Bishop Creek Progress Report 2:
APPENDIX D - BISHOP CREEK GENERAL WILDLIFE TECHNICAL MEMO

Results of General Wildlife Surveys

Bishop Creek Hydroelectric Power Project (FERC No. 1394) Relicensing
Inyo County, California

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1.0 INTRODUCTION

This report presents the results of the 2019 general wildlife surveys conducted in and around the existing hydroelectric facilities associated with the Bishop Creek Hydroelectric Project (Federal Energy Regulatory Commission [FERC] Project No. 1394-080; hereinafter referred to as the "Project"). The Project is located along Bishop Creek southwest of the City of Bishop, Inyo County, California (Exhibit 1, Project Vicinity). Surveys were conducted in support of efforts to relicense the Project, as the existing FERC Project license is due to expire on June 30, 2024.

2.0 PROJECT BACKGROUND

Southern California Edison Company (SCE) is the licensee, owner, and operator of the existing hydroelectric facilities subject to the relicensing effort. The Project is predominantly located on Bishop Creek in Inyo County and includes facilities on Birch and McGee Creeks. SCE operates the Project under a 30-year license issued by FERC on July 19, 1994. SCE has initiated relicensing utilizing FERC's Integrated Licensing Process. No changes in Project operations or existing facilities are anticipated in association with issuance of a new license.

In advance of filing a Notice of Intent (NOI) and Pre-Application Document (PAD) with the FERC, SCE and their team of experts and contractors (Relicensing Team) worked with stakeholders to identify studies necessary to advance the goal of accelerating FERC's ability to issue a Study Plan Determination. These efforts began over one year prior to SCE's formal initiation of the relicensing process with FERC, through a series of Technical Working Group (TWG) meetings held in Bishop, California.

During the Technical Working Group meetings, stakeholders identified the need to conduct a general wildlife study to determine the presence or absence of special status wildlife species that could potentially utilize project facilities for nesting, roosting, foraging, or sheltering, and if so, how Project operations may affect these species. Draft study plans were distributed with PAD and revised after receiving comments pursuant to 18 CFR § 5.9. FERC approved the Revised Study Plan (RSP) with its Study Plan Determination on November 4, 2019. As required by the Integrated Licensing Procedures (ILP) described in 18 Code of Federal Regulations (CFR) section 5.15 (b), this memorandum will support a periodic progress report to stakeholders and will be incorporated by reference in the Initial Study Report (ISR) in November of 2020.

3.0 ENVIRONMENTAL SETTING

The Project facilities are in the Owens Valley along the eastern Sierra Nevada Mountains (Exhibit 1). Project facilities include powerhouses, dams, impoundments (including South Lake and Lake Sabrina), diversions, weirs, outbuildings, valve houses, access roads, and a flowline. The Project's facilities are sited along Bishop Creek and its tributaries including South Fork, Middle Fork, Green Creek, Birch Creek, and McGee Creek. Bishop Creek is tributary to the Owens River. Project facilities are situated across privately and federally-held properties (federal lands include those held and managed by the US Forest Service [USFS] and US Bureau of Land Management [BLM]). Subsequently, land uses adjacent to the Project also vary, and include residential, grazing, public recreation, and federally-designated Wilderness land, among others.

The Project area is one of moderate to steep ridge and valley topography. Elevations within the drainages range from approximately 4,000 feet above mean sea level (msl) to over 13,000 feet above msl. Bishop Creek is a major stream with a total drainage area of approximately 70

square-miles, flowing northeastward approximately 28 miles from its headwaters in the Sierra Nevada to its confluence with the Owens River at the City of Bishop. The North, Middle and South Forks of Bishop Creek originate in nearby glacial basins separated by ridges. South Lake and Lake Sabrina are the major storage reservoirs in the watershed.

The Project area supports upland vegetation communities in higher terraces and a mixture of floodplains, wetlands, riparian, and littoral communities within and adjacent to Bishop Creek. Plant community types consist of alpine grasses and forbs, alpine mixed scrub, barren, bitterbrush, saltbush, curl-leaf mountain mahogany, Great Basin mixed scrub, rabbitbrush, basin sagebrush, Great Basin – desert mixed scrub, blackbush, eastside pine, annual grasses and forbs, perennial grasses and forbs, lodgepole pine, high desert mixed scrub, singleleaf pinyon pine, limber pine, canyon live oak, subalpine conifers, whitebark pine, wet meadows, riparian mixed hardwood, willow, quaking aspen, perennial lake or pond, water, and willow (shrub).

The Wildlife Study Plan Survey Area (Exhibit 2, General Wildlife Study Area) consists of Project facilities including powerhouses, dams, diversions, lakes and other impoundments, the flowline starting at Intake No. 2, valve houses, other outbuildings, and access roads and included a 500-foot survey area buffer surrounding each of the above listed Project components. Note: only those areas of lakes and other impoundments within 500 feet of a Project facility were surveyed. Representative site photographs are included in Attachment A: Site Photographs.

Table 1, Bishop Creek Hydroelectric Project General Wildlife Survey Areas, describes each facility and its surrounding plant communities. A description of the plant communities associated with the general wildlife survey locations is located in Attachment B: Plant Community Descriptions.

TABLE 1
BISHOP CREEK HYDROELECTRIC PROJECT
GENERAL WILDLIFE SURVEY AREAS

Project Facilities	Elevation (msl)	Surrounding Plant Communities
South Lake (Hillside) Dam	9,765 ft	Barren, Basin Sagebrush, Subalpine Conifers, Lodgepole Pine
Sabrina Lake Dam	9,145 ft	Quaking Aspen, Basin Sagebrush, Urban-related Bare Soil, Perennial Lake or Pond
McGee Creek Diversion	9,206 ft	Quaking Aspen, Eastside Pine, Great Basin Mixed Scrub
Birch Creek Diversion	8,319 ft	Quaking Aspen, Eastside Pine, Great Basin Mixed Scrub
Green Creek Diversion	10,272 ft	Quaking Aspen, Subalpine Conifers, Barren
Bishop Creek South Fork Diversion Dam	8,224 ft	Quaking Aspen, Basin Sagebrush, Curleaf Mountain Mahogany
Bishop Creek Intake 2 Dam	8,110 ft	Quaking Aspen, Basin Sagebrush, Great Basin Mixed Scrub, Perennial Lake or Pond
Bishop Creek Powerhouse No. 2 and Intake 3	7,147 ft	Eastside Pine, Bitterbush, Basin Sagebrush, Singleleaf Pinyon Pine, Urban-related Bare Soil, Perennial Lake or Pond
Bishop Creek Powerhouse No. 3 and Intake 4	6,311 ft	Eastside Pine, Great Basin Mixed Scrub, Bitterbush, Urban-related Bare Soil, Perennial Lake or Pond
Bishop Creek Powerhouse No. 4 and Intake 5	5,183 ft	Blackbush, Eastside Pine, Great Basin – Desert Mixed Scrub, Riparian Mixed Hardwood, Urban-related Bare Soil, Perennial Lake or Pond
Bishop Creek Powerhouse No. 5 and Intake 6	4,781 ft	Great Basin – Desert Mixed Scrub, High Desert Mixed Scrub, Urban-related Bare Soil, Perennial Lake or Pond
Bishop Creek Powerhouse No. 6	4,516 ft	High Desert Mixed Scrub, Saltbush, Willow

Project Facilities	Elevation (msl)	Surrounding Plant Communities
Flowline Road	7,120 ft	Bitterbush, Quaking Aspen, Great Basin Mixed Scrub, Great Basin – Desert Mixed Scrub, Singleleaf Pinyon Pine, Blackbush, Eastside Pine, High Desert Mixed Scrub, Willow, Urban-related Bare Soil, Perennial Lake or Pond

3.1 PROJECT FACILITIES USE

Project facilities include 13 dams/diversions and 5 powerhouses with a combined generating capacity of 28.565 megawatts (MW). The Project diverts water for power generation from the Middle and South Forks of Bishop Creek, McGee Creek and Birch Creek through the five powerhouses and associated intakes as follows:

- Powerhouse No. 2, immediately below the confluence of the Middle and South forks of Bishop Creek;
- Powerhouse No. 3, 3 miles below Powerhouse No. 2;
- Powerhouse No. 4, approximately 3 miles below Powerhouse No. 3;
- Powerhouse No. 5, approximately 1 mile below Powerhouse No. 4; and
- Powerhouse No. 6, approximately 2 miles below Powerhouse No. 5.

3.1.1 Reservoirs

South Lake is operated as a store and release facility for water storage and downstream hydropower generation of electricity. South Lake holds and releases spring runoffs to allow for regulated flows during the summer months to the powerhouses and provide for water recreation. South Lake has a net storage capacity of 12,883 acre feet at a normal full pool elevation of 9,751.3 feet msl. The surface area of the reservoir when full is approximately 173 acres. The flow is regulated with an unlined tunnel with a capacity of 178 cubic feet per second (cfs). The submerged outlet tunnel intake portal is located approximately 1,200 feet upstream of the dam.

Lake Sabrina has a net storage capacity of approximately 8,376 acre feet at a normal maximum reservoir level elevation of 9,131.62 feet msl. The surface area of the reservoir when full is approximately 184 acres. Water is released to the downstream channel via low-level outlets; the intake is a fully submerged concrete box supporting three steel trash racks that is integral with the upstream side the dam. The invert of the intake is at elevation 9,067.42 feet.

3.1.2 Dams and Diversions

Green Creek Diversion is located 0.8 miles east/northeast of the Hillside Dam (South Lake) spillway. A wooden head gate, 3 feet long by 2 feet high, is located approximately 80 feet downstream from Bluff Lake on Green Creek. The head gate diverts water into an open channel approximately 1,400 feet in length to the Green Creek diversion intake. The diversion is earth and rock fill, located at 10,264 feet msl, approximately 51 feet along the crest and 9 feet above the streambed. The diversion is equipped with a 12.5-foot-wide by 1-foot-deep spillway. The intake consists of a 16-inch diameter steel pipe with a slide gate and a trash rack. A 16-inch diameter drainpipe passes through the intake chamber which is constructed of concrete masonry. A 16-inch diameter steel pipe, approximately 4,750 feet long, extends into a natural channel, 1,150 feet in length, and carries water to South Lake.

South Fork Diversion is earth and rock fill with a crest elevation of 8,211 feet msl, crest length of approximately 65 feet, and crest height of 10 feet above the streambed. The diversion is equipped with a 40-foot-wide by 6-foot-deep spillway. A 38-inch diameter steel pipe with a gate valve and trash rack comprises the outlet. The spillway height may be raised or lowered with 4-inch by 6-inch flashboards, each 4 feet in length. A 12-inch-diameter drain pipe passes through the base of the intake chamber and a 36-inch-diameter drainpipe passes through the diversion. The flowline consists of approximately 4,104 feet of 38-inch diameter steel pipe connected to 4,059 feet of 34-inch diameter steel pipe. The flowline extends from the South Fork diversion to Intake No. 2 reservoir. The flowline is protected with air valves, expansion joints, a sand box and a sand trap. The sand box is concrete lined, and approximately 17 feet by 24 feet with exit to a 38-inch-diameter steel pipe extending to Intake No. 2 and has two drain gates.

Hillside Dam is an 81.5-foot high rock fill timber face (covered with geomembrane) dam completed in 1910 to enlarge an existing natural lake (South Lake). The crest is 645 feet long and is at elevation 9,757.6 feet msl. There is a 40-foot spillway, and a 1,900-foot unlined outlet tunnel that discharges into the South Fork of Bishop Creek, 600 feet downstream of the dam. The reservoir is operated as a regulating reservoir for a series of hydroelectric powerhouses including Bishop Creek Powerhouses 2 through 6.

Weir Lake Weir, located approximately 1,800 feet below Hillside Dam, is used for flow monitoring. Weir Lake Weir, also known as South Lake Weir, is a structure of concrete approximately 70 feet long and varying in height from 2 feet to 4 feet. The weir is 25 feet wide by 1-foot-high.

Sabrina Dam and associated facilities consist of a 70-foot by 900-foot timber face (covered with geomembrane) rock fill dam, an uncontrolled main spillway formed by an ogee crest, an uncontrolled auxiliary spillway formed by a concrete wall, and three low-level outlets. The dam forms Lake Sabrina, which is operated as a regulating reservoir for a series of hydroelectric powerhouses which include Bishop Creek Powerhouses 2 through 6.

Longley Dam is an earth and rock fill dam constructed with a reinforced concrete core wall. The dam has a crest elevation of 10,708 feet, crest length of 120 feet, and crest height of 27 feet above streambed. The upstream face of the dam has a slope of 2 to 1 and a downstream face slope of 1.5 to 1. There are two 8-inch-diameter steel outlet pipes encased in concrete which pass through the base of the dam. Flow is controlled by two 10-inch gate valves. The spillway is 8 feet wide by 2 feet deep. The spillway channel is excavated in 8-foot-wide solid rock where water is diverted into McGee Creek.

Intake No. 2 Dam is a 41-foot-high, 443 feet long, earth fill dam with a concrete core wall extending over approximately half its length. The concrete corewall is discontinued on the right side of the dam where the dam is less than 20 feet high. There is a service spillway with an ogee crest and an auxiliary spillway with an ungated concrete ogee crest, two low level outlet conduits, and one intake structure. Water is conveyed to Flowline/Penstock No. 2 through a 48-inch-diameter steel pipe that passes under the dam near the left abutment. The steel pipe connects to a second hydraulically operated, 48-inch-diameter butterfly valve located in a small building at the downstream toe of the dam. The butterfly valve controls flow through a 48-inch to 60-inch-diameter expansion to the 60-inch diameter flowline to Bishop Creek Powerhouse No. 2. The valves are normally open but are operable remotely from the SCE's Bishop Control Center located next to Powerhouse No. 4. A 24-inch-diameter sand sluice pipe runs parallel to the 48-inch-diameter pipe and passes under the dam. A 20-inch fish-water release pipe branches off the 24-inch sluice line directly above the valve house. The fish-water release piping

was reconfigured and a new acoustic velocity meter (AVM) to measure flow was installed in 2008 to monitor and record minimum flow releases

- **Intake No. 3 Dam**: 20 feet by 225 feet concrete arch; 40 feet by 3.5 feet spillway; 60-inch by 6,421-foot-long steel pipe; 60-inch by 6,209-foot steel pipe; 54 feet to 48-inch by 4,673 feet penstock
- **Intake No. 4 Dam**: 28 feet by 323 feet concrete arch; 50 feet by 5 feet spillway; 60 feet steel intake pipe; 60-inch by 6,242 feet steel pipeline; 30 feet by 24-inch by 5,314 feet penstock; 30-inch by 5,665 feet penstock
- **Intake No. 5 Dam**: 20 feet by 275 feet concrete; 60-inch by 3 feet spillway; 60 feet steel pipe; 60-inch by 2,933 feet steel pipe; 60-inch by 540 feet concrete pipe; two 42-inch by 4,800 feet penstocks
- **Intake No. 6 Dam**: 26-inch by 320 feet concrete dam; 6 feet spillway; 3,000 feet steel pipe; 54-inch by 4,360 feet penstock
- **Diversion Pipe**: The Birch-McGee Diversion pipe connects to the lower end of Flowline No. 2. This 24-inch-diameter steel pipe conveys water from Birch and McGee creeks to Flowline No. 2. The rated capacity of the Birch-McGee Diversion pipe is approximately 40 cfs. The flowline collects water from the following:
    - **Birch-McGee Diversion:** a 6 feet by 22 feet stone and concrete diversion dam; a 22-inch steel pipe connects to Penstock 2 above Powerhouse 2.
    - **McGee Creek Diversion** is a 6 feet by 22 feet concrete dam on McGee Creek, with a 12 feet by 1 feet spillway. Water is diverted into an 18-inch steel outlet pipe and into a flowline, which discharges into Birch Creek above the Birch Creek Diversion.

4.0 METHODS

4.1 LITERATURE REVIEW

A review of existing literature was conducted to determine the potential for special status wildlife species to occur in the vicinity of the Project. This review included biological reports previously prepared for individual projects within the Wildlife Study Plan Survey Area (Psomas 2004a, 2004b, 2005, 2006a, 2006b, 2007a, 2007b, 2008a, 2008b, 2010, and 2014) and the EA for the Bishop Creek Project (FERC 1991). To obtain information on known special status wildlife species reported to occur in the Project vicinity, the CDFW's California Natural Diversity Database (CNDDB) (CDFW 2018a, 2020a) was queried for special status wildlife species for the following U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles: Coyote Flat, North Palisade, Tungsten Hills, Mt. Darwin, Mount Tom, Bishop, and Mt. Goddard. Other sources in the literature review included: eBird database for observations within the Project Area including South Lake, Lake Sabrina, North Lake, Intake No 2, Bishop Plant 4, and Aspendell; 2014 Owens Basin southwestern willow flycatcher survey results (CDFW 2014; 2015 USFWS Report on willow flycatcher), yellow-billed cuckoo, and Bell's vireo surveys in Inyo and Mono Counties (Greene 2015); U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (IPaC) website (USFWS 2018); USFWS' Seven-Year Work Plan September 2016 Version (USFWS 2016a) and USFWS Unscheduled Listing Actions September 2016 version (USFWS 2016b); Sierra Nevada Bighorn Sheep Critical Habitat Final Rule (USFWS 2008); List of USFS Management Indictor Species (USFS 2018a); a list of potentially occurring threatened and endangered and other sensitive species potentially occurring in the Wildlife Study Plan Survey Area (USFS 2018b); March-June 2018 Sierra Nevada Bighorn

Sheep Location Maps (USFS 2018c, personal communication); the Butterfly Reference Document for the Inyo, Sequoia, and Sierra National Forests USFS Region 5 (USFS 2015); and Verner (1980) for coniferous bird communities.

4.2 GENERAL WILDLIFE FIELD SURVEYS

General wildlife field surveys were conducted within the Wildlife Study Plan Survey Area (Exhibit 2) from August 5 – 9, 2019. The general wildlife surveys included a habitat assessment for southwestern willow flycatcher nesting habitat, searches on USFS Management Indicator Species (MIS), and observation of Mule Deer use of deer crossings. The general wildlife field surveys included a pedestrian survey at each of the Project's facilities including a 500-foot buffer around each facility to identify and map existing conditions, document existing wildlife, and identify potentially suitable habitat (i.e., preferred plant associations and habitat structure) for special status species determined to have the potential to occur at each facility based on the literature review and agency consultation. Binoculars were used to directly observe wildlife. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing objects such as rocks, boards, and debris. Mammals were identified by visual recognition or evidence of diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. All wildlife observed were recorded in field notes to species (if possible) and location. Nesting behavior of birds and raptors were noted by species and the locations of active or potential nests recorded with a hand-held global positioning system (GPS) unit. Breeding behavior of birds was observed and noted. Nests were located and mapped on an aerial photograph and nest location documented using a hand-held GPS unit. Observations of active or abandoned raptor nests were also recorded using a hand-held GPS unit.

Nomenclature for wildlife generally follows Crother (2012) for amphibians and reptiles, American Ornithologists' Union (2017) for birds, and Wilson and Reeder (2005) for mammals. All species observed were recorded in field notes.

Southwestern willow flycatcher Nesting Habitat Assessment: Biologists surveyed for suitable nesting habitat for southwestern willow-flycatcher (*Empidonax traillii extimus*), as defined by the USFS. Suitable habitat for this species consists of relatively dense riparian tree and shrub communities alongside rivers, streams, or other wetlands, including lakes and reservoirs (riparian habitat). It establishes nesting territories, builds nests, and forages where mosaics of relatively dense and expansive growths of trees and shrubs are established, near or adjacent to surface water or underlain by saturated soil. In most instances, the dense vegetation occurs within 10 to 13 feet above ground. Habitat patches must be at least 0.25 acres in size and at least 30 feet wide. Historically the southwestern willow flycatcher nested in native vegetation including willows, seepwillow, boxelder, buttonbush, and cottonwood. Following modern changes to riparian communities, this subspecies still nests in native vegetation, but also uses thickets dominated by non-native tamarisk and Russian olive, or mixed native/non-native stands. The flycatcher builds a small open cup nest, most often 6.5 to 23 feet above ground in a fork or on a horizontal branch of a medium-sized bush or small tree where the plant growth is most dense, where trees and shrubs have vegetation near ground level, and where there is a low-density canopy (Sogge et al 2010).

MIS Species: Surveys for MIS were conducted concurrently with the general wildlife surveys described above.

Mule deer: Pedestrian surveys were performed along the length of the flowline. Signs of mule deer use (i.e., scat and tracks, or direct observations) were recorded along the flowline road at each of the two deer crossings constructed over the flowline, mule deer and their sign were also

documented during the general wildlife surveys. The locations of mule deer trails along the flowline were documented with photographs and hand-held GPS. Other wildlife identified by observation or tracks using the mule deer crossings were also identified to the lowest taxonomic rank possible in the field, and tracks and signs documented with photographs. Additionally, trail cameras were installed along the flowline and at the existing deer crossings to document mule deer and wildlife use. Data from the trail cameras were downloaded on September 17, 25, and November 9, 2019. Photographs were reviewed, and species identified to lowest taxonomic level possible by photography.

Bat Habitat Assessment and Special Status Amphibians

Surveys were conducted in 2019 for special status amphibians and an assessment of the Project facilities for suitable roosting habitat for bats.

5.0 RESULTS

5.1 LITERATURE REVIEW

As a result of the literature review, it was determined that three wildlife species designated as threatened or endangered by the USFWS or CDFW were reported as occurring within the Wildlife Study Plan Survey Area, and another three wildlife species designated as threatened or endangered by the USFWS or CDFW may occur within the Wildlife Study Plan Survey Area (Table 2, Endangered, Threatened, or Fully Protected Species Potential to Occur). Five wildlife species designated as threatened or endangered by the USFWS or CDFW are unlikely to occur within the Wildlife Study Plan Area. Additionally, one sensitive wildlife species was reported as occurring within the Wildlife Study Plan Survey Area, and another five sensitive wildlife species were determined to have the potential to occur within the Wildlife Study Plan Survey Area (Table 3, Sensitive Species Potential to Occur). Fourteen bird species designated as Species of Special Concern by the USFWS are expected to occur within the Wildlife Study Plan Survey Area, and another four bird species designated as Species of Special Concern by the USFWS are not expected to occur for breeding, but may occur as a migrant within the Wildlife Study Plan Survey Area (Table 4, Bird Species of Conservation Concern).

TABLE 2
ENDANGERED, THREATENED, OR FULLYPROTECTED SPECIES POTENTIAL TO OCCUR

Scientific/ Common Name	Federal Status	State Status	Habitat	Likelihood For Occurrence/ Occurrence Notes
Known to Occur In the Project Vicinity				
Haliaeetus leucocephalus bald eagle	USFS_S	Endangered CDFW__FP	Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches and nesting sites to support them. Perching sites need to be composed of large trees or snags with heavy limbs or broken tops. It roosts communally in winter in dense, sheltered, remote conifer stands. Breeding habitat in California is primarily in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers.	Expected to occur for foraging and wintering; mainly expected to occur as a vagrant but not expected to occur for nesting. eBird* reports a recent sighting (2018) at Lake Sabrina. No occurrences of bald eagle were documented in the CNDDB search for the Project vicinity. 2019 Survey – Observed.
Aquila chrysaetos golden eagle	--	CDFW__FP, CDFW__WL	Golden eagles occur locally in open country such as open coniferous forest, sage-juniper flats, desert, and barren areas, especially in rolling foothills and mountainous regions. Within southern California, the species favors grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nesting is primarily restricted to rugged, mountainous country. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Expected to occur for foraging and wintering; mainly expected to occur as a vagrant but not expected to occur for nesting. eBird reports recent sightings (2018) at Aspendell, Intake No 2 and South Lake, North Lake, and Lake Sabrina. No occurrences of golden eagle were documented in the CNDDB search for the Project vicinity. 2019 Survey – Observed.
Empidonax traillii willow flycatcher	USFS_S	Endangered	In general, prefers moist, shrubby areas, often with standing or running water; e.g., in California, restricted to thickets of willows, whether along streams in broad valleys, in canyon bottoms, around mountain-side seepages, or at the margins of ponds and lakes. In the West, generally occurs in beaver meadows, along borders of clearings, in brushy lowlands, in mountain parks, or along watercourses to 7,500 feet.	Expected to occur for foraging; mainly expected to occur as a migrant but not expected to occur for nesting. eBird reported observation at Aspendell, Lake Sabrina, South Lake, and North Lake; suitable habitat. Please note that eBird does not distinguish between northern subspecies of willow flycatcher and southwestern willow flycatcher. 2019 Survey – None Observed.

TABLE 2
ENDANGERED, THREATENED, OR FULLYPROTECTED SPECIES POTENTIAL TO OCCUR

Scientific/ Common Name	Federal Status	State Status	Habitat	Likelihood For Occurrence/ Occurrence Notes
Empidonax traillii extimus southwestern willow flycatcher	Endangered	Endangered	Occurs in riparian woodlands in Southern California. Willow-dominated riparian habitats that are similar to least Bell's vireo nesting habitats; shows a stronger preference for sites with surface water in the vicinity, such as along streams, on the margins of a pond or lake, and at wet mountain meadows.	Expected to occur for foraging; mainly expected to occur as a migrant but not expected to occur for nesting. eBird reported observation at Aspendell, Lake Sabrina, South Lake, and North Lake; suitable habitat. Please note that eBird does not distinguish between northern subspecies of willow flycatcher and southwestern willow flycatcher. 2019 Survey – None Observed.
May Potentially Occur In the Project Vicinity				
Siphateles bicolor snyderi Owens tui chub	Endangered	Endangered	Needs clear, clean water, adequate cover, and aquatic vegetation within a variety of habitats, including Great Basin flowing water and Great Basin standing water within the Owens River basin; at elevations above 4,000 feet.	May potentially occur. Reported from 4.4 miles northeast of Powerhouse No. 6, located along North Fork Bishop Creek near Hwy 6 north of Bishop, northeast of the Project watershed northeastern most boundary. 2019 Survey – None Observed.
Vulpes vulpes necator Sierra Nevada red fox	Candidate, USFS_S	Threatened	Uses dense vegetation and rocky areas for cover and den sites. Found in a variety of habitats, including alpine, alpine dwarf scrub, broadleaved upland forest, meadow and seep, riparian scrub, subalpine coniferous forest, upper montane coniferous forest, and wetland; at elevations above 2,500 feet.	May potentially occur; reported from 3.8 miles northeast of Powerhouse No. 6, located in Bishop, northeast of the Project watershed northeastern most boundary; last seen in 1922. 2019 Survey – None Observed.
Ovis canadensis sierrae Sierra Nevada bighorn sheep	Endangered	Endangered, CDFW__FP	Available water and steep, open terrain free of competition from other grazing ungulates within alpine, alpine dwarf scrub, chaparral, chenopod scrub, Great Basin scrub, Mojavean desert scrub, montane dwarf scrub, pinon and juniper woodlands, riparian woodland, and Sonoran Desert scrub habitats, from 5,000 to 9,000 feet during the winter and 10,000 to 14,000 feet during summer.	May potentially occur. Reported from 12.9 miles northwest of Powerhouse No. 6, located at Wheeler Crest (aka Wheeler Ridge), 10 miles northwest of Bishop, 12.9 miles northwest of the Project watershed northern boundary. 2019 Survey – None Observed.

TABLE 2
ENDANGERED, THREATENED, OR FULLYPROTECTED SPECIES POTENTIAL TO OCCUR

Scientific/ Common Name	Federal Status	State Status	Habitat	Likelihood For Occurrence/ Occurrence Notes
Unlikely to Occur In the Project Vicinity				
Oncorhynchus clarkii seleniris Paiute cutthroat trout	Threatened	–	Cannot tolerate presence of other salmonids. Requires clean gravel for spawning and cool, well-oxygenated waters in Great Basin flowing water habitat, at elevations up to 10,000 feet.	Unlikely to occur. Reported 6.2 miles northwest of Longley Lake Dam/McGee Lake, located in Birchim Lake in the headwaters of Pine Creek 5.4 miles northwest of the Project watershed northwestern boundary. Determined to be not true Paiute cutthroat trout by CDFW (CDFW 2018a). 2019 Survey – None Observed.
Rana muscosa southern mountain yellow-legged frog	Endangered	Endangered	Highly aquatic and rarely found more than 3.3 feet from water. They can be found sitting on rocks along the shoreline where there may be little or no vegetation. Historically inhabited lakes, ponds, marshes, meadows, and streams at elevations typically ranging from approximately 4,500 to 12,000 feet.	Unlikely to occur. No recorded occurrences in Inyo County. 2019 Survey – None Observed.
Rana sierrae Sierra Nevada yellow-legged frog	Endangered , USFS_S	Threatened, CDFW_ WL	Always encountered within a few feet of water. Tadpoles may require 2 to 4 years to complete their aquatic development. Found in streams, lakes, and ponds in montane riparian and a variety of other habitats from 4,495 to 11,975 feet.	Unlikely to occur. Reported from South Fork Bishop Creek, 2.1 miles south of Bishop Creek South Fork Diversion Dam; Wonder Lake, 2.3 mi northwest of Sabrina Lake; Treasure Lakes 3,4,5,6, and 7; 1.6 miles west of north end of South Lake. Populations along Bishop Creek are considered extirpated by CDFW. 2019 Survey – None Observed.
Anaxyrus canorus Yosemite toad	Threatened	CDFW _SSC	Primarily montane wet meadows; also, in seasonal ponds associated with lodgepole pine and subalpine conifer forest within meadow and seep, subalpine coniferous forest, and wetland habitat, from 6,400 to 11,300 feet.	Unlikely to occur. Reported from 5.5 miles southwest of Sabrina Lake Dam, located 1.2 miles southwest of Project watershed western boundary. 2019 Survey – None Observed.

TABLE 2
ENDANGERED, THREATENED, OR FULLYPROTECTED SPECIES POTENTIAL TO OCCUR

Scientific/ Common Name	Federal Status	State Status	Habitat	Likelihood For Occurrence/ Occurrence Notes
Gulo gulo California wolverine	Proposed Threatened, USFS_S	Threatened, CDFW__FP	Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances. Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats, including alpine, meadow and seep, north coast coniferous forest, riparian forest, subalpine coniferous forest, upper montane coniferous forest, and wetland from 1,640 to 4,921 feet.	Unlikely to occur. Reported from 0.38 mile south of South Lake Dam, located along the east side of South Lake; however, it is considered extirpated from Project area by CDFW (personal communication). 2019 Survey – None Observed.

* https://ebird.org/region/US-CA-027

USFS: U.S. Forest Service; BLM: Bureau of Land Management; CDFW: California Department of Fish and Wildlife; CDF: California Department of Forestry and Fire Protection

Legend:

USFWS

S: Sensitive

USFS

FFS Sensitive

BLM

S Sensitive

CDFW

FP Fully Protected
SSC Species of Special Concern
WL Watch List

TABLE 3
SENSITIVE SPECIES POTENTIAL TO OCCUR

Scientific/ Common Name	Federal Status	State Status	Habitat	Likelihood for Occurrence/Occurrence Notes
Known to Occur In the Project Vicinity				
Accipiter gentilis northern goshawk	BLM_S, USFS_S	CDFW_S, CDFW_SSC	Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees within north coast coniferous forest, subalpine coniferous forest, and upper montane coniferous forest habitats from 915 to 9,900 feet.	Known to occur. This species has been recorded 0.18 mile north of Birch Creek Diversion, near Birch Creek; and 0.75 mile south of South Lake Dam on the east side of South Lake. 2019 Survey – Observed.
May Potentially Occur In the Project Vicinity				
Corynorhinus townsendii Townsend's big-eared bat	USFS_S, BLM_S	CDFW_SSC	Roosts in the open, hanging from walls and ceilings throughout California in a wide variety of habitats, including chaparral, chenopod scrub, Great Basin grassland, Great Basin scrub, upper and lower montane coniferous forest, meadow and seep, riparian forest/woodland, and valley and foothill grassland. Most common in mesic sites. Roosting sites limiting. Extremely sensitive to human disturbance. Found from 4,000 to 10,800 feet.	May potentially occur. This species has been recorded at Yaney Mine, approximately 1.1. miles east of the Project watershed's eastern boundary, 1.6 miles northeast of Powerhouse No. 5 and Intake 6. 2019 Survey – None Observed.
Euderma maculatum spotted bat	BLM_S	CDFW_SSC	Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting within wide variety of habitats from arid deserts and grasslands through mixed conifer forests from mostly 900 to 2,700 feet but up to 9,700 feet.	May potentially occur. This species has been recorded 1.5 miles northeast of Powerhouse No. 6, located in a residential area between Highway 395 and Highway 168, northeast of the Project watershed northeastern most boundary. 2019 Survey – None Observed.
Lepus townsendii western white-tailed jackrabbit	–	CDFW_SSC	Open areas with scattered shrubs and exposed flat-topped hills with open stands of trees, brush and herbaceous understory within sagebrush, subalpine conifer, juniper, alpine dwarf shrub, and perennial grassland habitats, from 120 to 12,000 feet.	May potentially occur. This species has been recorded north of Bishop, northeast of the Project watershed's northeastern most boundary, 4.5 miles northeast of Powerhouse No. 6 along North Fork Bishop Creek near Highway 6. 2019 Survey – None Observed.

TABLE 3
SENSITIVE SPECIES POTENTIAL TO OCCUR

Scientific/ Common Name	Federal Status	State Status	Habitat	Likelihood for Occurrence/Occurrence Notes
Lithobates pipiens northern leopard frog	–	CDFW_SSC	Highly aquatic species. Shoreline cover submerged, and emergent aquatic vegetation are important habitat characteristics within freshwater marsh, Great Basin flowing waters, Great Basin standing waters, marsh and swamp, wetland habitats, from sea level to 7,000 feet.	May potentially occur. This species has been recorded northwest of the Project watershed's northernmost boundary, 1.7 miles northwest of Powerhouse No. 6, 0.4 mile east of Birch Creek, 4 miles west of Bishop. Species analyzed in Aquatic Resources Section. 2019 Survey – None Observed.
Martes caurina sierrae Sierra marten	USFS_S	–	Needs variety of different-aged stands, particularly old-growth conifers and snags which provide cavities for dens/nests, within mixed evergreen forests with more than 40% crown closure along Sierra Nevada and Cascade Mountains, from 8,000 to 10,300 feet.	May potentially occur. This species has been recorded 2.7 miles southwest of Sabrina Lake Dam, along Middle Fork Bishop Creek just south of Dingleberry Lake. 2019 Survey – None Observed.

USFS: U.S. Forest Service; BLM: Bureau of Land Management; CDFW: California Department of Fish and Wildlife; CDF: California Department of Forestry and Fire Protection

Legend:

USFWS

S: Sensitive

USFS

S Sensitive

BLM

S Sensitive

CDFW

SSC Species of Special Concern

Species	Breeding Season	Habitat	Potential to Occur
Leucosticte atrata black rosy-finch	Jun 15 to Aug 31	Above timberline throughout its range, wherever proper cliffs and rockslides provide nest sites with protection from falling rocks and hail and where adequate feeding grounds occur on tundra, fellfields, rockslides, snowfields, and glaciers within commuting distance. May occur in enclaves of alpine habitat on northeast faces of mountains whose summits are below timberline, but where cliffs, shade, and snow produce alpine climate.	eBird* reported observation at Aspendell; suitable habitat. 2019 Survey – None Observed.
Spizella breweri Brewer's sparrow	May 15 to Aug 10	Breeds in shrublands; most closely associated with landscapes dominated by big sagebrush (*Artemisia tridentata*). Overwinters in sagebrush shrublands and brushy desert habitat, including desert scrub dominated by various saltbush species (*Atriplex* spp.) and creosote (*Larrea tridentata*).	eBird reported observation at Aspendell, Intake 2, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey – Observed.
Carpodacus cassinii Cassin's finch	May 15 to Jul 15	Generally open coniferous forests of interior western mountains over a broad elevational range. Often found in mature forests of lodgepole pine (*Pinus contorta*) and ponderosa pine (*P. ponderosa*)	eBird reported observation at Intake 4, Aspendell, Intake 2, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey – Observed.
Pipilo chlorurus green-tailed towhee	May 1 to Aug 10	Habitat varies with elevation. Dry shrubby hillsides (shrub-steppe) and post-disturbance shrubby second growth are most commonly used. Vegetation may be characterized as low brush cover, often interspersed with trees; avoids typical forest.	eBird reported observation at Aspendell, Intake 2, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey – Observed.
Tringa flavipes lesser yellowlegs	Breeds elsewhere	Common breeder in boreal forest (generally open forest) and forest/tundra transition habitats; less abundant in adjacent subarctic tundra. Also nests in man-made habitats such as seismic and gas line right-of-ways, road allowances, and mine clearings. Typical foraging areas are located along the shores of large, shallow, freshwater lakes and sloughs (interior breeders) or in brackish portions of salt marshes (coastal breeders).	Not expected to occur for breeding; no potentially suitable breeding habitat; may occur as a migrant. 2019 Survey – None Observed.
Melanerpes lewis Lewis's woodpecker	Apr 20 to Sep 30	Important aspects of breeding habitat include an open canopy, a brushy understory offering ground cover, dead or downed woody material, available perches, and abundant insects. Three principal habitats are open ponderosa pine forest, open riparian woodland dominated by cottonwood, and logged or burned pine (*Pinus* spp.) forest; also found in oak (*Quercus* spp.) woodland, nut and fruit orchards, piñon pine–juniper (*Pinus cembroides* – *Juniperus* spp.) woodland, a variety of pine and fir (*Abies* spp.) forests, and agricultural areas including farm- and ranchland. Often classified as a specialist in burned pine forest habitat.	eBird reported observation at Aspendell; suitable habitat. 2019 Survey – None Observed.

Species	Breeding Season	Habitat	Potential to Occur
Numenius americanus long-billed curlew	Apr 1 to Jul 31	Nests primarily in short-grass or mixed-prairie habitat with flat to rolling topography. Wide range of habitats used during migration, including dry short-grass prairie, wetlands associated with alkali lakes, playa lakes, wet coastal pasture, tidal mudflats, salt marsh, alfalfa fields, barley fields, fallow agriculture fields, and harvested rice fields. Overwinters in tidal estuaries, wet pasture habitats, and sandy beaches.	Not expected to occur for breeding; no potentially suitable breeding habitat; may occur as a migrant 2019 Survey – None Observed.
Limosa fedoa marbled godwit	Breeds elsewhere	In northern prairies of Canada and U.S., breeds in short, sparsely to moderately vegetated landscapes that include native grassland and wetland complexes with a variety of wetland classes (ephemeral to semi-permanent). Away from breeding areas, most migrants found in flocks at coastal estuaries, mudflats, salt marshes, lagoons, and sandy beaches. Habitats used by birds in winter like those of coastal migrants: coastal mudflats adjoining savannas or meadows, estuaries, sandy beaches, and sandflats; sometimes roosting at salt ponds.	Not expected to occur for breeding; no potentially suitable breeding habitat; may occur as a migrant 2019 Survey – None Observed.
Contopus cooperi olive-sided flycatcher	May 20 to Aug 31	Primarily montane and northern coniferous forests. May occur at any elevation from sea level to timberline, but usually at mid- to high-elevation forest (920–2,130 m). Within the coniferous forest biome, most often associated with forest openings, forest edges near natural openings (e.g., meadows, canyons, rivers) or human-made openings (e.g., harvest units), or open to semi-open forest stands. Frequently occurs along wooded shores of streams, lakes, rivers, beaver (*Castor canadensis*) ponds, bogs, and muskegs, where natural edge habitat occurs and standing dead trees often are present.	eBird reported observation at Aspendell, Intake 2, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey – None Observed.
Gymnorhinus cyanocephalus pinyon jay	Feb 15 to Jul 15	Piñon-juniper woodland is used most extensively but flocks also breed in sagebrush (*Artemisia* spp.), scrub oak (*Quercus* spp.) and chaparral communities. In parts of its range (central Arizona, southern California), inhabits ponderosa and Jeffrey pine (*Pinus jeffreyi*) forests.	eBird reported observation at Intake 4, Aspendell, and Intake 2; suitable habitat. 2019 Survey – None Observed.
Selasphorus rufus rufous hummingbird	Breeds elsewhere	Breeds in dense mature and second growth coniferous forests, deciduous woods, riparian thickets, swamps and meadows, farmland, pasture edges, orchards and city yards, parks, and gardens; in the Pacific Northwest U.S. and Canada. Migrants utilize montane meadows; alpine meadows in the Sierras as high as 12,598 feet. Overwinters in Mexico.	eBird reported observation at Aspendell, Intake 2, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey –Observed.
Oreoscoptes montanus sage thrasher	Apr 15 to Aug 10	Shrub-steppe dominated by big sagebrush (*Artemisia tridentata*). Considered a sagebrush obligate but noted in black greasewood (*Sarcobatus vermiculatus*) habitat in Utah and Nevada and bitterbrush (*Purshia tridentata*) habitat in Washington. Migrants utilize sagebrush plains, arid shrub, grassland with scattered bushes, and open piñon-juniper woodland, primarily in arid or semiarid situations; rarely around towns. Overwinter in arid to semiarid, open and semi-open country with scrub, scattered bushes, and sagebrush.	eBird reported observation 0.85-mile northeast of Powerhouse No. 3; suitable habitat. 2019 Survey – None Observed.

Species	Breeding Season	Habitat	Potential to Occur
Artemisiospiza nevadensis sagebrush sparrow	Mar 15 to Jul 31	Prefers semi-open habitats with evenly spaced shrubs 3 to 6 feet high. Vertical structure, habitat patchiness, and vegetation density may be more important in habitat selection than specific shrub species, but this sparrow is closely associated with big sagebrush throughout most of its range. observed in creosote bush, low desert scrub, and coastal sagebrush scrub during migration. In northern portions of its range, favors big sagebrush. Farther south, fairly common to uncommon during winter in desert washes, big sagebrush, creosote bush, sparse cactus scrub, arid grasslands, and arboreal yucca (*Yucca* spp.) mixed with greasewood	eBird reported observation at Intake 4, and Intake 2; suitable habitat. 2019 Survey – None Observed.
Vermivora virginiae Virginia warbler	May 1 to Jul 31	Over most of its range, typically found breeding in piñon-juniper and oak woodlands. May also occur in high-altitude life zones dominated by large conifers but tends to select patches of shrubby vegetation for breeding; never occurs in coniferous forests where there is not a deciduous mix (CRO). Strong association for breeding in steep draws, drainages, or slopes with oak or other shrubby vegetation.	eBird reported observation at Aspendell and South Lake; suitable habitat. 2019 Survey – None Observed.
Picoides albolarvatus white-headed woodpecker	May 1 to Aug 15	Requires montane coniferous forests dominated by pines (*Pinus* ssp.), with tree species composition varying geographically. Within the Sierra Nevada, occupies mixed coniferous forest of ponderosa and sugar pines, white fir, red fir (*Abies magnifica*), Douglas-fir, and black oak (*Quercus kelloggii*); occurs more locally on drier east-slope forests dominated by Jeffrey pine (*P. jeffreyi*) and in high-elevation lodgepole pine and western white pine (*P. monticola*) forests, and is generally absent from digger pine (*P. sabiniana*)-dominated habitats at lower elevations on western flank of the Sierra Nevada.	eBird reported observation at Aspendell, Intake 2, Lake Sabrina, and South Lake; suitable habitat. 2019 Survey – None Observed.
Tringa semipalmata willet	Apr 20 to Aug 5	On the prairies, uses short, sparse cover in wetlands and grasslands. Breeds on semiarid plains near bodies of water (eastern Oregon), in grasslands associated with shallow wetlands (southern Alberta), in native grasslands and to a lesser extent cropland (N. Dakota), in uplands near brackish or saline wetlands, and less frequently on alkali flats (Utah) and lakes in forested mountain areas. During nonbreeding season, found in diverse California coastal types: mudflat, marsh, sandy beach, and rocky coast.	Not expected to occur for breeding; no potentially suitable breeding habitat; may occur as a migrant 2019 Survey – None Observed.
Sphyrapicus thyroideus Williamson's sapsucker	May 1 to Jul 31	Throughout range, breeds in middle to high elevation conifer and mixed conifer-deciduous forests. Common in montane western larch, Douglas fir (*Pseudotsuga menziesii*), ponderosa pine, and pine-fir forests.	eBird reported observation at Aspendell, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey –Observed.
Empidonax traillii willow flycatcher	May 20 to Aug 31	In general, prefers moist, shrubby areas, often with standing or running water; e.g., in California, restricted to thickets of willows, whether along streams in broad valleys, in canyon bottoms, around mountain-side seepages, or at the margins of ponds and lakes. in the West, generally occurs in beaver meadows, along borders of clearings, in brushy lowlands, in mountain parks, or along watercourses to 7,500 feet.	eBird reported observation at Aspendell, Lake Sabrina, South Lake, and North Lake; suitable habitat. 2019 Survey – None Observed.
* https://ebird.org/region/US-CA-027			

In addition, the USFS provided a list of Sierra Nevada Forest Management Indicator Species (Table 5, Sierra Forest Management Indicator Species).

TABLE 4
SIERRA FOREST MANAGEMENT INDICATOR SPECIES

Habitat or Ecosystem Component	CWHR Type(s) Defining the Habitat or Ecosystem Component[1]	Sierra Nevada Forests Management Indicator Species Scientific Name	Category for Project Analysis[2]
Riverine and Lacustrine	lacustrine (LAC) and riverine (RIV)	aquatic macroinvertebrates	2
Shrubland (west-slope chaparral types)	montane chaparral (MCP) mixed chaparral (MCH) chamise-redshank chaparral (CRC)	fox sparrow (*Passerella iliaca*)	2
Oak-associated Hardwood and Hardwood/Conifer	montane hardwood (MHW) montane hardwood-conifer (MHC)	mule deer (*Odocoileus hemionus*)	2
Riparian	montane riparian (MRI) valley foothill riparian (VRI)	yellow warbler (*Dendroica petechial*)	2
Wet Meadow	wet meadow (WTM) freshwater emergent wetland (FEW)	Pacific tree frog (*Pseudacris regilla*)	2
Early Seral Coniferous Forest	ponderosa pine (PPN) Sierran mixed conifer (SMC) white fir (WFR) red fir (RFR) eastside pine (EPN) tree sizes 1, 2, and 3 all canopy closures	mountain quail (*Oreortyx pictus*)	2
Mid Seral Coniferous Forest	ponderosa pine (PPN) Sierran mixed conifer (SMC) white fir (WFR), red fir (RFR) eastside pine (EPN) tree size 4 all canopy closures	mountain quail (*Oreortyx pictus*)	
Late Seral Open Canopy Coniferous Forest	ponderosa pine (PPN) Sierran mixed conifer (SMC) white fir (WFR) red fir (RFR) eastside pine (EPN) tree size 5 canopy closures S and P	sooty (blue) grouse (*Dendragapus obscurus*)	1
Late Seral Closed Canopy Coniferous Forest	ponderosa pine (PPN) Sierran mixed conifer (SMC) white fir (WFR) red fir (RFR) tree size 5 (canopy closures M and D) tree size 6	California spotted owl (*Strix occidentalis occidentalis*) American marten (*Martes americana*) northern flying squirrel (*Glaucomys sabrinus*)	2
Snags in Green Forest	Medium and large snags in green forest	hairy woodpecker (*Picoides villosus*)	2

TABLE 4
SIERRA FOREST MANAGEMENT INDICATOR SPECIES

Habitat or Ecosystem Component	CWHR Type(s) Defining the Habitat or Ecosystem Component[1]	Sierra Nevada Forests Management Indicator Species Scientific Name	Category for Project Analysis[2]
Snags in Burned Forest	Medium and large snags in burned forest (stand-replacing fire)	black-backed woodpecker (*Picoides arcticus*)	2

[1] All CWHR size classes and canopy closures are included unless otherwise specified; **dbh** = diameter at breast height; **Canopy Closure classifications:** S=Sparse Cover (10-24% canopy closure); P= Open cover (25-39% canopy closure); M= Moderate cover (40-59% canopy closure); D= Dense cover (60-100% canopy closure); **Tree size classes:** 1 (Seedling)(<1" dbh); 2 (Sapling)(1"-5.9" dbh); 3 (Pole)(6"-10.9" dbh); 4 (Small tree)(11"-23.9" dbh); 5 (Medium/Large tree)(≥24" dbh); 6 (Multi-layered Tree) [In PPN and SMC] (Mayer and Laudenslayer 1988).

[2] **Category 1:** MIS whose habitat is not in or adjacent to the Project area and would not be affected by the Project.
Category 2: MIS whose habitat is in or adjacent to Project area but would not be either directly or indirectly affected by the Project.
Category 3: MIS whose habitat would be either directly or indirectly affected by the Project.

5.2 CRITICAL HABITAT

On August 26, 2016, the USFWS published the current Final Rule designating 750,926 acres of land as critical habitat for the Yosemite toad (*Anaxyrus canorus*) and 1,082,147 acres of land as critical habitat for the Sierra Nevada yellow-legged frog (*Rana sierrae*) in Alpine, Amador, Calaveras, El Dorado, Fresno, Inyo, Lassen, Madera, Mariposa, Mono, Nevada, Placer, Plumas, Sierra, Tulare, and Tuolumne counties, California (USFWS 2016c). On August 5, 2008, the USFWS published the current Final Rule designating approximately 417,577 acres of land as critical habitat for the Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*) in Tuolumne, Mono, Fresno, Inyo, and Tulare counties, California (USFWS 2008).

USFWS-designated critical habitats for Sierra Nevada yellow-legged frog overlap a small portion of the Project boundaries (Exhibit 3, Critical Habitat Near Project Facilities); including South Lake, portions of the Green Creek diversion and flow line, and approx. 3,000 feet of Bishop Creek downstream of South Lake. South Lake and Bishop Creek support large population of non-native rainbow and brown trout, which makes these areas unsuitable for the persistence of Sierra Nevada yellow-legged frog. Green Creek diversion is dry and currently unused, making it also unsuitable for Sierra Nevada yellow-legged frog.

Critical habitat for Yosemite toad does not overlap the Project boundary but does occur west of the Project (Exhibit 3). Critical habitat for Sierra Nevada bighorn sheep overlaps the Project boundary east of Longley Lake.

No changes to Project operations are planned, or the additional of new facilities, therefore there would be no impact to designated critical habitat from continued operation of the Project.

5.3 FIELD SURVEY

Weather conditions for conducting general wildlife surveys were good for observing wildlife for observing wildlife. The temperatures were mild and did not restrict wildlife movement or behavior, skies were generally clear and sunny allowing excellent visibility of the Survey Area. Survey dates, times, and weather data are shown in Table 6, Environmental Conditions During 2019 Wildlife Survey.

TABLE 5
ENVIRONMENTAL CONDITIONS DURING 2019 WILDLIFE SURVEY

Date	Location	Approximate Survey Time	Weather
August 5, 2019	Sabrina Lake Intake No. 2 Powerhouse No. 2 and Intake 3	12:00 to 3:15 p.m	Temp 81-84 Fahrenheit (F), winds 1-5 mph, partly cloudy skies, and good visibility
August 6, 2019	Powerhouse No. 3 and Intake 4 Powerhouse No. 4 and Intake 5 Powerhouse No. 5 and Intake 6 Powerhouse No. 6	7:00 a.m.to 2:15 pm	Temp 69-87 F, winds 1-4 mph, partly cloudy skies, and good visibility
August 7, 2019	McGee Creek Diversion Birch Creek Diversion	7:45 a.m.to 1:45 pm	Temp 65-80 F, winds 0-3 mph, partly cloudy skies, and good visibility
August 8, 2019	Green Creek Diversion South Lake Bishop Creek South Fork Diversion Dam	7:15 a.m.to 4:00 pm	Temp 47-83 F, winds 0-6 mph, partly cloudy skies, and good visibility
August 9, 2019	Powerhouse No. 2 and Intake 3 Intake No. 2	7:15 to 11:00 am	Temp 68-78 F, winds 0-3 mph, clear skies, and good visibility

5.4 GENERAL WILDLIFE

A listing of wildlife species observed during the surveys is provided in Attachment C: Wildlife Compendium. The compendium also notes species observed per facility.

5.5 EXISTING CONDITIONS

Existing Conditions are described here as the natural environment surrounding the Project facilities, and are based on the results of the 2019 general wildlife surveys and literature review.

Numerous upland plant communities are present within the Project vicinity supporting a variety of wildlife species. These plant communities mix and blend one into another providing a complex of habitats with an overstory of one community supporting an understory of a second community. This complexity is reflected in the wildlife species that occur in multiple communities.

The intermixing of the vegetation communities in the Project vicinity provides for a complex habitat allowing wildlife to utilize many different plant communities throughout a great range of elevations. For this analysis the plant communities have been lumped into lower, midrange, and higher elevation associations:

- Lower elevation plant communities (4000 feet to 6000 feet above msl) are an interdigitated mix of canyon live oak, single leaf pinyon pine, eastside pine, lodgepole pine, high desert mixed scrub, pine, rabbit brush, salt bush, Great Basin mixed scrub/big (basin) sagebrush, and annual grasses and forbs. Project facilities at this elevation range include Powerhouse No. 6, Powerhouse No. 5 and Intake 6, and Powerhouse No. 4 and Intake 5.
- Mid-elevation communities (5000 feet to 7000 feet above msl) consist of a mix of canyon live oak, single leaf pinyon pine, eastside pine, lodgepole pine, limber pine, rabbit brush,

Great Basin Sagebrush, curlleaf mountain mahogany, and annual grasses and forbs. Project facilities at this elevation range include Powerhouse No. 4 and Intake 5, Powerhouse No. 3 and Intake 4.

- Higher elevation communities (above 7000 feet msl) consist of a mix of canyon live oak, eastside pine, limber pine, lodgepole pine, subalpine confers and whitebark pine, bitterbrush, and Great Basin Sagebrush, alpine mixed scrub, curlleaf mountain mahogany, alpine grasses and forbs, and perennial grasses and forbs. Project facilities at this elevation range include Powerhouse No. 2 and Intake 3, Intake No. 2 Dam, South Fork Diversion Dam, Green Creek Diversion, Birch Creek Diversion, McGee Creek Diversion, Lake Sabrina Dam, and South Lake (Hillside Dam).

The following paragraphs identify representative wildlife species with potential to occur within those habitats surrounding the Project facilities, based on the literature review and 2019 general wildlife surveys. Wildlife observed in 2019 are in bold.

Representative wildlife life associated with the lower elevation habitats include Mourning Cloak (*Nymphalis antiopa*), Great Basin spadefoot toad (*Scaphiopus intermontanus*), western toad (*Anaxyrus boreas*), desert horned lizard (*Phrynosoma platyrhinos*), **granite spiny lizard** (*Sceloporus orcutti*), northern alligator lizard (*Elgaria coerulea*), gopher snake (*Pituophis catenifer*), western rattlesnake (*Crotalus oreganus*), **lesser goldfinch** (*Spinus psaltria*), California quail (*Callipepla californica*), western bluebird (*Sialia mexicana*), **common raven** (*Corvus corax*), American crow (*Corvus brachyrhynchos*), **red-tailed hawk** (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), **house finch** (*Haemorhous mexicanus*), **Say's Phoebe** (*Sayornis saya*), Cassin's king bird (*Tyrannus vociferans*), California scrub jay (*Aphelocoma californica*), white-crowned sparrow (*Zonotrichia leucophrys*), pallid bat (*Antrozous pallidus*), **black-tailed jackrabbit** (*Lepus californicus*), Botta's pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus maniculatus*), pinyon mouse (*Peromyscus truei*), **California ground squirrel** (*Otospermophilus beecheyi*), **least chipmunk** (*Neotamias minimus*), California vole (*Microtus californicus*), southern grasshopper mouse (*Onychomys torridus*), **coyote** (*Canis latrans*), and **mule deer** (*Odocoileus hemionus*).

Representative wildlife life associated with the mid-elevation habitats include, Sierra sulfur (*Colias behrii*), Mourning Cloak (*Nymphalis antiopa*), Sierra treefrog (Pseudacris sierra), Mt. Lyell salamander (*Hydromantes platycephalus*) sage brush lizard (*Sceloporus graciosus*), pinyon jay (*Gymnorhinus cyanocephalus*) is very common in the pinyon-sagebrush zone: other common bird species include the **western wood pewee** (*Contopus sordidulus*), **northern flicker** (*Colaptes auratus*), **Steller's jay** (*Cyanocitta stelleri*), **lesser goldfinch** (*Spinus psaltria*), **common raven** (*Corvus corax*), **red-tailed hawk** (*Buteo jamaicensis*), **dark-eyed junco** (*Junco hyemalis*), **Mountain chickadee** (*Poecile gambeli*), brown creeper (*Certhia americana*), **white-crowned sparrow** (*Zonotrichia leucophrys*), **Brewer's sparrow** (*Spizella breweri*), **purple finch** (*Haemorhous purpureus*), American pika (*Ochotona princeps*), **California ground squirrel** (*Otospermophilus beecheyi*), **golden-mantled ground squirrel** (*Callospermophilus lateralis*), **Douglas' squirrel** (*Tamiasciurus douglasii*), long-tailed vole (*Microtus longicaudus*), deer mouse (*Peromyscus maniculatus*), pinyon mouse (*Peromyscus truei*), bushy-tailed woodrat (*Neotoma cinerea*), **coyote**, and **mule deer**.

Representative wildlife life associated with the higher elevation habitats include Sierra skipper (*Hesperia miriamae*), Sierra treefrog (*Pseudacris sierra*), sage brush lizard (*Sceloporus graciosus*), **common raven** (*Corvus corax*), **Williamson's sapsucker** (*Sphyrapicus thyroideus*), **Steller's jay** (*Cyanocitta stelleri*), **Clark's nutcracker** (*Nucifraga columbiana*), **mountain bluebird** (*Sialia currucoides*), hermit thrush (*Catharus guttatus*), **Cassin's finch** (*Carpodacus cassinii*), **Northern goshawk** (*Accipiter gentilis*), **American pika** (*Ochotona*

princeps), alpine chipmunk (*Neotamias alpinus*), yellow-pine chipmunk (*Neotamias amoenus*), **Douglas' squirrel** (*Tamiasciurus douglasii*), **Belding's ground squirrel** *(Urocitellus beldingi*), and **yellow-bellied marmot** (*Marmota flaviventris*).

5.6 SPECIAL STATUS SPECIES OBSERVED DURING FIELD SURVEY

During the 2019 field surveys, eight special status species were observed and are described below. Special Status Species as used herein are those wildlife species given legal protection under the federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, California Environmental Quality Act, or recognized as sensitive or of conservation concern by the USFWS, USFS, or CDFW.

- Northern goshawks (*Accipiter gentilis*), a CDFW Species of Special Concern and USFS Sensitive Species, were observed within the Birch Creek Diversion survey area (Exhibit 4, Special Status Species Observations) within Quaking Aspen and Eastside Pine habitat. After first hearing an alarm call from an adult, an adult male and one juvenile flew overhead among the pine trees. During the observation, begging calls were heard from at least one juvenile and response calls were heard from the adult. Additionally, three inactive nests were found with the aspen woodland. It would appear that the northern goshawks were breeding in the survey area. Nesting raptor surveys are recommended for the Birch Creek Diversion survey area next year.
- A bald eagle (*Haliaeetus leucocephalus*), a state listed Endangered species and a CDFW Fully Protected species, was observed at the Bishop Creek Powerhouse No. 2 and Intake 3 survey area (Exhibit 4) flying over Bitterbush habitat. The bald eagle was a flyover occurrence; it was not observed nesting in any of the survey areas. Therefore, no CNDDB form was prepared for this species.
- Four golden eagles (*Aquila chrysaetos*), a CDFW Fully Protected species, were observed during the wildlife surveys: one adult and one juvenile were observed flying over Eastside Pine habitat at the McGee Creek Diversion; and two adults were observed flying over Singleleaf Pine, Great Basin Mixed Scrub, Bitterbush habitats above the flowline west of Bishop Creek Intake 2 Dam (Exhibit 4). The golden eagles were flyover occurrences at both survey areas; they were not observed nesting in any of the survey areas. Therefore, no CNDDB form was prepared for this species.
- A Brewer's sparrow (*Spizella breweri*), a USFWS Bird Species of Conservation Concern, was observed at the Bishop Creek South Fork Diversion Dam and Bishop Creek Intake 2 Dam survey areas (Exhibit 4) flying through Quaking Aspen habitat in both areas.
- A rufous hummingbird (*Selasphorus rufus*), a USFWS Bird Species of Conservation Concern, was observed at the South Lake and Green Creek Diversion survey areas (Exhibit 4), flying through Lodgepole Pine and Subalpine Conifer habitat respectively.
- A green-tailed towhee (*Pipilo chlorurus*), a USFWS Bird Species of Conservation Concern, was observed at the Sabrina Lake Dam, McGee Creek Diversion, Birch Creek Diversion, Green Creek Diversion, Bishop Creek South Fork Diversion Dam, and Bishop Creek Intake 2 Dam survey areas (Exhibit 4). Green-tailed towhees were observed in the following habitats: Quaking Aspen, Curleaf Mountain Mahogany, and Subalpine Conifer.
- A Cassin's finch (*Haemorhous cassinii*), a USFWS Bird Species of Conservation Concern, was observed at the South Lake and Lake Sabrina survey areas (Exhibit 4), flying through Lodgepole Pine and Quaking Aspen habitat respectively.

- A Williamson's sapsucker (*Sphyrapicus thyroideus*), a USFWS Bird Species of Conservation Concern, was observed at the Lake Sabrina and Birch Creek Diversion survey areas (Exhibit 4), flying through Quaking Aspen and Eastside Pine habitat respectively.

5.6.1 Southwestern Willow Flycatcher Nesting Habitat Assessment

Willow (*Salix* spp.) habitat was present in the survey area in two very small, isolated fragments along Bishop Creek north of Powerhouse 6, Powerhouse 5 and Intake 6. Willow habitat is dominated by tree-sized willows of any species in riparian floodplains, seeps, springs, swamps or dry washes. Willows often dominate these areas to the exclusion of other riparian species but other species such as cottonwoods (*Populus* spp.), and alders (*Alnus* sp.) may occur in small amounts. The USFS specifies that suitable breeding habitat at low and mid-elevations can be composed of single species of willow, but the height must range from 9 to 55 feet. The willow habitat in the survey area did not meet this standard. Additionally, a distinct overstory of cottonwood, willow, or other broadleaf trees, with recognizable subcanopy layers and a dense understory of mixed species are often present. No such overstory was present in the survey area.

High elevation habitats range from nearly monotypic dense stands of willow to mixed stands of native broadleaf trees and shrubs, 6–21 feet in height with no distinct overstory layer; often associated with sedges, rushes, nettles, and other herbaceous wetland plants; usually very dense structure in lower 6 feet; live foliage density is high from the ground to the canopy. Vegetation surrounding the patch can range from open meadow, to agricultural lands, to pines or upland shrub. This habitat structure was not found during the surveys. At several sites, including areas near Powerhouse 4 and Intake 5 and Powerhouse 2 and Intake 3, Riparian Mixed Hardwood habitat was observed. Riparian Mixed Hardwood describes the mixture of tree willows, cottonwoods, alders, and other tree species where none are dominant. In most cases, at least three genera are present in the mixture. These species occur in moist areas and adjacent to stream courses often found adjacent to upland lower montane conifers. The foliage in this habitat was not dense enough from the ground to canopy to be considered suitable habitat.

Other broadleaf habitat observed in the survey area include Quaking Aspen, with an understory dominated by wild rose. This habitat was described at multiple sites including, the Birch Creek Diversion, McGee Creek Diversion, Powerhouse 2 and Intake 3, the confluence of South Fork Bishop Creek and Mid Fork Bishop Creek, Intake No. 2 Dam and Reservoir, Lake Sabrina, South Fork Diversion Dam, Green Creek Diversion, and South Lake. As with the riparian mixed hardwood habitat, the aspen habitat was not dense enough in vegetation to be considered suitable habitat. The rose understory was dense, but the midstory was sparse in foliage, and the overstory was also not suitably dense.

The habitat at Powerhouse 3 and Intake 4 is dominated by Eastside Pine, Great Basin Mixed Scrub, and Bitterbush. The general composition of the tree/shrub vegetation at the site is not suitable habitat for willow flycatcher.

At best, the Willow, Riparian Mixed Hardwood, and Quaking Aspen habitats are marginal nesting habitat for southwestern flycatcher and is more suitable as a corridor for migration than for breeding.

A 2015 joint study by the USFWS, CDFW, Point Blue Conservation Sciences (PBCS), and Bishop Paiute Tribe (Greene 2015) found no southwestern willow flycatcher migrating or nesting

along Bishop Creek. Of the 36 sites surveyed from Bishop to Mono Lake, the Owens River was the closest site to the Project Area that found willow flycatcher nesting territories. The findings from the current survey corroborate the results by the USFWS as neither suitable breeding habitat. In addition, no southwestern willow flycatchers were observed in the surveyed areas around Project facilities along Bishop, Birch, and McGee Creeks.

5.6.2 MIS Species

Mule deer (*Odocoileus hemionus*) was the only MIS species observed during the general survey. The results of those surveys are discussed below under the mule deer subheading.

5.6.3 Mule Deer

An adult female mule deer and her fawn were observed at Bishop Creek Intake 2 Dam along the south end of the lake (Exhibit 5, Mule Deer Observations). Vertebrae were observed within the Green Creek Diversion survey area. Scat was observed at Bishop Creek South Fork Diversion Dam and Bishop Creek Powerhouse No. 2 and Intake 3. Three trail cameras were installed along the flowline and at the existing deer crossings to document wildlife use. Two of the cameras were stolen, but one remains at the deer crossing and guzzler over the flowline (Exhibit 5). The trail camera successfully recorded the following species: mule deer, grey fox (*Urocyon cinereoargenteus*), and mountain lion (*Puma concolor*). Representative photos from the trail cameras are included in Attachment D: Wildlife Camera Results. Although photographs were available from only one camera, observations confirm that mule deer are using the other deer crossing as well. The survey team observed signs that the other crossing is also well used by mule deer in terms of a well-marked trail by hoof prints and scat.

Because mule deer are mobile and are known to travel throughout the Study Area including crossing roads and Highway 6, Psomas contacted the California Department of Transportation (Caltrans) concerning records of mule deer versus automobile collusions along Hwy 6. During the 10-year period from January 1, 2007 to December 31, 2017 Caltrans recorded 17 vehicle verse deer collision on Inyo 168 from the beginning of the route (Postmile 0) near North Lake Road to North Fork Bishop Creek Bridge (PM 15.407) (Lianne Talbot, P.E. personal communication with Psomas, Brad Blood. E-mail dated August 7, 2018).

The photographs taken from the camera stations document wildlife use from September 26 to November 9, 2019. This coincides with the timing of the fall migration of mule deer in the eastern Sierra Nevada. However, the photographs of the mule deer using the crossing may also have captured their routine use of the herd's territory. The deer spend the summer months at high elevation summer ranges, where there is a higher diversity and higher quality of foraging plants. As autumn approaches, temperatures cool and snow levels increase, placing a higher energetic cost on the deer to thermoregulate and travel. Most deer migrate to lower elevations before the onset of severe winter weather to avoid getting trapped at the summer range (Monteith et al. 2011).

GPS data provided by CDFW for deer within the regional vicinity demonstrate that deer are common around the Project area and appear to be using the flowline road and deer crossings. This data is consistent with the camera findings showing that the deer in the area are using the wildlife crossings.

5.6.4 Bats and Amphibians

Bat Habitat Assessment

On June 10, 2019, a bat habitat assessment was conducted to determine potential for significant bat roosts at Project facilities along Bishop Creek (Psomas 2019a). Of all the Project facilities inspected, the powerhouses were determined to be the most suitable for bat day roosting. Appurtenant structures, such as sheds and warehouses, were also inspected; however, no evidence of day-roosting was observed, and the other structures did not provide environmental conditions equivalent to the powerhouses, such as accessibility, thermal insulation, heat sources, etc.

No sign of roosting was observed in Powerhouse No. 6 or Powerhouse No. 4 and no bat day roosting is anticipated at either facility. Powerhouse No. 3 contained limited bat guano likely resulting from bat night-roosting activity within the Powerhouse; no significant bat roosts occur in Powerhouse 3. Powerhouse 6 and Powerhouse 5 were both supporting active bat day roosting during the survey. The species present could not be determined, but more than five bats were observed roosting in crevices at both powerhouses. Both roosts have potential to support maternity roosting.

The tailraces at Powerhouses No. 6, No. 5, and No. 2 have limited potential to support roosting bats; however, they are not accessible for daytime visual surveys.

Potential maternity roosts occur at Powerhouses No. 5 and No. 2. The remaining powerhouses are not likely to support maternity roosting. No maternity roosting is anticipated at Project facilities without powerhouses, including the facilities not surveyed on Birch Creek and McGee Creek. These locations do not likely contain structures with features necessary to support maternity roosts, including heat sources and insulation. None of the facilities were inspected for sign of hibernacula during the June 10th survey. Surveys to determine hibernacula can only occur during the winter months.

A survey for wintering bats at potential winter roosting sites at Project facilities was conducted on January 27, 2020. The purpose of the winter bat survey is to determine if Project facilities, especially Powerhouses and associated outbuildings are used by bats as winter hibernacula. No wintering bats were observed at any of the powerhouses and outbuildings during this survey (Psomas 2020).

Based on these results, it is recommended that an acoustic bat survey be conducted in and around Powerhouses 2, 3, 5 and 6 during the 2020 field season.

Special Status Amphibians

On September 23rd and 24th, 2019, focused diurnal and nocturnal surveys were conducted. These surveys were performed to determine the presence or absence of special status amphibian species, including the federally-threatened Yosemite toad, federally-endangered Sierra Nevada yellow-legged frog, and northern leopard frog (*Lithobates pipiens*), a California Species of Special Concern, in potentially suitable aquatic and adjacent upland habitat in survey areas along Bishop Creek near Project facilities (Psomas 2019).

No Yosemite toad, northern leopard frog, or Sierra Nevada yellow-legged frog were observed during the surveys, nor were any other amphibian species detected. Overnight temperatures during the surveys were mild with the lowest temperature recorded at 37° Fahrenheit. The

timing of amphibian surveys, occurring in conjunction with electrofishing, may have coincided with the onset of overwintering of some amphibians.

Although suitable terrestrial habitat for Yosemite toad, Sierra Nevada yellow-legged frog, and northern leopard frog was present throughout all the survey areas, suitable breeding habitat was more limited and located outside of the Bishop Creek Hydro Project's operations area. Despite the presence of suitable habitat for the three special status amphibian species in survey areas, Yosemite toad, Sierra Nevada yellow-legged frog, or northern leopard frog are not expected to occur within the surveyed areas or within the Project's operations area due to the following factors:

- Abundance of predatory fish species throughout Bishop Creek. The effects of non-native predatory trout on populations of native amphibians, and Sierra Nevada yellow-legged frog has been well documented (Knapp 1996 and Knapp and Matthews 2000, and references cited therein).
- Northern leopard frog was last recorded in Birch Creek area in 1960 in the vicinity of the Rocking K Ranch (CNDDB 2018a and 2020b). All other reported localities occur down in the Owens Valley.
- Yosemite toad has never been recorded within the Bishop Creek Watershed. (No CNDDB or Museum Records in the Project Area (CDFW 2018a and 2020b)

Additionally, the USFWS has stated that populations of these species are extant only in high elevation lakes in the Sierra Nevada Mountains (USFWS 2013), and surveys conducted by the CDFW (2018b) for these special status amphibians did not include Bishop Creek below South Lake and Sabrina Lake. CDFW's monitoring of populations of these special status amphibians takes place only in the high elevation lakes above the Project Area. The results indicate that all known extant populations occur above the Project Area in the high elevations lakes above the Wonder Lakes chain.

Based on the above, it is that no further surveys for special status amphibians are recommended as they are absent from the Project area.

5.6.5 Other Observations

A female warbling vireo (*Vireo gilvus*) was observed delivering food items to chicks in a nest within the survey area of Bishop Creek Powerhouse No. 3 and Intake 4 (Exhibit 4). This was the only active nest observed during the wildlife surveys.

Several wildlife species were observed along Highway 168 that were not a part of the survey effort at the Project facilities. These species include the western toad (*Anaxyrus boreas*), California kingsnake (*Lampropeltis getula californiae*), Great Basin gopher snake (*Pituophis catenifer deserticola*), and the long-nosed leopard lizard (*Gambelia wislizenii*).

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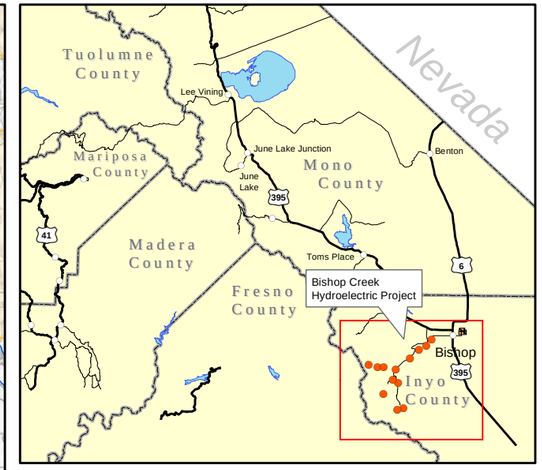
Powerhouse No. 6
Powerhouse No. 5 and Intake 6
Powerhouse No. 4 and Intake 5
Powerhouse No. 3 and Intake 4
Powerhouse No. 2 and Intake 3
Longley Lake Dam (McGee Lake)
Birch Creek Diversion
McGee Creek Diversion
Bishop Creek Intake No. 2 Dam
Bishop Creek South Fork Diversion Dam
Sabrina Lake Dam
South Lake Dam
Green Creek Diversion Dam
Bishop
BLM Land
Inyo National Forest
INYO
SIERRA NATIONAL FOREST
KINGS CANYON NATIONAL PARK
John Muir Wilderness
Sequoia-Kings Canyon Wilderness
Horton Creek
McGee Creek
Birch Creek
Bishop Creek
Coyote Creek
Rawson Creek
North Fork Bishop Creek
Middle Fork Bishop Creek
South Fork Bishop Creek
West Fork Coyote Creek
East Fork Coyote Creek
Freeman Creek
Green Creek
Lake Sabrina
South Lake
Ed Powers Rd
Inyo National Forest
395
168
6



Regional Location

Legend

- Project Facility Site Locations
- Diversion Channels, Pipelines, & Penstocks
- Project Contributing Watershed
- National Forest/National Park Boundary
- Wilderness Area Boundary
- Bureau of Land Management (BLM) Boundary

N
W E
S

2 1 0 2 Miles

Project Vicinity

Exhibit 1

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

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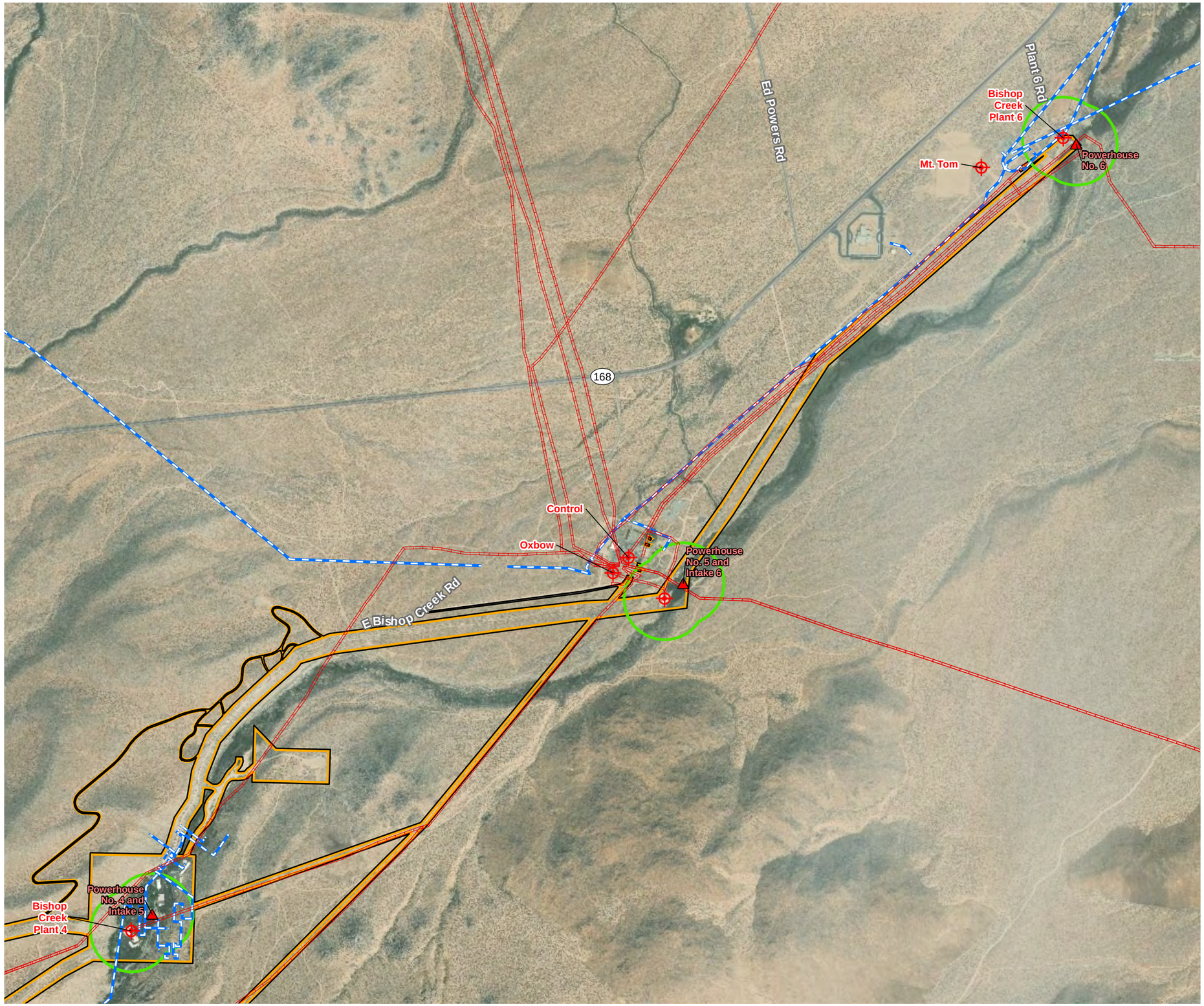

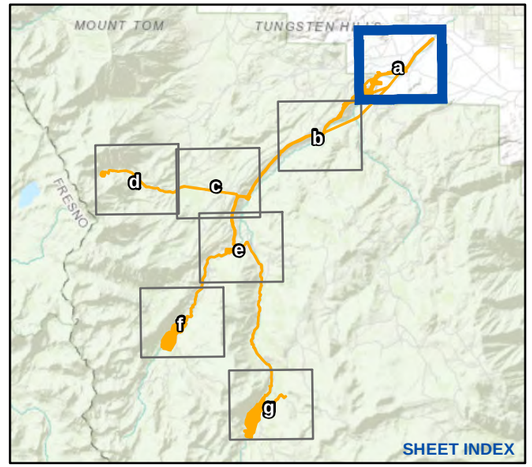

- Powerhouse
- Utility
- Transmission Line
- Powerline
- Wildlife and Plant Study Area
- FERC Boundary

N
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1,200 600 0 1,200 Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2a

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

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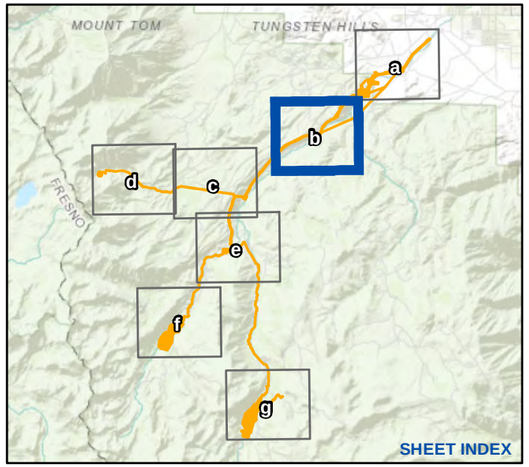

- Powerhouse
- Utility
- Gage
- Transmission Line
- Powerline
- Wildlife and Plant Study Area
- FERC Boundary

N
W E
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1,200 600 0 1,200 Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2b

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

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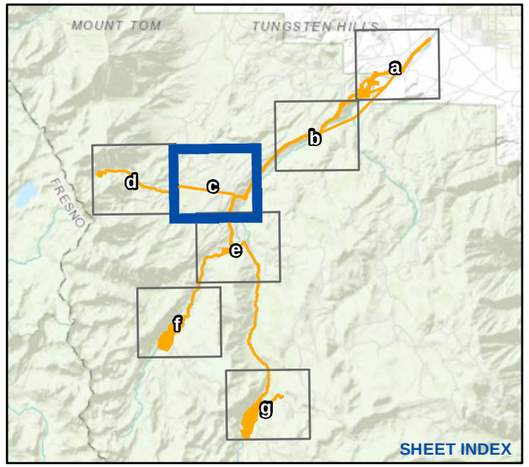

- Powerhouse
- Utility
- Diversion
- Penstock
- Transmission Line
- Powerline
- Mule Deer Study Area
- Wildlife and Plant Study Area
- FERC Boundary

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W E
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1,200 600 0 1,200
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2c

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

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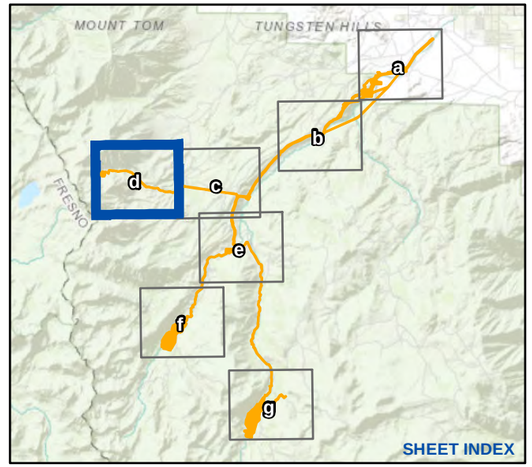
Longley Lake Dam (McGee Lake)

McGee Creek Diversion

Match Line - Sheet c



- Diversion
- Dam
- Penstock
- Wildlife and Plant Study Area
- FERC Boundary

N
W E
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1,200 600 0 1,200 Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2d

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

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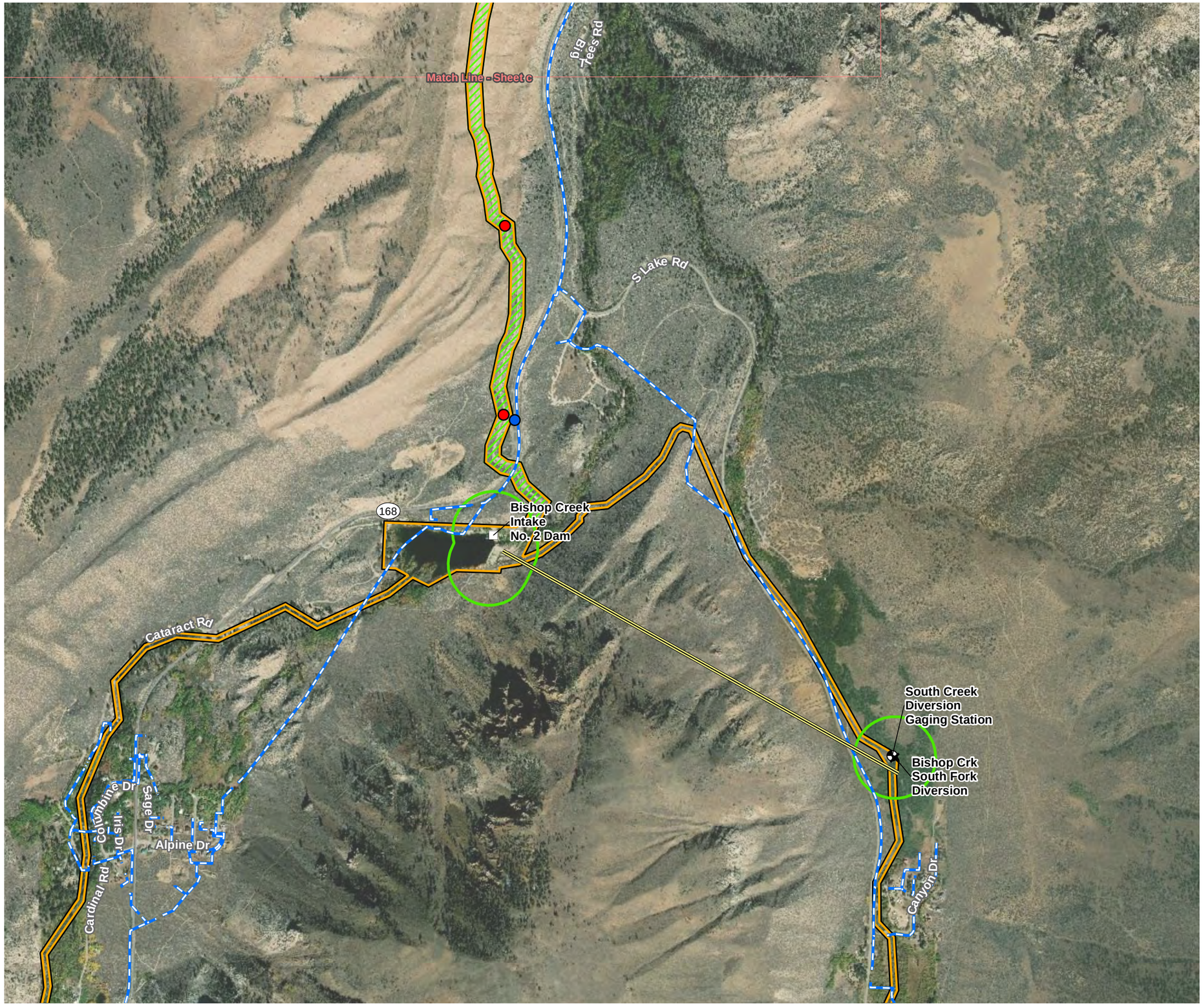

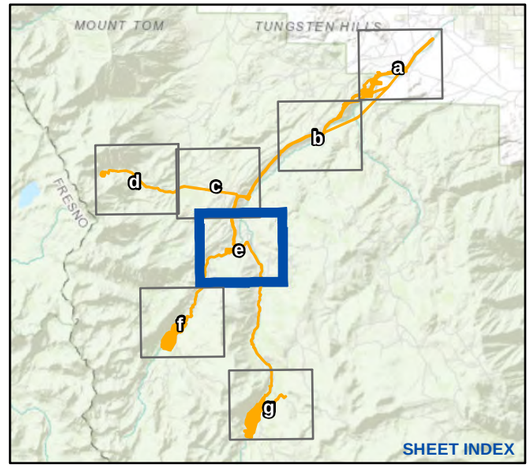

- Diversion
- Dam
- Gage
- Penstock
- Powerline
- Mule Deer Study Area
- Wildlife and Plant Study Area
- FERC Boundary
- Wildlife Cameras
- Mule Deer Observation

N
W E
S

1,200 600 0 1,200 Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2e

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_GenWildlifeStudyArea.pdf

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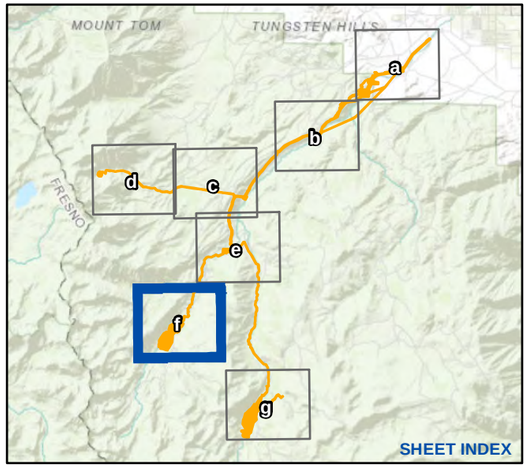

Dam
Powerline
Wildlife and Plant Study Area
FERC Boundary

N
W E
S

1,200 600 0 1,200
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2f

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_GenWildlifeStudyArea.pdf

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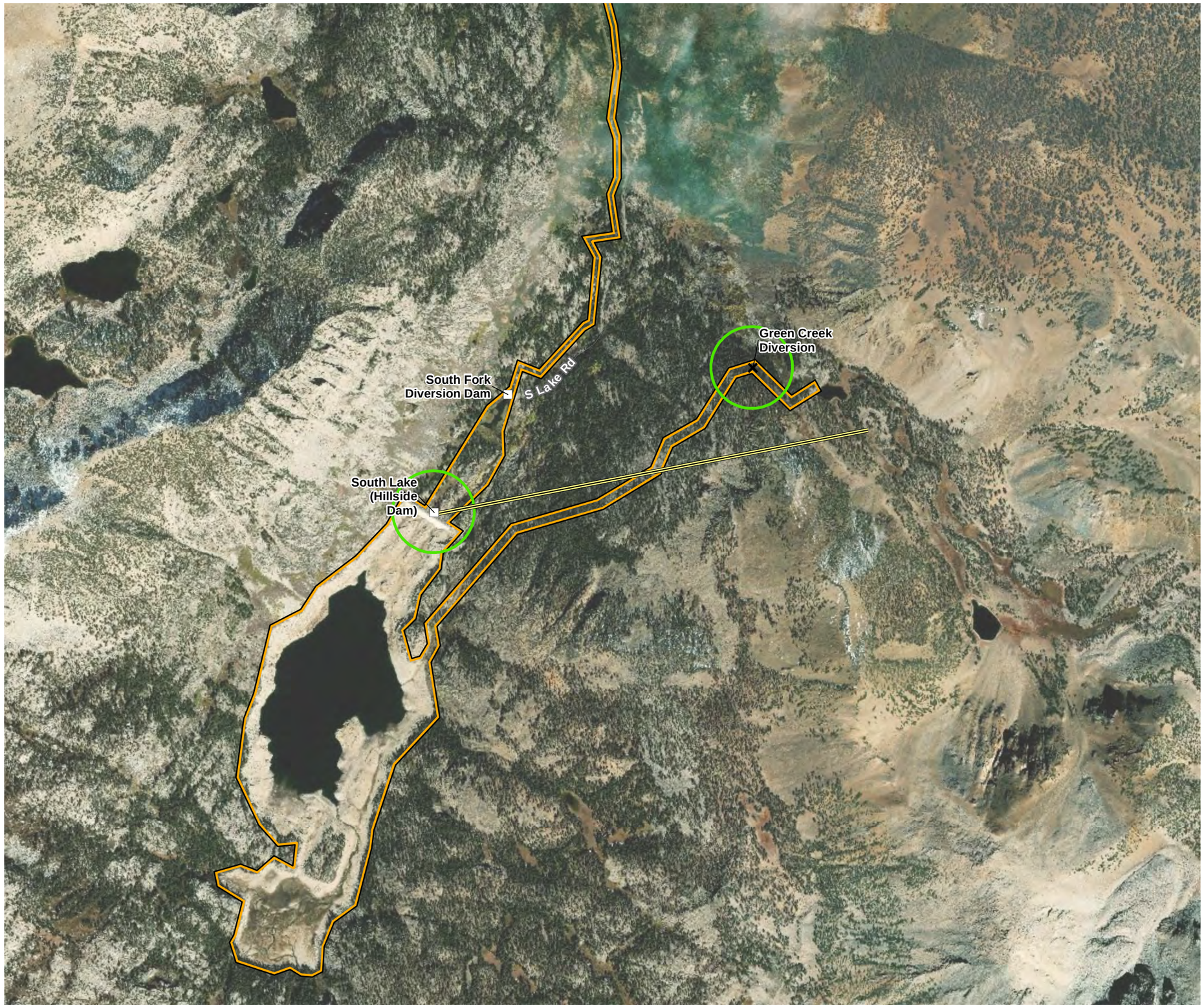

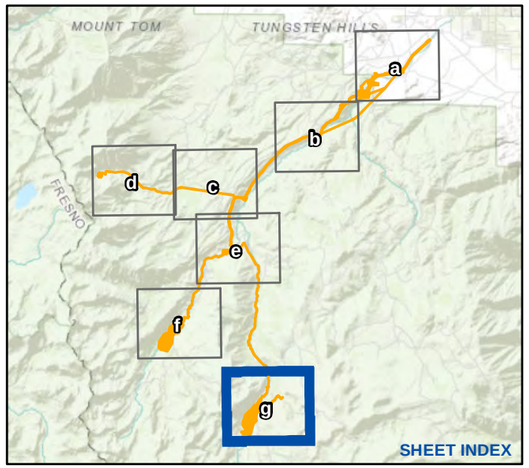

- Diversion
- Dam
- Penstock
- Wildlife and Plant Study Area
- FERC Boundary

N
W E
S

1,200 600 0 1,200
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

General Wildlife Study Area
Exhibit 2g

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_GenWildlifeStudyArea.pdf

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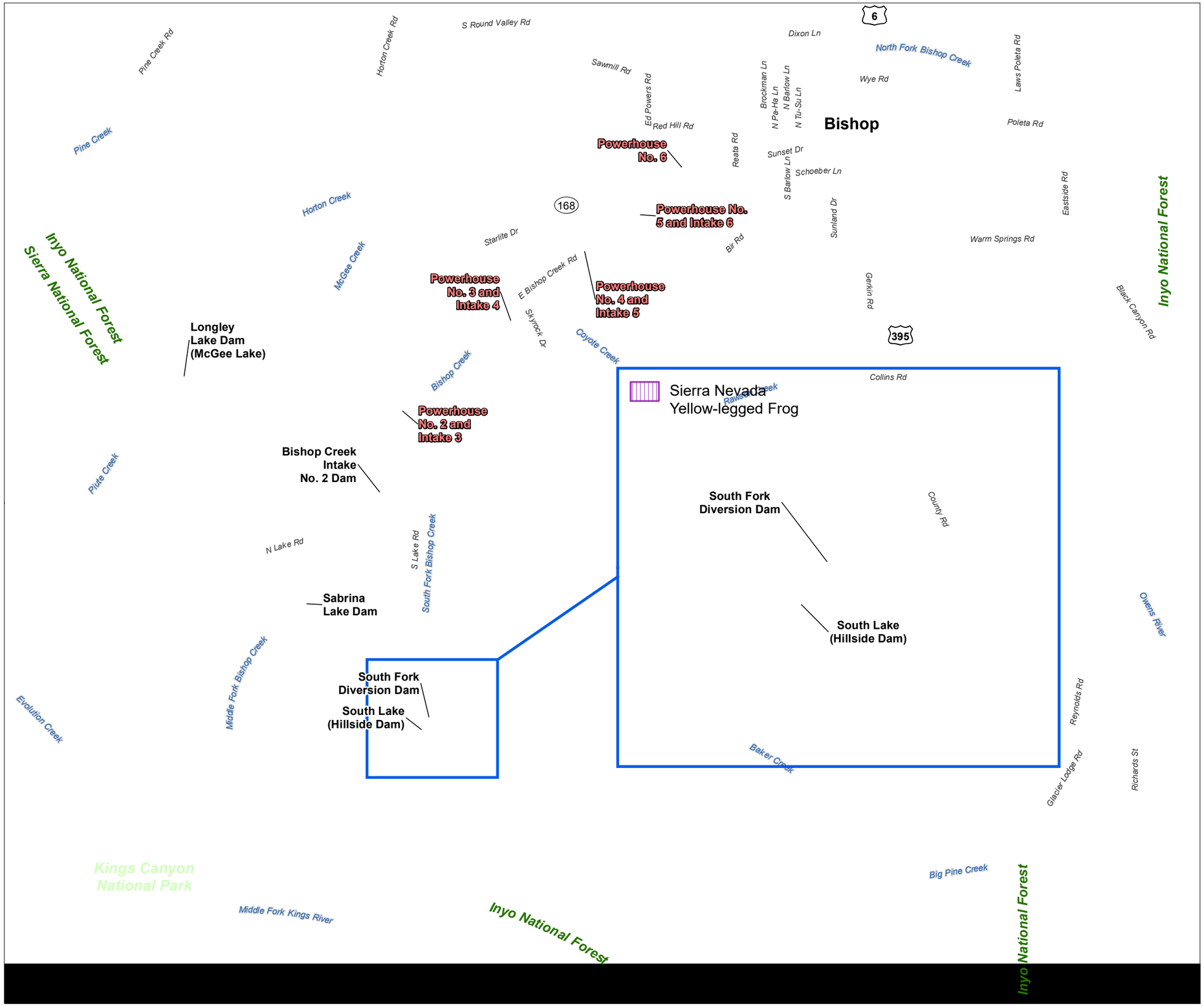

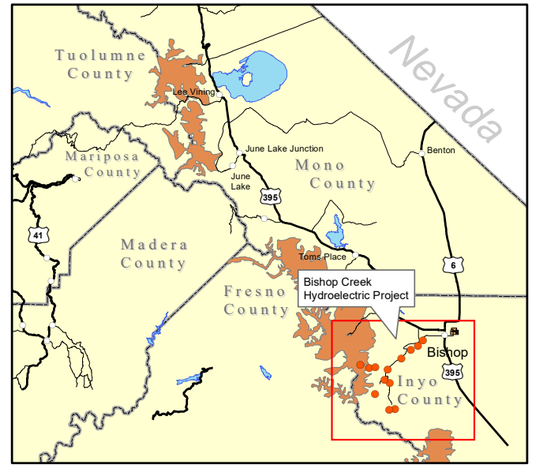

Facilities*

- Powerhouse
- Dam
- FERC Boundary

USFWS Critical Habitat

- Sierra Nevada Bighorn Sheep
- Sierra Nevada Yellow-legged Frog
- Yosemite Toad

Land Jurisdiction

- Bureau of Indian Affairs
- Bureau of Land Management
- Local Government
- National Park Service
- State (CDFW)
- Undetermined
- United States Forest Service

Other Areas

- National Forest Boundaries

*Due to the scale of this map, not all project facilities are shown.

N W E S

2 1 0 2 Miles

Critical Habitat Near Project Facilities

Exhibit 3

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 04/09/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_CriticalHabitat.pdf

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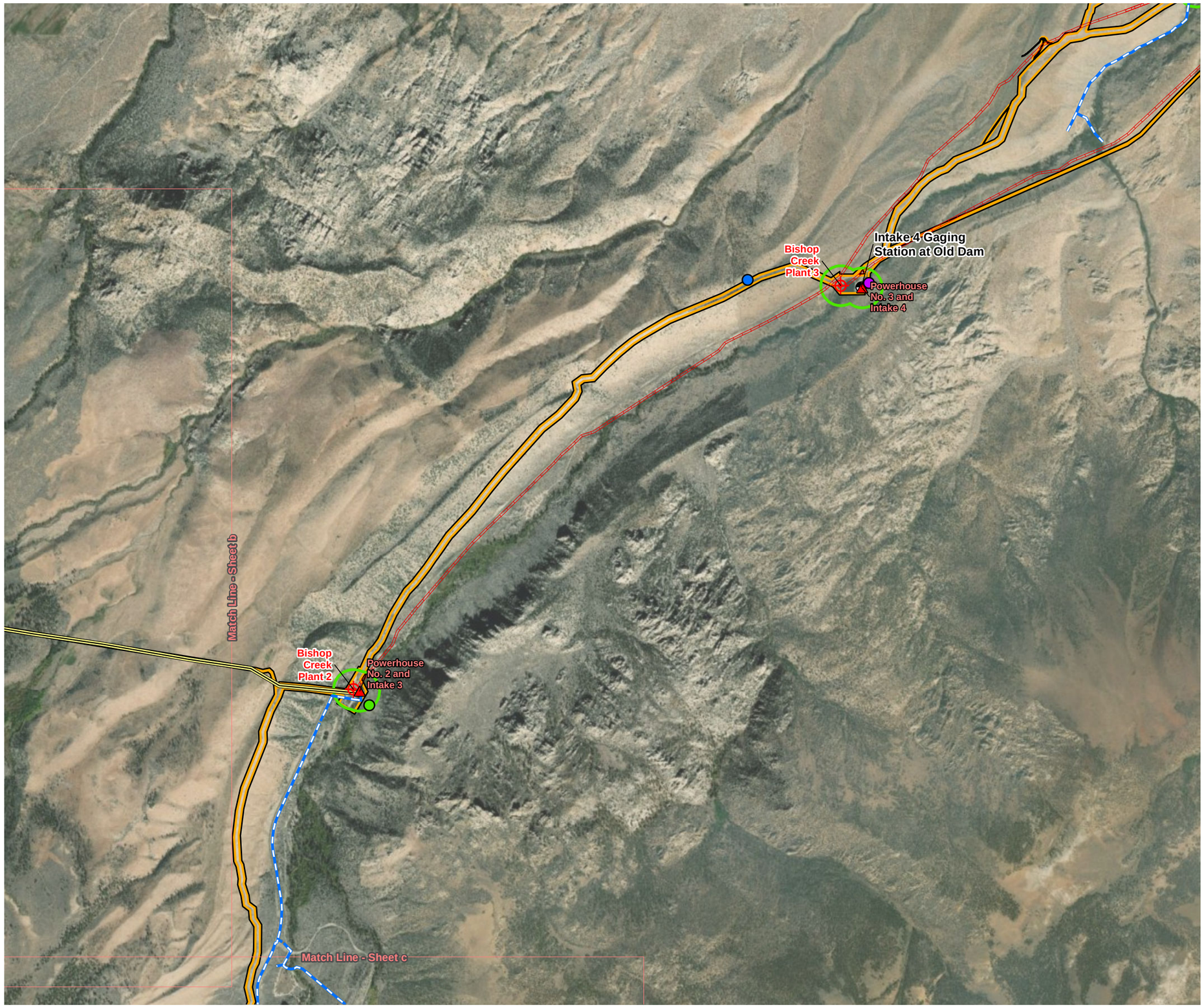

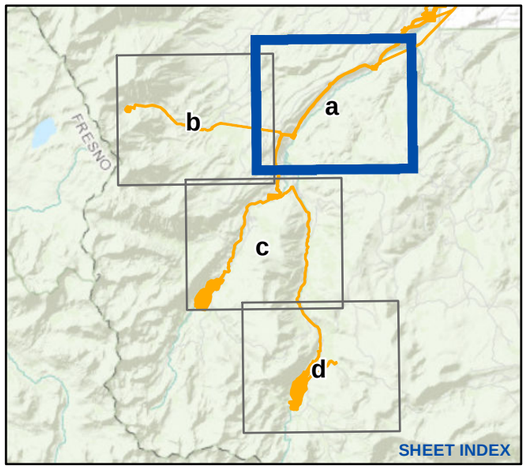

- Powerhouse
- Utility
- Gage
- Penstock
- Transmission Line
- Powerline
- Wildlife and Plant Study Area
- FERC Boundary

Special Status Species

- Bald Eagle
- golden eagle
- nesting warbling vireo

N
W E
S

2,000 1,000 0 2,000
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

Special Status Species Observations

Exhibit 4a

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_SpecialStatusSpecies.pdf

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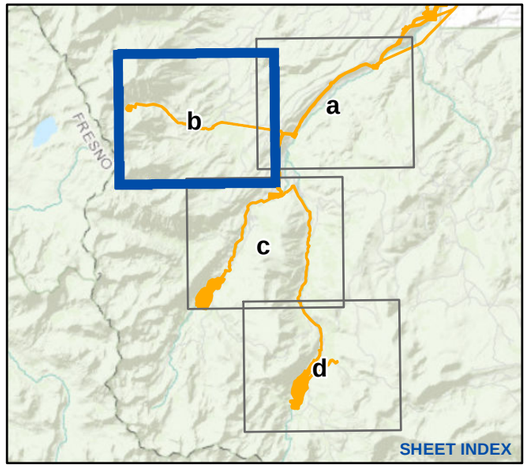


- Utility
- Diversion
- Dam
- Penstock
- Powerline
- Wildlife and Plant Study Area
- FERC Boundary

Special Status Species

- Brewer's sparrow
- Inactive northern goshawk nest
- Williamson's sapsucker
- golden eagle
- green-tailed towhee
- northern goshawk

N
W E
S

2,000 1,000 0 2,000
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

Special Status Species Observations

Exhibit 4b

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_SpecialStatusSpecies.pdf

D:\Projects\3KLE\010102\MXD\Wildlife_Report\ex_SS_Species_20200302.mxd

Match Line - Sheet a

Match Line - Sheet b

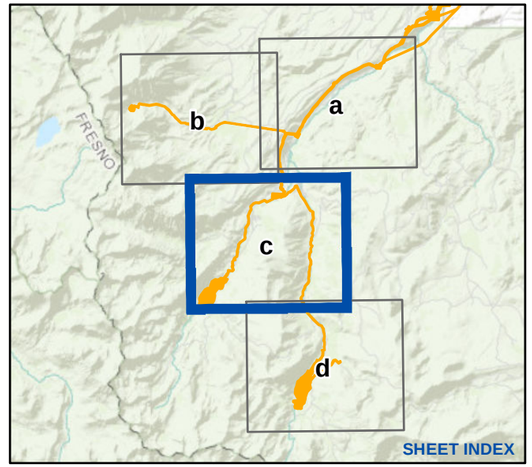
Match Line - Sheet d

Bishop Creek Intake No. 2 Dam

Bishop Crk South Fork Diversion

South Creek Diversion Gaging Station

Sabrina Lake Dam



- Diversion
- Dam
- Gage
- Penstock
- Powerline
- Wildlife and Plant Study Area
- FERC Boundary

Special Status Species

- Brewer's sparrow
- Cassins's finch
- Williamson's sapsucker
- green-tailed towhee

N
W E
S

2,000 1,000 0 2,000
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

Special Status Species Observations

Exhibit 4c

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_SpecialStatusSpecies.pdf

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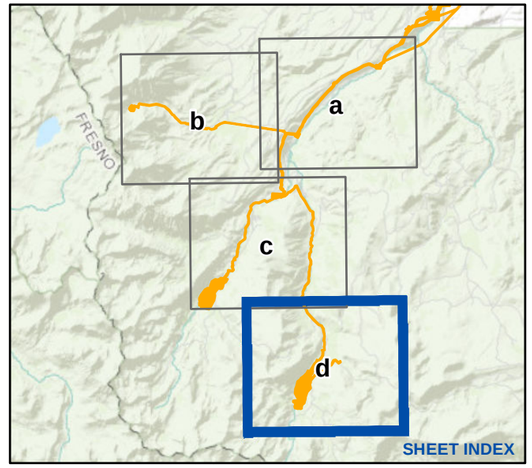

- Diversion
- Dam
- Penstock
- Wildlife and Plant Study Area
- FERC Boundary

Special Status Species

- Cassins's finch
- green-tailed towhee
- rufous hummingbird

N
W E
S

2,000 1,000 0 2,000
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

Special Status Species Observations

Exhibit 4d

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_SpecialStatusSpecies.pdf

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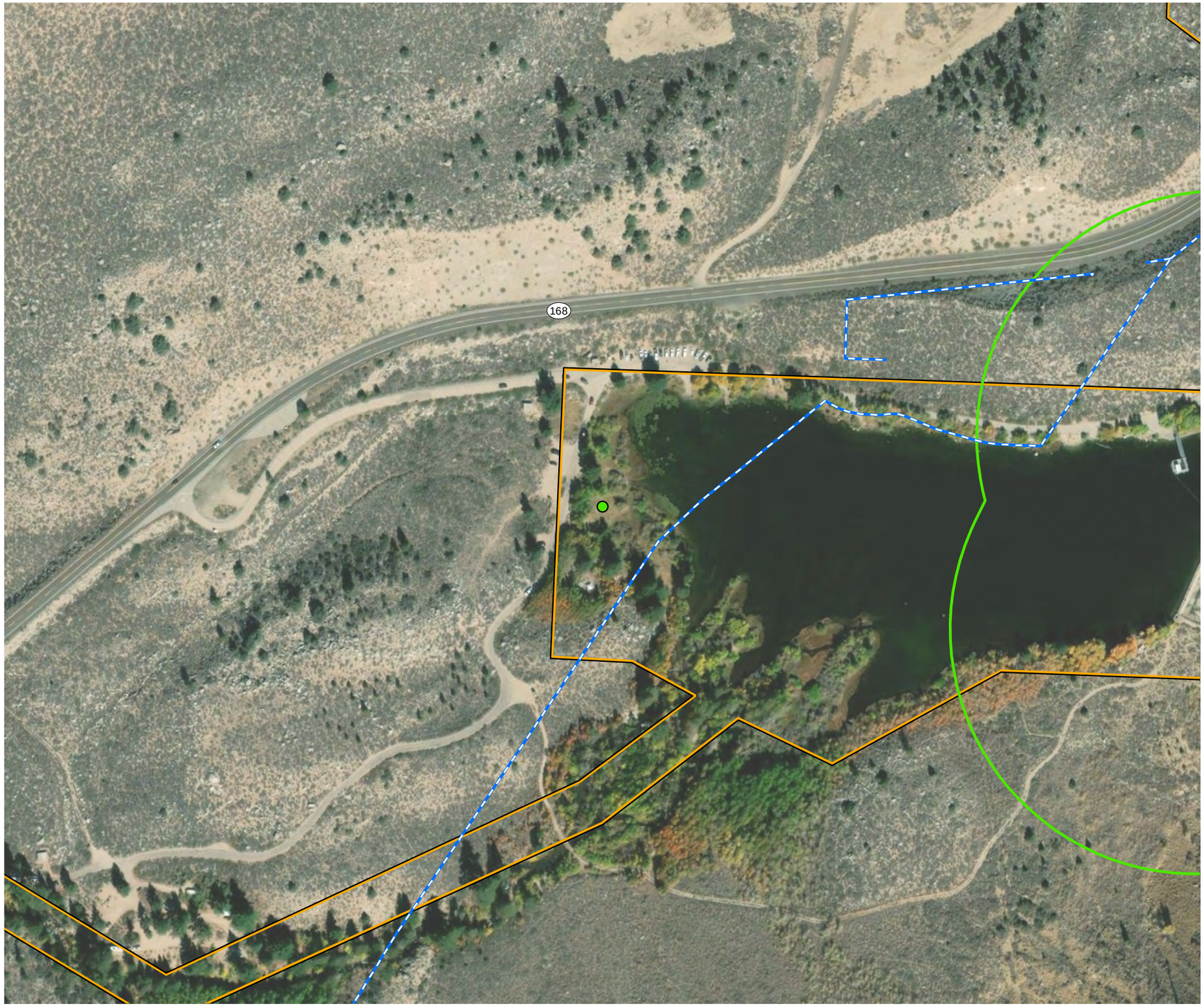

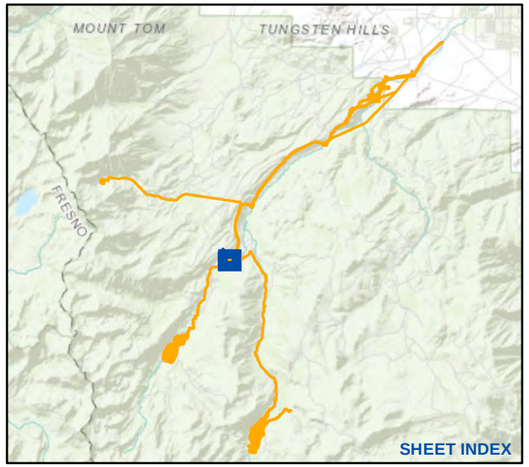

Powerline

Wildlife and Plant Study Area

FERC Boundary

mule deer sighting

N

W E

S

200 100 0 200

Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

Mule Deer Observations

Exhibit 5a

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/03/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_MuleDeerObs.pdf

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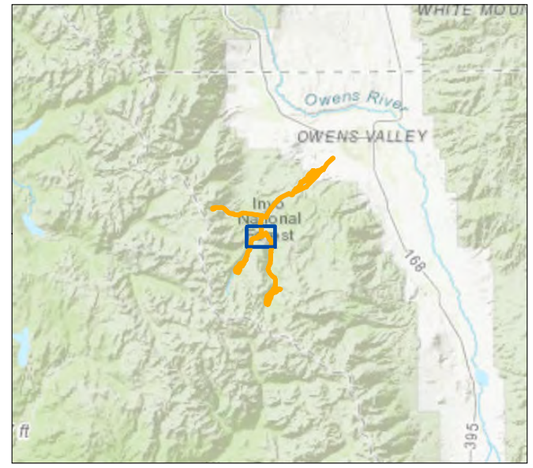

- Mule Deer Study Area
- FERC Boundary
- Penstock
- Diversion
- Dam
- Gage
- Powerline
- Wildlife Cameras
- Mule Deer Observation

N
W E
S

1,000 500 0 1,000
Feet

Aerial Source: Esri, DigitalGlobe 2018
Projection: NAD83 UTM Zone 11 (meters)

Mule Deer Observations

Exhibit 5b

Bishop Creek Hydroelectric Relicensing Project

PSOMAS

(Rev: 03/04/2020 RMB) R:\Projects\KLE\3KLE010102\Graphics\Wildlife_Report\ex_MuleDeerObs.pdf

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ATTACHMENT A

SITE PHOTOGRAPHS

Photo 1: View of surrounding habitat at Powerhouse No. 6.

Photo 2: View of the dam and surrounding habitat at Powerhouse No. 5.

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Photo 3: View of the dam and surrounding habitat at Powerhouse No. 4.

Photo 4: View of the dam and surrounding habitat at Powerhouse No. 3 and Intake No. 4.

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Photo 5: View of the dam and surrounding habitat at Intake No. 2.

Photo 6: View of surrounding habitat at Intake No. 2.

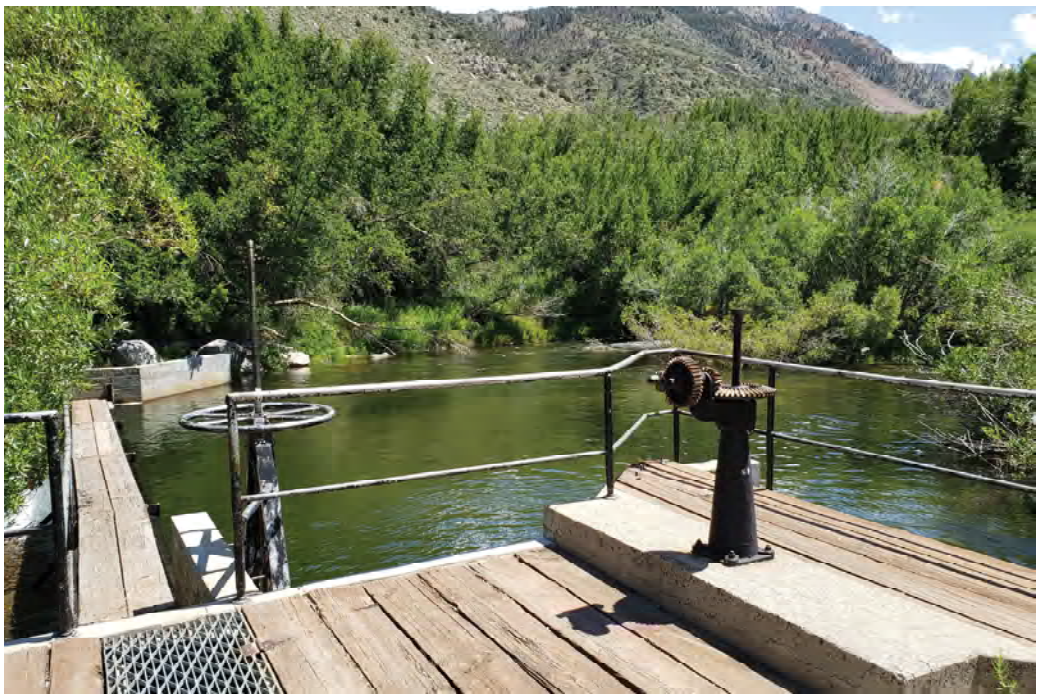

Photo 7: View from the diversion dam and surrounding habitat at the South Fork Diversion Dam.

Photo 8: View of the diversion dam and surrounding habitat at the Green Creek Diversion.

Photo 9: View of the diversion dam and surrounding habitat at the Birch Creek Diversion.

Photo 10: View of the diversion dam and surrounding habitat at the McGee Creek Diversion.

Photo 10: View of Birch Creek Habitat

Photo 11: View of the spillway and surrounding habitat at Lake Sabrina.

Photo 12: View of Hillside Dam and surrounding habitat at South Lake.

Photo 13: View of Lake Sabrina Habitat down stream of Lake Sabrina outlet.

Photo 14: View of the flowline and wildlife crossing where one of the wildlife cameras was installed.

Photo 15: View of the flowline flowline road.

Photo 16: View of the deer crossing over flowline.

ATTACHMENT B

PLANT COMMUNITY DESCRIPTIONS

PLANT COMMUNITIES

Upland Botanical Resources

This section is based on keys and descriptions from the USFS using the Calveg[1] classification system. This is the preferred key in use by the Inyo National Forest and is used here to be consistent with the Inyo National Forest Plan (USFS 2018a). In this system, differences between community types (also referred to as alliances) are based on canopy cover as determined from aerial photography and satellite imagery. .

Tree Dominated

Canyon Live Oak

With a canopy cover of at least 50 percent, the canyon live oak (*Quercus chrysolepis*) community generally occurs on relatively dry, shallow colluvial soils in steep canyons between approximately 1600 feet and 8400 feet. Understory shrubs can include deerbrush (*Ceanothus integerrimus*) and whiteleaf Manzanita (*Arctostaphylos viscida*), as well as annual grasses and forbs.

Eastside Pine

This community is defined by presence of Jeffrey pine (*Pinus jeffreyi*), either alone or in combination with ponderosa pine (*P. ponderosa*), with a canopy cover of at least 75 percent. The community generally occurs at moderate to upper montane elevations, especially in an elevation range of approximately 5400 feet to 10,000 feet.

Limber Pine

With a canopy cover of at least 75 percent, the limber pine (*Pinus flexilis*) community is associated with dry, steep, high elevation sites generally in the range of 8000 feet to 10,600 feet. These slopes are often east facing, eroded, rocky, coarse-textured, and with low soil nutrient levels.

Lodgepole Pine

The lodgepole pine (*Pinus contorta* ssp. *murrayana*) alliance, with at least 75 percent canopy cover of this species, generally occurs at elevations from approximately 5800 feet to 11,200 feet. Lodgepole pine is an important invader species following fire or disturbance.

Singleleaf Pinyon Pine

With a canopy cover of at least 75 percent, the singleleaf pinyon pine (*Pinus monophylla*) community typically occupies dry slopes within a wide elevation range. Understory shrub

[1] The CALVEG ("Classification and Assessment with Landsat of Visible Ecological Groupings") system was initiated in January 1978 by the Region 5 Ecology Group of the U.S. The Calveg team's mission was to classify California existing vegetation communities for use in statewide resource planning considerations. It is a hierarchical classification originally based on "formation" categories: forest, woodland, chaparral, shrubs and herbaceous in addition to non-vegetated units. They were originally identified by distinctions calculated among canopy reflectance values used in the LANDSAT satellite. Since then, the classification has been expanded from an initial 129 types occurring throughout the eight regions of the state to the current 213 occurring in nine regions, and image resolution has been enhanced. https://www.fs.fed.us/r5/rsl/Projects/classification/system.shtml accessed January 16, 2019.

species commonly include big sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia tridentata*), cacti (*Opuntia* spp.) and rabbitbrush (*Chrysothamnus* spp.).

Subalpine Conifers

A combination of two or more conifer species, with a canopy cover of at least 50 percent, comprises this community. Depending on location, the mixture may include three or more of the following species: mountain hemlock (*Tsuga mertensiana*), lodgepole pine (*Pinus contorta* ssp. *murrayana*), limber pine (*P. flexilis*) and/or whitebark pine (*P. albicaulis*). The elevation range of this community is approximately 7600 feet to 11,800 feet.

Whitebark Pine

With a canopy cover of whitebark pine (*Pinus albicaulis*) of at least 75 percent, this community occurs on high windswept ridges within an elevation range of 8600 feet to 12,000 feet. In these areas, a krummholzed form is common, but an upright form also grows in areas of glacial scouring where soil development is poor.

Shrub Dominated

Alpine Mixed Scrub

Alpine Mixed Scrub communities consist of a mixture of tall and dwarf shrubs and some low graminoid and forb species, often including cushion or rosette-leaved plants that survive harsh climatic conditions above timberline. In the Sierra Nevada, the Alpine Mixed Scrub Alliance has been mapped chiefly in the range of approximately 8000 feet to 12,600 feet. Common shrubs include creambush oceanspray (*Holodiscus discolor*), Greene's goldenweed (*Ericameria greenei*) and mountain white heather (*Cassiope mertensiana*). Shrubby willows (*Salix* spp.) are also common in this type. Non-shrub species include those represented in the Alpine Grasses and Forbs Alliance.

Bitterbrush

Bitterbrush (*Purshia tridentata*) is dominant in this alliance and can include the varieties antelope bitterbrush (*P. t.* var. *tridentata*) and desert bitterbrush (*P. t.* var. *glandulosa*). The alliance has been mapped at elevations from approximately 4800 feet to 8000 feet. Bitterbrush is a high value forage species that is associated with species such as big sagebrush (*Artemisia tridentata*), singleleaf pinyon pine (*Pinus monophylla*) and Jeffrey pine (*P. jeffreyi*).

Blackbush

This community is defined by occurrence of blackbush (*Coleogyne ramosissima*) with a canopy cover of at least 50 percent. Other upland shrubs, especially Mormon tea (*Ephedra* spp.), white bursage (*Ambrosia dumosa*) and saltbush (*Atriplex* spp.) may be present.

Curlleaf Mountain Mahogany

This community occurs on gently to steeply sloping mountain uplands and ridge tops, usually in association with rocky outcrops. Curlleaf mountain mahogany (*Cercocarpus ledifolius*) has been mapped more frequently in its shrub form than as a tree in the southern Sierras. It is abundant mainly at elevations above approximately 5400 feet.

Great Basin Mixed Scrub/Big (Basin) Sagebrush

A mixture of common Great Basin shrubs, with big basin sagebrush (*Artemisia tridentata* ssp. *tridentata*) cover of at least 50 percent, defines this type. It commonly occurs in the range of approximately 5000 feet to 10,600 feet in the southern Sierras. Other species can include mountain sagebrush (*A. t.* ssp. *vaseyana*), bitterbrush (*Purshia tridentata*), curlleaf mountain mahogany (*Cercocarpus ledifolius*), currant (*Ribes* spp.), snowberry (*Symphoricarpos* spp.) and/or interior rose (*Rosa woodsii*).

High Desert Mixed Scrub

This mixture of shrub species, found up to approximately 7400 feet, is defined by the presence of abundant (but not dominant) ephedra species, especially green ephedra (*Ephedra viridis*), spiny menodora (*Menodora spinescens*) and horsebrush (*Tetradymia* spp.).

Rabbitbrush

This community occurs on dry slopes and flats that are dominated by various species of rabbitbrush (*Chrysothamnus* spp.). In the Sierra Nevada it occurs chiefly within an elevation range of approximately 2600 feet to 9000 feet, often in proximity to the annual grasses and Forbs Alliance.

Saltbush

This alliance is a combination of shadscale (*Atriplex confertifolia*), fourwing saltbush (*A. canescens*), and/or other *Atriplex* species. It generally occurs at elevations of approximately 3000 feet to 5000 feet. Other alkaline desert shrub species such as rabbitbrush (*Chrysothamnus* spp.) can be closely associated with this type.

Herbaceous Dominated

Alpine Grasses and Forbs

Prostrate or low-growing herbaceous species predominate in this botanically diverse community rather than shrubs or trees. The community occurs most often within an elevation range of approximately 8200 feet to more than 13,000 feet. Due to high evaporative potential, the short growing season and abrasion or desiccation by wind, morphological adaptions by particular species are often similar to those in the desert. For example, several cushion-forming plants occur within these rocky sites, as well as species with basal rosette-type leaves. Nevertheless, there are a rich variety of herbaceous species that may be found in this Alliance, partially due to diverse habitats and moisture. On dry, open fell-fields, phlox (*Phlox condensata*) often dominate a site and on granite and metamorphics, oval-leaved buckwheat (*Eriogonum ovalifolium*) is a prominent species in many areas. Other species that may be identified in this community include prostrate sibbaldia (*Sibbaldia procumbens*), knotweed (*Polygonum davisiae*), buttercup (*Ranunculus eschscholtzii*), rockcress (*Arabis lemmonii*), mountain sorrel (*Oxyria digyna*), pussypaws (*Calyptridium umbellatum*), Indian paintbrush (*Castilleja lemmonii*), and (on moist sites) columbine (*Aquilegia pubescens*).

Annual Grasses and Forbs

This community is dominated by annual grasses such as bromes (*Bromus* spp.), needlegrass (*Achnatherum* spp.) and wild oats (*Avena* spp.), as well as forbs such as owl's clover (*Orthocarpus* spp.), fiddleneck (*Amsinckia intermedia*) and stork's bill (*Erodium* spp.). This community is often associated with burn areas, xeric or disturbed conditions.

Perennial Grasses and Forbs

This community consists of at least 50 percent cover of perennial grasses and forbs, retaining some moisture in mid-summer and growing in an elevation generally within approximately 6400 feet to 12,000 feet. Upper elevations are often associated with subalpine conifers such as whitebark pine (*Pinus albicaulis*) and lodgepole pine (*P. contorta* ssp. *murrayana*).

ATTACHMENT C

WILDLIFE COMPENDIUM

COMPENDIUM OF GENERAL WILDLIFE SURVEYS

Species	South Lake	Sabrina Lake Dam	McGee Creek Diversion	Birch Creek Diversion	Green Creek Diversion	Bishop Creek South Fork Diversion Dam	Bishop Creek Intake 2 Dam	Bishop Creek PH No. 2 and Intake 3	Bishop Creek PH No. 3 and Intake 4	Bishop Creek PH No. 4 and Intake 5	Bishop Creek PH No. 5 and Intake 6	Bishop Creek PH No. 6
LIZARDS												
granite spiny lizard *Sceloporus orcutti*		x										x
common side-blotched lizard *Uta stansburiana*						x		x		x	x	
BIRDS												
Mallard *Anas platyrhynchos*	x	x				x	x					
band-tailed pigeon *Patagioenas fasciata*		x							x	x		
Eurasian collared-dove *Streptopelia decaocto*								x			x	x
mourning dove *Zenaida macroura*			x	x		x	x	x		x	x	x
Costa's hummingbird *Calypte costae*								x				
rufous hummingbird *Selasphorus rufus*	x				x							
calliope hummingbird *Selasphorus calliope*			x	x								
turkey vulture *Cathartes aura*			x	x		x		x				
bald eagle *Haliaeetus leucocephalus*								x				
northern goshawk *Accipiter gentilis*				x								
red-tailed hawk *Buteo jamaicensis*						x	x					x
golden eagle *Aquila chrysaetos*			x				x					
northern pygmy-owl					x							

COMPENDIUM OF GENERAL WILDLIFE SURVEYS

Species	South Lake	Sabrina Lake Dam	McGee Creek Diversion	Birch Creek Diversion	Green Creek Diversion	Bishop Creek South Fork Diversion Dam	Bishop Creek Intake 2 Dam	Bishop Creek PH No. 2 and Intake 3	Bishop Creek PH No. 3 and Intake 4	Bishop Creek PH No. 4 and Intake 5	Bishop Creek PH No. 5 and Intake 6	Bishop Creek PH No. 6
Glaucidium gnoma												
Williamson's sapsucker *Sphyrapicus thyroideus*		x		x								
red-breasted sapsucker *Sphyrapicus ruber*	x	x					x					
northern flicker *Colaptes auratus*		x	x	x				x	x			
American kestrel *Falco sparverius*			x				x					
western wood-pewee *Contopus sordidulus*	x	x	x	x	x		x	x				
dusky flycatcher *Empidonax oberholseri*		x			x							
black phoebe *Sayornis nigricans*	x				x			x		x	x	
Say's phoebe *Sayornis saya*												x
loggerhead shrike *Lanius ludovicianus*												
warbling vireo *Vireo gilvus*	x							x	x			
Steller's jay *Cyanocitta stelleri*		x			x		x	x	x	x		
Clark's nutcracker *Nucifraga columbiana*	x	x	x	x	x		x					
common raven *Corvus corax*	x	x						x			x	x
violet-green swallow *Tachycineta thalassina*	x	x					x	x	x			
northern rough-winged swallow						x	x					

COMPENDIUM OF GENERAL WILDLIFE SURVEYS

Species	South Lake	Sabrina Lake Dam	McGee Creek Diversion	Birch Creek Diversion	Green Creek Diversion	Bishop Creek South Fork Diversion Dam	Bishop Creek Intake 2 Dam	Bishop Creek PH No. 2 and Intake 3	Bishop Creek PH No. 3 and Intake 4	Bishop Creek PH No. 4 and Intake 5	Bishop Creek PH No. 5 and Intake 6	Bishop Creek PH No. 6
Stelgidopteryx serripennis												
mountain chickadee *Poecile gambeli*	x	x			x	x	x	x				
white-breasted nuthatch *Sitta carolinensis*			x	x	x							
rock wren *Salpinctes obsoletus*	x	x	x	x	x		x	x				
house wren *Troglodytes aedon*	x	x					x	x				
ruby-crowned kinglet *Regulus calendula*	x	x										
mountain bluebird *Sialia currucoides*					x							
Townsend's solitaire *Myadestes townsendi*		x			x							
American robin *Turdus migratorius*	x	x		x			x					
house finch *Haemorhous mexicanus*									x	x	x	x
purple finch *Haemorhous purpureus*					x			x				
Cassin's finch *Haemorhous cassinii*	x	x										
lesser goldfinch *Spinus psaltria*							x	x	x	x	x	
American goldfinch *Spinus tristis*								x				
green-tailed towhee *Pipilo chlorurus*		x	x	x	x		x	x				

COMPENDIUM OF GENERAL WILDLIFE SURVEYS

Species	South Lake	Sabrina Lake Dam	McGee Creek Diversion	Birch Creek Diversion	Green Creek Diversion	Bishop Creek South Fork Diversion Dam	Bishop Creek Intake 2 Dam	Bishop Creek PH No. 2 and Intake 3	Bishop Creek PH No. 3 and Intake 4	Bishop Creek PH No. 4 and Intake 5	Bishop Creek PH No. 5 and Intake 6	Bishop Creek PH No. 6
spotted towhee *Pipilo maculatus*								x				
Brewer's sparrow *Spizella breweri*						x	x					
vesper sparrow *Pooecetes gramineus*				x		x	x					
lark sparrow *Chondestes grammacus*	x											
song sparrow *Melospiza melodia*	x					x						
white-crowned sparrow *Zonotrichia leucophrys*	x		x	x				x	x			
dark-eyed junco *Junco hyemalis*	x	x	x	x	x	x	x					
red-winged blackbird *Agelaius phoeniceus*						x						
brown-headed cowbird *Molothrus ater*		x										
Brewer's blackbird *Euphagus cyanocephalus*						x	x					
orange-crowned warbler *Oreothypis celata*		x	x	x					x			
common yellowthroat *Geothlypis trichas*							x					
yellow-rumped warbler *Setophaga coronata*		x	x	x	x		x		x			
hermit warbler *Setophaga occidentalis*				x								
western tanager *Piranga ludoviciana*							x	x	x			
black-headed grosbeak *Pheucticus melanocephalus*								x				

COMPENDIUM OF GENERAL WILDLIFE SURVEYS

Species	South Lake	Sabrina Lake Dam	McGee Creek Diversion	Birch Creek Diversion	Green Creek Diversion	Bishop Creek South Fork Diversion Dam	Bishop Creek Intake 2 Dam	Bishop Creek PH No. 2 and Intake 3	Bishop Creek PH No. 3 and Intake 4	Bishop Creek PH No. 4 and Intake 5	Bishop Creek PH No. 5 and Intake 6	Bishop Creek PH No. 6
MAMMALS												
Douglas' Squirrel *Tamiasciurus douglasii*	x				x							
Yellow-bellied marmot *Marmota flaviventris*							x					
California ground squirrel *Otospermophilus beecheyi*		x	x	x			x	x				
Belding's ground squirrel *Urocitellus beldingi*		x										
Golden-mantled ground squirrel *Callospermophilus lateralis*	x	x	x	x		x	x	x				
Least chipmunk *Neotamias minimus*			x	x								
American pika *Ochotona princeps*					x							
black-tailed jackrabbit *Lepus californicus*											x	x
mountain lion *Puma concolor*							x					
Coyote *Canis latrans*						scat	scat					
common gray fox *Urocyon cinereoargenteus*							remains					
southern mule deer *Odocoileus hemionus*					Vertebrae	scat	female & fawn	scat				

ATTACHMENT D

WILDLIFE CAMERA RESULTS

Photo 1: Representative photographic results of mule deer using the wildlife crossing over the flowline.

Photo 2: Representative photographic results of mountain lion using the wildlife crossing over the flowline.

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Photo 3: Representative photographic results of gray fox using the wildlife crossing over the flowline.

Photo 4: Representative photographic results of mule deer using the wildlife crossing over the flowline.