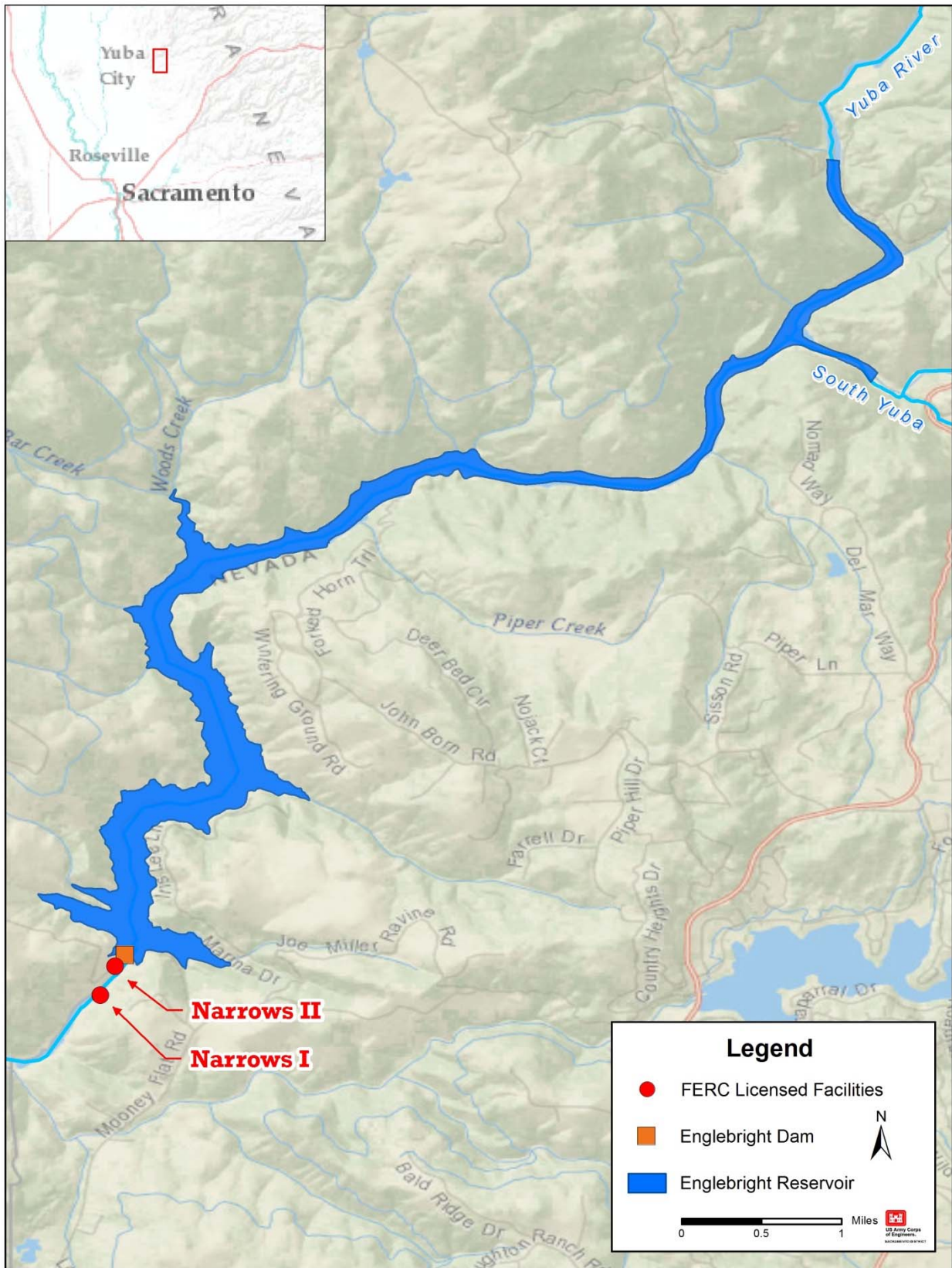


Figure 3. Map depicting Englebright Dam, the FERC-licensed facilities, and the upper extent of the reservoir.

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## 5.0 Status of Listed Species and Critical Habitat

Federally listed species known to occur in the project area, or may be affected by the project are the Central Valley ESU of spring-run Chinook salmon (*Oncorhynchus tshawytscha*) listed as “threatened”, the California Central Valley steelhead (*Oncorhynchus mykiss*) ESU listed as “threatened”, and the Southern DPS of North American green sturgeon (*Acipenser medirostris*) listed as “threatened”. In addition critical habitat has been designated for each of the listed species that includes the Lower Yuba River or portions of it. A full description of the listed species and respective critical habitats is discussed in the BA for Daguerre Point, Chapter 4 (See Enclosure). Spring-run Chinook Salmon and steelhead can access the Lower Yuba River up to Englebright Dam, and their critical habitat is designated accordingly. Green sturgeon do not access the Yuba River above Daguerre Point Dam, so their critical habitat is designated only up to Daguerre Point Dam. None of these listed species nor their critical habitat are located within the Englebright Reservoir or surrounding area above Englebright Dam. For the purpose of this consultation, effects are evaluated for listed species and critical habitat located in the Lower Yuba River downstream from Englebright Dam.

### 5.1 Central Valley Spring-run Chinook Salmon ESU

#### 5.1.1 ESA Listing Status

On September 16, 1999, NMFS listed the Central Valley ESU of spring-run Chinook salmon (*Oncorhynchus tshawytscha*) as a “threatened” species (64 FR 50394). On June 14, 2004, following a five-year species status review, NMFS proposed that the Central Valley spring-run Chinook salmon remain listed as a threatened species based on the Biological Review Team strong majority opinion that the Central Valley spring-run Chinook ESU is “likely to become endangered within the foreseeable future” due to the greatly reduced distribution of Central Valley spring-run Chinook salmon and hatchery influences on the natural population. On June 28, 2005, NMFS reaffirmed the threatened status of the Central Valley spring-run Chinook

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salmon ESU, and included the FRFH spring-run Chinook salmon population as part of the Central Valley spring-run Chinook salmon ESU (70 FR 37160).

Section 4(c)(2) of the ESA requires that NMFS review the status of listed species under its authority at least every five years and determine whether any species should be removed from the list or have its listing status changed. In August 2011, NMFS completed a second 5-year status review of the Central Valley spring-run Chinook salmon ESU. Prior to making a determination on whether the listing status of the ESU should be uplisted (i.e., threatened to endangered), downlisted, or remain unchanged, NMFS considered: (1) new scientific information that has become available since the 2005 status review (Good et al. 2005); (2) an updated biological status summary report (Williams et al. 2011) intended to determine whether or not the biological status of spring-run Chinook salmon has changed since the 2005 status review was conducted (referred to as the “viability report”); (3) the current threats to the species; and (4) relevant ongoing and future conservation measures and programs.

Based on a review of the available information, NMFS (2011) recommended that the Central Valley spring-run Chinook salmon ESU remain classified as a threatened species. NMFS’ review also indicates that the biological status of the ESU has declined since the previous status review in 2005 and, therefore, NMFS recommended that the ESU’s status be reassessed in 2 to 3 years if it does not respond positively to improvements in environmental conditions and management actions. As part of the 5-year review, NMFS also re-evaluated the status of the FRFH stock and concluded that it still should be considered part of the Central Valley spring-run Chinook salmon ESU.

In addition to Federal regulations, the California Endangered Species Act (CESA, Fish and Game Code Sections 2050 to 2089) establishes various requirements and protections regarding species listed as threatened or endangered under state law. California’s Fish and Game Commission is responsible for maintaining lists of threatened and endangered species under CESA. Spring-run Chinook salmon in the Sacramento River Basin, including the lower Yuba River, was listed as a threatened species under CESA on February 2, 1999.

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## 5.1.2 Critical Habitat Designation

Critical habitat was designated for the Central Valley spring-run Chinook salmon ESU on September 2, 2005 (70 FR 52488), and includes stream reaches of the Feather and Yuba rivers, Big Chico, Butte, Deer, Mill, Battle, Antelope, and Clear creeks, the Sacramento River, and portions of the northern Delta (NMFS 2009a). On the lower Yuba River, critical habitat is designated from the confluence with the Feather River upstream to Englebright Dam. This critical habitat includes the stream channels in the designated stream reaches and their lateral extents, as defined by the ordinary high-water line. In areas where the ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation (defined as the level at which water begins to leave the channel and move into the floodplain; it is reached at a discharge that generally has a recurrence interval of 1 to 2 years on the annual flood series; Bain and Stevenson 1999; 70 FR 52488, September 2, 2005).

## 5.2 Central Valley Steelhead DPS

### 5.2.1 ESA Listing Status

On March 19, 1998 (63 FR 13347) NMFS listed the California Central Valley steelhead ESU as “threatened”, concluding that the risks to Central Valley steelhead had diminished since the completion of the 1996 status review based on a review of existing and recently implemented state conservation efforts and federal management programs (e.g., CVPIA, AFRP, CALFED) that address key factors for the decline of this species. The California Central Valley steelhead ESU included all naturally spawned populations of steelhead in the Sacramento and San Joaquin rivers and their tributaries, but excluded steelhead from the tributaries of San Francisco and San Pablo bays (NMFS 2004b).

On June 14, 2004, NMFS proposed listing determinations for 27 ESUs of West Coast salmon and *O. mykiss*, including the California Central Valley steelhead ESU. In the proposed rule, NMFS concluded that steelhead were not in danger of extinction, but were likely to become endangered within the foreseeable future throughout all or a significant portion of their range and, thus, proposed that steelhead remain listed as threatened under the ESA. Steelhead from the

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Coleman National Fish Hatchery and the FRFH, as well as resident populations of *O. mykiss* (rainbow trout) below impassible barriers that co-occur with anadromous populations, were included in the California Central Valley steelhead ESU and, therefore, also were included in the proposed listing.

During the 2004 comment period on the proposed listings, the USFWS provided comments that the USFWS does not use NMFS' ESU policy in any USFWS ESA listing decisions. As a result of the comments received, NMFS re-opened the comment period to receive comments on a proposed alternative approach to delineating "species" of West Coast *O. mykiss* (70 FR 67130). NMFS proposed to depart from past practice of applying the ESU Policy to *O. mykiss* stocks, and instead proposed to apply the DPS Policy in determining "species" of *O. mykiss* for listing consideration. NMFS noted that within a discrete group of *O. mykiss* populations, the resident and anadromous life forms of *O. mykiss* remain "markedly separated" as a consequence of physical, physiological, ecological, and behavioral factors, and may therefore warrant delineation as separate DPSs (71 FR 834).

NMFS issued a policy for delineating distinct population segments of Pacific salmon in 1991 (56 FR 58612; November 20, 1991). Under this policy, a group of Pacific salmon populations is considered an "Evolutionarily Significant Unit" if it is substantially reproductively isolated from other conspecific populations, and it represents an important component in the evolutionary legacy of the biological species. Further, an ESU is considered to be a "Distinct Population Segment" (and thus a "species") under the ESA. In 1996, NMFS and USFWS adopted a joint policy for recognizing DPSs under the ESA (DPS Policy; 61 FR 4722; February 7, 1996). The DPS Policy adopted criteria similar to, but somewhat different from, those in the ESU Policy for determining when a group of vertebrates constitutes a DPS – The group must be discrete from other populations, and it must be significant to its taxon. A group of organisms is discrete if it is "*markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, and behavioral factors.*" Significance is measured with respect to the taxon (species or subspecies) as opposed to the full species (71 FR 834). Although the ESU Policy did not by its terms apply to steelhead, the DPS Policy stated that NMFS will continue to implement the ESU Policy with respect to "Pacific salmonids" (which included *O. mykiss*). In a previous instance of shared jurisdiction over a species (Atlantic salmon), NMFS and USFWS

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used the DPS Policy in their determination to list the Gulf of Maine DPS of Atlantic salmon as endangered (65 FR 69459; November 17, 2000).

Given NMFS and USFWS shared jurisdiction over *O. mykiss*, and consistent with joint NMFS and USFWS approaches for Atlantic salmon, it was concluded that application of the joint DPS policy to was logical, reasonable, and appropriate for identifying DPSs of *O. mykiss* (71 FR 834). Moreover, NMFS determined that use of the ESU policy — originally intended for Pacific salmon — should not continue to be extended to *O. mykiss*, a type of salmonid with characteristics not typically exhibited by Pacific salmon (71 FR 834).

On January 5, 2006 NMFS issued a final decision that defined Central Valley steelhead as a DPS rather than an ESU, and retained the status of Central Valley steelhead as threatened (71 FR 834). The DPS includes all naturally spawned anadromous *O. mykiss* (steelhead) populations below natural and manmade impassable barriers in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco and San Pablo Bays and their tributaries (63 FR 13347). Steelhead in two artificial propagation programs — the Coleman National Fish Hatchery, and FRFH steelhead hatchery programs are considered to be part of the DPS. NMFS determined that these artificially propagated stocks are no more divergent relative to the local natural population(s) than what would be expected between closely related natural populations within the DPS (71 FR 834).

### **5.2.2 Critical Habitat Designation**

On February 16, 2000 (65 FR 7764), NMFS published a final rule designating critical habitat for Central Valley steelhead. This critical habitat includes all river reaches accessible to listed steelhead in the Sacramento and San Joaquin rivers and their tributaries in California, including the lower Yuba River upstream to Englebright Dam. NMFS proposed new Critical Habitat for spring-run Chinook salmon and Central Valley steelhead on December 10, 2004 (69 FR 71880) and published a final rule designating critical habitat for these species on September 2, 2005. This critical habitat includes the lower Yuba River (70 FR 52488) from the confluence with the lower Feather River upstream to Englebright Dam.

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## 5.3 Southern DPS of North American Green Sturgeon

### 5.3.1 ESA Listing Status

The green sturgeon is the most widely distributed member of the sturgeon family Acipenseridae (70 FR 17386). North American green sturgeon are found in rivers from British Columbia south to the Sacramento River, California, and their ocean range is from the Bering Sea to Ensenada, Mexico. In assessing North American green sturgeon status, NMFS determined that two DPSs exist. The northern DPS is made up of known North American green sturgeon spawning (or single stock populations) in the Rogue, Klamath and Eel rivers. In 2005, the southern DPS was believed to contain only a single spawning population in the Sacramento River (70 FR 17386). However, four fertilized green sturgeon eggs collected in 2011 near the Thermalito Afterbay Outlet provide the first documentation of at least some successful spawning in the Feather River (A. Seesholtz, CDWR, pers. comm., June 16, 2011).

The Southern DPS of North American green sturgeon (*Acipenser medirostris*) was listed as a federally threatened species on April 7, 2006 (71 FR 17757) and includes the green sturgeon population spawning in the Sacramento River and utilizing the Sacramento-San Joaquin River Delta, and San Francisco Estuary. NMFS (2009b) *Draft Environmental Assessment for the Proposed Application of Protective Regulations Under Section 4(D) of the Endangered Species Act for the Threatened Southern Distinct Population Segment of North American Green Sturgeon* indicated that the Southern DPS of North American green sturgeon faces several threats to its survival, including the loss of spawning habitat in the upper Sacramento River, and potentially in Section 4(c)(2) of the ESA requires that NMFS review the status of listed species under its authority at least every five years and determine whether any species should be removed from the list or have its listing status changed. In October 2012, NMFS noticed the initiation of the 5-year status review of the Southern DPS of North American green sturgeon (77 FR 64959).

The purpose of the 5-year review is to ensure the accuracy of the listing classification for the Southern DPS of North American green sturgeon. A 5-year review is based on the best scientific and commercial data available; therefore, NMFS is requesting submission of any such information on the Southern DPS that has become available since the listing determination in

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2006. To ensure that the 5-year review is complete and based on the best available scientific and commercial information, NMFS is soliciting new information from the public, governmental agencies, Tribes, the scientific community, industry, environmental entities, and any other interested parties concerning the status of the Southern DPS since the listing determination in 2006 (77 FR 64959).

### **5.3.2 Critical Habitat Designation**

On October 9, 2009, NMFS (74 FR 52300) designated critical habitat for the Southern DPS of North American green sturgeon. This designated critical habitat includes most of the DPS's occupied range, including: (1) coastal marine waters from Monterey Bay to the Washington/Canada border; (2) coastal bays and estuaries in California, Oregon, and Washington; and (3) fresh water rivers in the Central Valley, California. In the Central Valley, critical habitat for green sturgeon includes the Sacramento River, lower Feather River, lower Yuba River, the Sacramento-San Joaquin River Delta, and San Francisco Estuary. NMFS (74 FR 52300) defined specific habitat areas in the Sacramento, Feather, and Yuba rivers in California to include riverine habitat from each river mouth upstream to and including the furthest known site of historic and/or current sighting or capture of North American green sturgeon, as long as the site is still accessible. Critical habitat in the lower Yuba River includes the stream channels to the ordinary high water line extending from the confluence with the mainstem Feather River upstream to Daguerre Point Dam.

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## 6.0 Effects Determination and Conclusion

This evaluation has identified two categories of activities within the Corps' Project Description that may affect listed species or critical habitat. These are summarized below.

### ***ONGOING MAINTENANCE OF RECREATIONAL FACILITIES ON AND AROUND ENGLEBRIGHT RESERVOIR***

Maintenance of recreational facilities on and around Englebright Reservoir only has the potential to impact the lower Yuba River through the inadvertent release of contaminants into Englebright Reservoir. Overall, although the possibility is extremely remote given all of the above considerations previously described, the continuation of these Corps' activities associated with ongoing maintenance of recreational facilities on and around Englebright Reservoir do have the potential to transmit contaminants downstream to the lower Yuba River. However, due to the measures taken and spill response plans in place, the likelihood of contaminant levels exceeding thresholds for adverse effects is unlikely. For this reason, these activities may affect, but are not likely to adversely affect listed fish species and critical habitat in the lower Yuba River.

### ***CONTINUED ADMINISTRATION OF MAINTENANCE SERVICE CONTRACTS AT ENGLEBRIGHT DAM AND RESERVOIR***

The Corps' discretionary activities include administration of: (1) portable restroom pumping; and (2) herbicide application maintenance service contracts in areas surrounding Englebright Reservoir. These maintenance activities have a remote possibility to impact the lower Yuba River, as discussed below.

Overall, the continuation of the Corps' activities associated with continued administration of maintenance service contracts at Englebright Dam and Reservoir that have the potential to transmit contaminants downstream to the lower Yuba River have the potential to affect listed species. However, due to the measures incorporated and spill response plans in place, the likelihood of contaminant levels exceeding thresholds for adverse effects is unlikely. For this reason, these activities may affect, but are not likely to adversely affect listed fish species and critical habitat in the lower Yuba River.



## 7.0 List of Contacts/Contributors/Preparers

<b>U.S. Army Corps of Engineers, Sacramento District</b>		
<i>1325 J Street</i>		
<i>Sacramento, CA 95814</i>		
<b>Name</b>	<b>Title</b>	<b>Email</b>
Randy Olsen	Chief, Operations and Readiness Branch	Randy.P.Olsen@usace.army.mil
Doug Grothe	Park Manager, Englebright and Martis Creek Lakes	Doug.Grothe@usace.army.mil
Lisa Clay	Assistant District Counsel	Lisa.H.Clay@usace.army.mil
Brian Mulvey	Senior Fishery Biologist/Environmental Planner	Brian.M.Mulvey@usace.army.mil
Terry Hershey Fisher	District Natural Resources Specialist	Theresa.H.Fisher@usace.army.mil

<b>HDR Engineering Inc.</b>		
<i>2365 Iron Point Road, Suite 300, Folsom, CA 95630</i>		
<i>(916) 817-4700</i>		
<b>Name</b>	<b>Title</b>	<b>Email</b>
Paul Bratovich	Principal Fisheries Scientist	Paul.Bratovich@hdrinc.com
Dianne Simodynes	Senior Environmental Scientist	Dianne.Simodynes@hdrinc.com
Jose Perez-Comas	Senior Environmental Scientist	Jose.Perez-Comas@hdrinc.com
Morgan Neal	Fisheries Biologist	Morgan.Neal@hdrinc.com
Tal Link	Junior Environmental Planner	Tal.Link@hdrinc.com
Andy Arnold	CAD/GIS Technician	Andy.Arnold@hdrinc.com
Janna Huchet	Project Coordinator	Janna.Huchet@hdrinc.com

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Enclosure

Biological Assessment

for the

Authorized Operations and Maintenance of  
Existing Fish Passage Facilities at Daguerre  
Point Dam on the Lower Yuba River

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