State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

*Resource Name or #: Klamath River Hydroelectric Project District – COPCO #2

P1. Other Identifier:

*P2. Location: ☐ Not for Publication X Unrestricted

*a. County: Siskiyou County, CA

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Date: T ; R ; ¼ of ¼ of Sec ; M.D. B.M.

c. Address: City: Zip:

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: See attached map

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) Construction of the COPCO #2 development began less than two years after the expansion of COPCO #1 in 1922. The site was scouted in the initial 1911-13 survey of the Klamath River, but construction was delayed to save funding and await increased demand for electricity. By the mid-1920s, that increased demand was realized with the rapid expansion of the timber industry and heavier electrical usage in the company's service area. COPCO #2 dam was completed in 1925 and began commercial operation on July 20, 1925. It is 33 feet high and has a crest length of 278 feet, small by comparison to COPCO #1. The reservoir behind the dam is also small, with only 73 acre-feet of capacity and no active storage. Therefore, during typical operations, the COPCO #2 powerhouse operates in-sync with the COPCO #1 powerhouse. COPCO #2 generation and hydraulic discharge must operate exactly synchronously with COPCO #1 generation and hydraulic discharge.

*P3b. Resource Attributes: (List attributes and codes) HP2 single family property, HP3 multi-family property, HP4 ancillary building, HP6 1 story office building, HP9 public utility building, HP11 engineering structure, HP15 educational building, HP20 aqueduct (penstocks), HP21 dam, HP22 reservoir, HP46 stone wall

*P4. Resources Present: ☐Building ☐Structure ☐Object ☐Site ☐District X Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.) See continuation sheets.

P5b. Description of Photo: (View, date, accession #) COPCO #2 Dam, July 2003

*P6. Date Constructed/Age and Sources: X Historic
☐Prehistoric ☐Both
1925

*P7. Owner and Address:
PacifiCorp
825 N. E. Multnomah, Suite 1500
Portland, OR 97232

P8. Recorded by: (Name, affiliation, and address) L. Durio, CH2M HILL, 1515 Poydras Street, Suite 2121, New Orleans, LA 70112

*P9. Date Recorded: July 2003

*P10. Survey Type: (Describe) Intensive Survey

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") see continuation sheet

*Attachments: ☐NONE X Location Map ☐Sketch Map X Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

The **COPCO #2 dam** is located on the Klamath River approximately 35 miles downstream of Upper Klamath Lake, near the Oregon/California border and approximately a quarter mile downstream of the COPCO #1 powerhouse. The dam is a concrete gravity structure with a tunnel intake and a 145-foot long gated spillway section with 5 gates. An ungated corrugated metal pipe provides instream releases into the Klamath River below the dam. The headgate was rebuilt in 1996. The tunnel intake is 53 feet long and incorporates trashracks and a roller-mounted (caterpillar) gate with an electric motor-driven wire rope hoist. The **waterway** consists of 2,440 feet of concrete-lined tunnel, 1,313 feet of wood stave pipeline, an additional 1,110 feet of concrete-lined tunnel, and two steel penstocks. Diameter of the tunnel and wood stave pipeline sections is a constant 16 feet. Diameter of the twin steel penstocks ranges from 16 feet at the tunnel portal to 8 feet at the powerhouse inlet. At the time of construction, the wood stave flowline, at over 1,300 feet long and 16 feet in diameter, was one of the largest in the country. In addition to the dam and the waterway, this site contains a timber crib and the remains of a coffer (wing) dam, associated with the construction of the dam. The **timber crib** is located on the south bank of the Klamath River, above the dam. The **coffer or wing dam** is in the river between COPCO #1 dam and COPCO #2 dam. It is normally located below the waterline.

The **COPCO #2 powerhouse** is located at the bottom of the penstock run, on a small flat shelf next to the river. It is a reinforced, poured concrete structure that houses two turbine-generators. It is a full story with a mezzanine level, over a basement. The structure has a rectangular footprint and a front gable roof with a monitor top along the ridge. It is three bays wide and five bays long. Each bay is delineated by an engaged pilaster. Set into panels within the bays, the windows are multi-light industrial steel sash, with operable hopper sections. In each bay, the top row of windows is separated from the rest of the bay by a wide, flat band, except in the front façade, center bay. On the front (south) and rear (north) facades, the center bay is dominated by a metal roll-up door. On the front (south) facade, the roll-up door is behind metal-framed, chain link gates – one pedestrian gate and one large double-leaf gate. A concrete header defines the top of the opening, which is somewhat shorter than the flanking window openings. Above this door opening in the center bay is a row of three 15-light windows. On the rear (north) facade, the center bay contains the roll-up door and a row of windows on either side of it. On each side of the doorway, there are three windows – the top and bottom windows are 6-lights each, while the center window is 18-lights. The door opening is even shorter relative to the window openings than the one on the front façade, and it lacks the separate header. A large, recessed square panel above the doorway aligns with the top of the flanking windows. Also on this rear facade, the column of windows on the east side consists of only the top, 15-light window. Below that is a recessed panel that contains two small metal vents.

The powerhouse is remarkably well designed for an industrial building in an isolated setting. Each pilaster on the front, rear and west side facades is adorned with a stylized metal light fixture bracket. Unfortunately, none of them retain their original shade or globe. The four on the front and rear facades cast light up instead of down and have been altered by the addition of non-original shades and/or lighting elements. The gable ends of the building are articulated by three recessed panels above a wide, flat band that appears to originally have had a cornice across it. The walls terminate in a substantial, projecting molded metal cornice that returns around the corners. Marks on the concrete bands that span the gable ends appear to indicate that the cornice or a similar construction detail originally ran all the way across the gable ends. The deep overhang on the gable ends is faced with a tongue and groove soffit.

The powerhouse contains two turbine-generators. The generators are on the main level, while the turbines are housed below. There is also an upper mezzanine level that runs along the east wall. The turbine-generators are vertical-shaft, Francis-type hydraulic turbine and synchronous generator sets. The turbine for Unit #1 was overhauled and the runner replaced in 2000. Originally an Allis-Chalmers unit, it is now an American Hydro unit. Unit #2 still retains its original Allis-Chalmers turbine. The generators were manufactured by General Electric. In the basement, where the turbines are located, are screened, metal louvered openings that look out to the concrete tailrace apron. The building is in good condition and has good integrity.

The powerhouse site also includes an elaborate mortared and coursed stone retaining wall south of the powerhouse, at the step-up transformers. This wall was extended in 1996.

Southwest of the powerhouse is the **control center building (5.6)**. This is a non-historic building that appears to be a modular/pre-fabricated structure, basically rectangular in plan with a very shallow side gable roof. The protruding entry has a shed roof. The building is constructed on a concrete foundation and is clad in metal panel siding. It has 1/1 fixed aluminum windows and metal doors. The building is in good condition but is not a contributing element.

West of the control center building is a large substation. All of this site is contained within a chain link fence topped with barbed wire. On the west side of the substation is a service area, with the maintenance/shop building and the gas and oil storage shed. The **maintenance building (5.7)** is a modern, five bay warehouse clad in metal R-panels. It has a shallow side-gable roof. The front (south) facade is dominated by five large roll-up doors. The side (east) facade has one (cont.)

metal pedestrian door and one single-light window. Constructed in 1991, the building is in excellent condition but is non-contributing.

Northeast of the maintenance building is a small metal building that appears to be an **oil and gas storage house**. It is wood-framed with corrugated metal walls and roof. It sits on a log or timber foundation. The eaves reveal exposed purlins and rafter tails. The front (south) façade contains a pair of metal-clad sliding doors on an overhead rail. There appears to be no further fenestration on the building. Although the construction date is unknown, it may date from the construction period of COPCO #2. It is in fair condition with good integrity.

COPCO #2 Village

Part of the COPCO #2 development is COPCO #2 village, which includes dwellings built for workers and other company employees, storage buildings, a former cookhouse/bunkhouse, a later bunkhouse/rooming house, and the 1965 school building that is now used as a community center. The village appears to have been an outgrowth of "Middle Camp," which was built during the initial construction period of the COPCO #2 development. It appears to be mostly vacant.

The former **cookhouse/bunkhouse** is a two story, wood frame building that faces north. It is two bays wide with a rectangular plan. Built on a concrete foundation, it is now clad in vinyl siding with aluminum replacement sash in the windows. Many of the replacement sash mimic the 1/1 configuration of the original wood sash, as evidenced by a 1942 photograph. The front gable roof is standing seam metal, and it retains its interior chimney on the western slope of the roof. A shed roof protects the front door, which is accessed by concrete steps with a metal handrail. The open eaves have been covered with vinyl soffits. Originally, the building had exposed rafter tails, elbow braces at the corners of the eaves, and decorative gable bracing, but that has all been removed. The building is in good condition, with fair integrity.

Just north of the former cookhouse/bunkhouse is a **modern bunkhouse** or rooming house. It faces west, with a large vacant lot or green space in front of it. It is a single story building on a concrete foundation. It features a projecting central entry section, with a three bay wing extending to both sides. The asphalt shingle roof is an intersecting gable with exposed rafter tails. The windows are sliding aluminum sash. The exterior is mainly wood paneling, but there is also masonite siding, and the gable ends feature rough-hewn wood siding. The building has a concrete front porch under the front gable, with triple wood posts at the outside corners. The building appears to date from the 1960s. It is in good condition but appears to be non-contributing.

West of the former cookhouse/bunkhouse is a single story, two bay **garage/storage building**. It appears to be an accessory building with no primary building extant. Built on a concrete foundation, it has a shallow front gable roof of asphalt shingle with exposed rafter tails. It is clad in 8-inch lapped wood siding and has aluminum sash windows on the rear facade. The front facade features two paneled roll-up garage doors. There is a pedestrian door with a single-light window on each side facade. The front gable end is punctuated by a small louvered vent. An accessory shed is attached on the east side facade. The building is in good condition with good integrity.

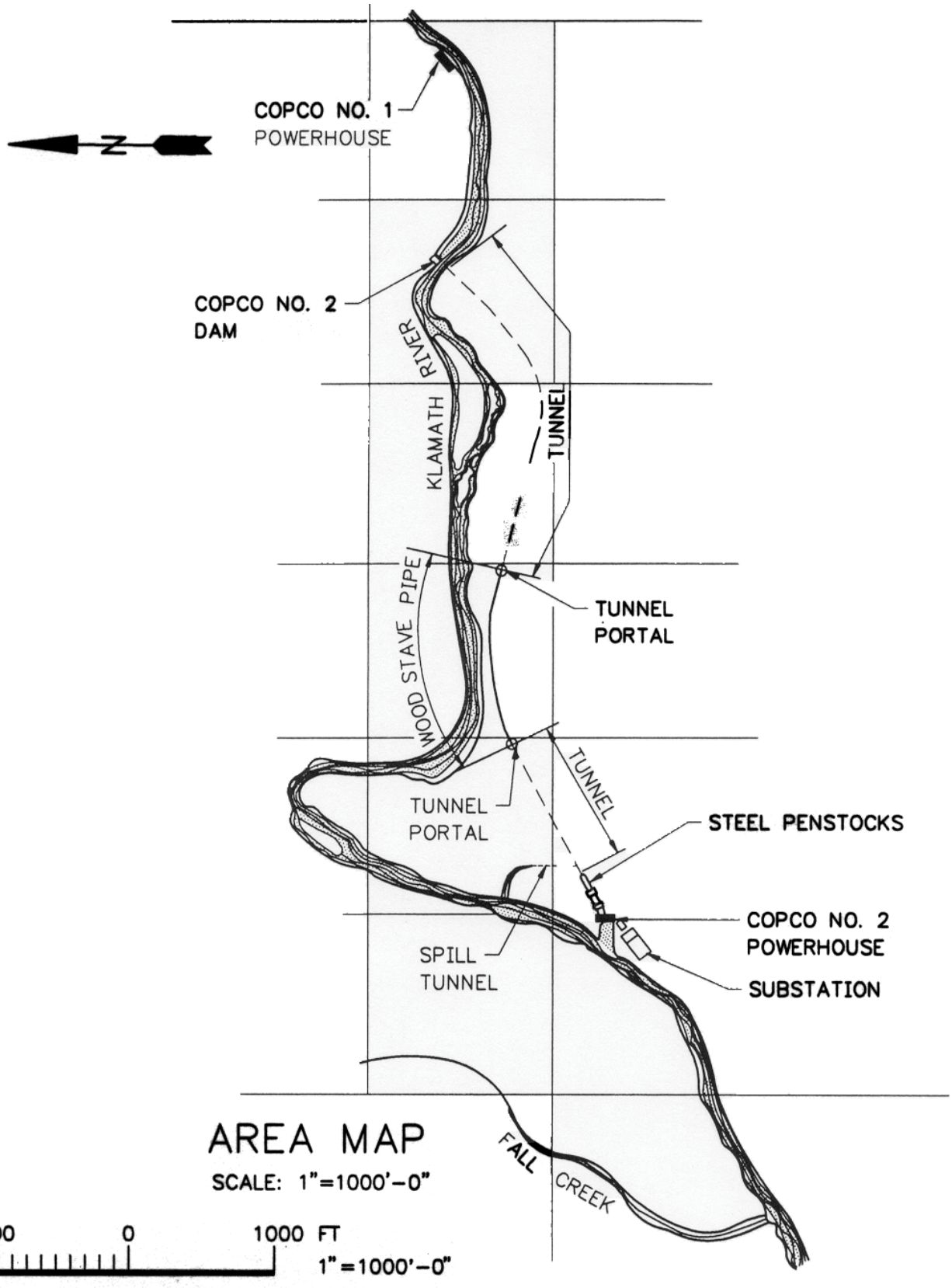
In COPCO #2 village, there are a number of **ranch-style houses,** probably dating from the early 1960s. They are all identical in appearance. They each have a rectangular footprint with a shallow side gable roof of R-panel metal and wide, boxed eaves. They are clad in 8-inch lapped wood siding on a concrete foundation. On one end is a 15-panel, aluminum overhead garage door. The windows are aluminum framed, either 1X1 sliding or sidelights flanking a picture window. The entry door is inset under the main roof, and there is an additional door near the garage. Both doors are covered by aluminum screen/storm doors. There is a large, brick, interior chimney set in the rear slope of the roof.

The village also contains a 1920s **bungalow** with garage, nearly identical to the bungalows found at COPCO #1. It is one story, three bays wide, with a front gable, asphalt shingle roof and concrete foundation. It is wood frame construction with drop wood siding and substantial surrounds on the doors and windows. The eaves have exposed rafter tails, and the front gable end is pierced by a wooden louvered vent. The front porch has a front gable roof supported on two battered wooden columns. It has wood decking and a tongue and groove ceiling. The original wood front door has a single panel below a single light window. On either side of the front porch is a set of paired windows. The sash have been replaced by 1/1 aluminum sash. On the rear facade, original windows have also been replaced by aluminum sliding sash. The rear door is the original 5-panel wood door, shielded by a shed roof overhang. The garage to the rear of the house has drop siding to match that of the house. Also on a concrete foundation, it has a front gable roof with a sliding, top rail, vehicular door that is also of drop siding. There is also a 5-panel door offset in this facade. This site has an expansive planted lawn with mature trees, including cottonwoods. A dry laid stone retaining wall encircles the property on the north and west sides.

There are three modern, modular or **prefabricated houses** on the village site. A typical example is the one next to the 1965 school house. Single story and rectangular in plan, it is clad in board and batten siding and has a corrugated metal roof with a substantial eave overhang. The windows are aluminum framed. A deep inset in the center of the front façade protects the entry door and a picture window. Immediately adjacent to this is a paneled overhead garage door. At least two of these houses (cont.)

date from 1985, when they were constructed as operator's houses. They are all in good condition but are non-contributing.

The 1965 **school house**, now used as a community center, replaced the 1922 school house at Fall Creek. It is a one story, wood framed building on a concrete foundation and is clad in masonite siding. It has a side gable roof of standing seam metal with deep eaves. Half of the front façade is dominated by large aluminum-framed windows. A relatively small building for a school, it is architecturally unassuming. It is in good condition and represents a continuation of the social development of the COPCO #2 village. While compatible with the project's history, it is considered a non-contributing resource due to its construction after the defined period of significance.


N
COPCO NO. 1
POWERHOUSE
COPCO NO. 2
DAM
KLAMATH RIVER
TUNNEL
WOOD STAVE PIPE
TUNNEL
PORTAL
TUNNEL
PORTAL
TUNNEL
STEEL PENSTOCKS
COPCO NO. 2
POWERHOUSE
SPILL
TUNNEL
SUBSTATION
FALL CREEK
AREA MAP
SCALE: 1"=1000'-0"
1000 0 1000 FT
1"=1000'-0"

View: COPCO #2 Timber Cribbing above Dam (photo provided by Patrick O'Bannon, Historic Research Associates) September 2002

View: COPCO #2 Remains of Coffer/Wing Dam (photo provided by Patrick O'Bannon, Historic Research Associates) September 2002

View: COPCO #2 Waterway - Wood Stave – July 2003

View: COPCO #2 Waterway – Steel Penstocks – July 2003

View: COPCO #2 Powerhouse – front (south) facade – July 2003

View: COPCO #2 Powerhouse – west side façade – July 2003

View: COPCO #2 Powerhouse – rear (north) façade – July 2003

View: COPCO #2 Powerhouse Interior – both generators – view from mezzanine level – July 2003

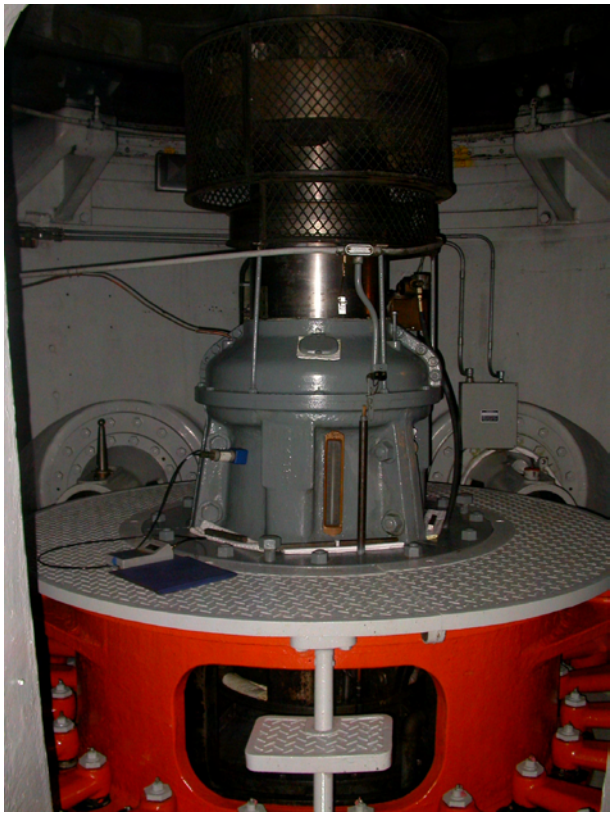
View: COPCO #2 Powerhouse Interior – Generator #21 – July 2003

View: COPCO #2 Powerhouse Interior – Generator #22 – July 2003

View: COPCO #2 Powerhouse Interior Mezzanine Level – July 2003

View: COPCO #2 Turbine Housing Unit #2 in Powerhouse Basement – July 2003

View: COPCO #2 Turbine Unit #2 Plate – July 2003



View: COPCO #2 Turbine Unit #2 – in Powerhouse Basement – July 2003

View: COPCO #2 Turbine Housing Unit #1 – in Powerhouse Basement – July 2003

View: COPCO #2 Turbine Unit #1 Plate – July 2003

View: COPCO #2 Turbine Unit #1 – in Powerhouse Basement – July 2003

View: COPCO #2 Stone Retaining Wall south of Powerhouse – July 2003

View: COPCO #2 Control Center Building – July 2003

View: COPCO #2 Development – Maintenance/Shop Building (1991) – July 2003

View: COPCO #2 Oil and Gas Storage Shed – July 2003

View: COPCO #2 Village – former Cook and Bunkhouse – July 2003

View: COPCO #2 Village – Bunkhouse/Rooming House – July 2003

View: COPCO #2 Village – Worker Housing - typical ranch-style house – July 2003

View: COPCO #2 Village – Worker Housing – typical bungalow – July 2003

View: COPCO #2 Village – Worker Housing – typical bungalow garage – July 2003

View: COPCO #2 Village – Garage/Accessory Building – July 2003

View: COPCO #2 Village – Worker Housing – typical modular housing – July 2003

View: COPCO #2 Village – Former Schoolhouse (1965) – current Community Center – July 2003