VII. FIGURES

Figure 1 Site Plan
Figure 2 Site Plan Detail
Figure 3 Elevations
Figure 4 Existing Site Photos
Figure 5 Photo Simulations

FIGURE 1 Site Plan

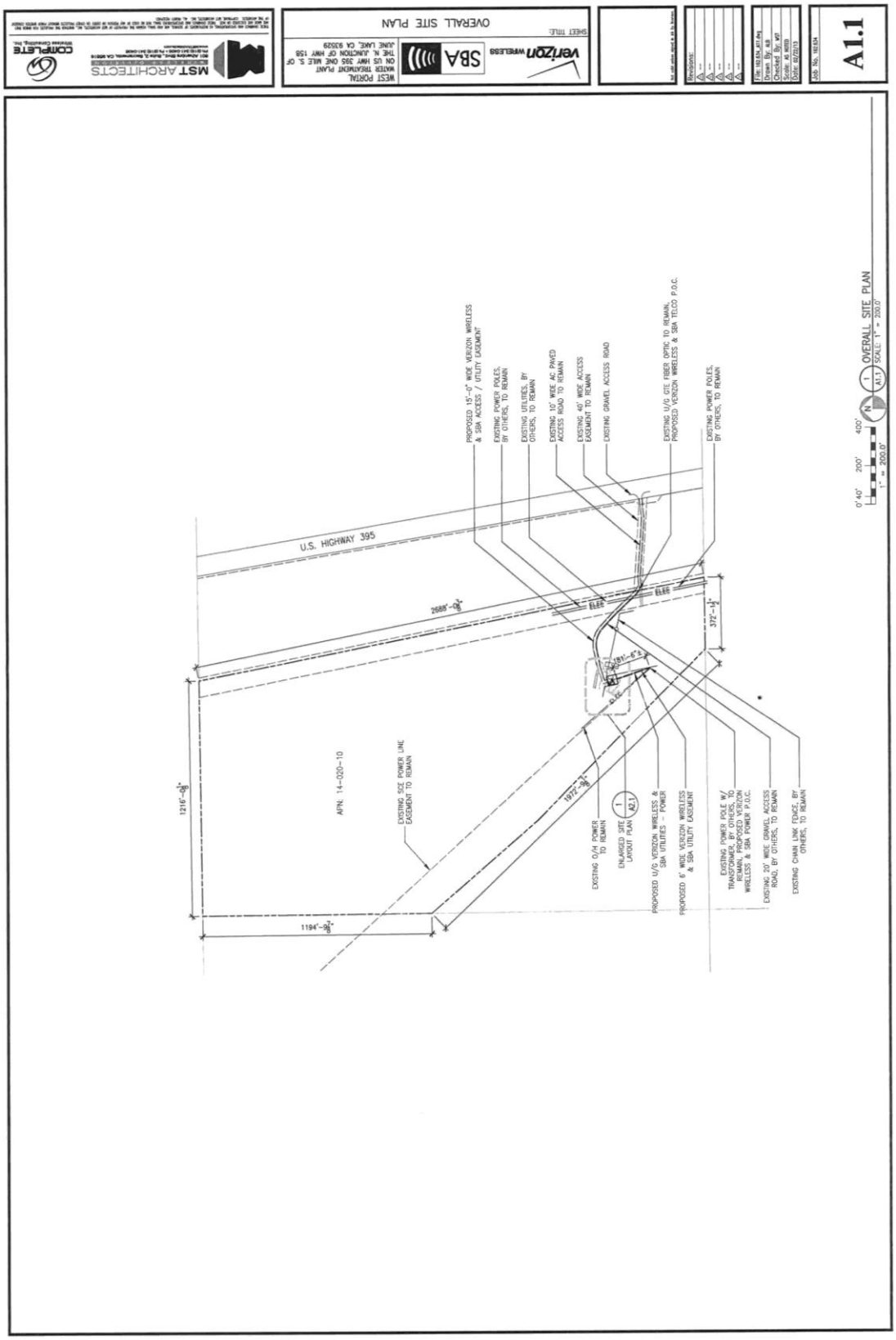


FIGURE 2 Site Plan Detail

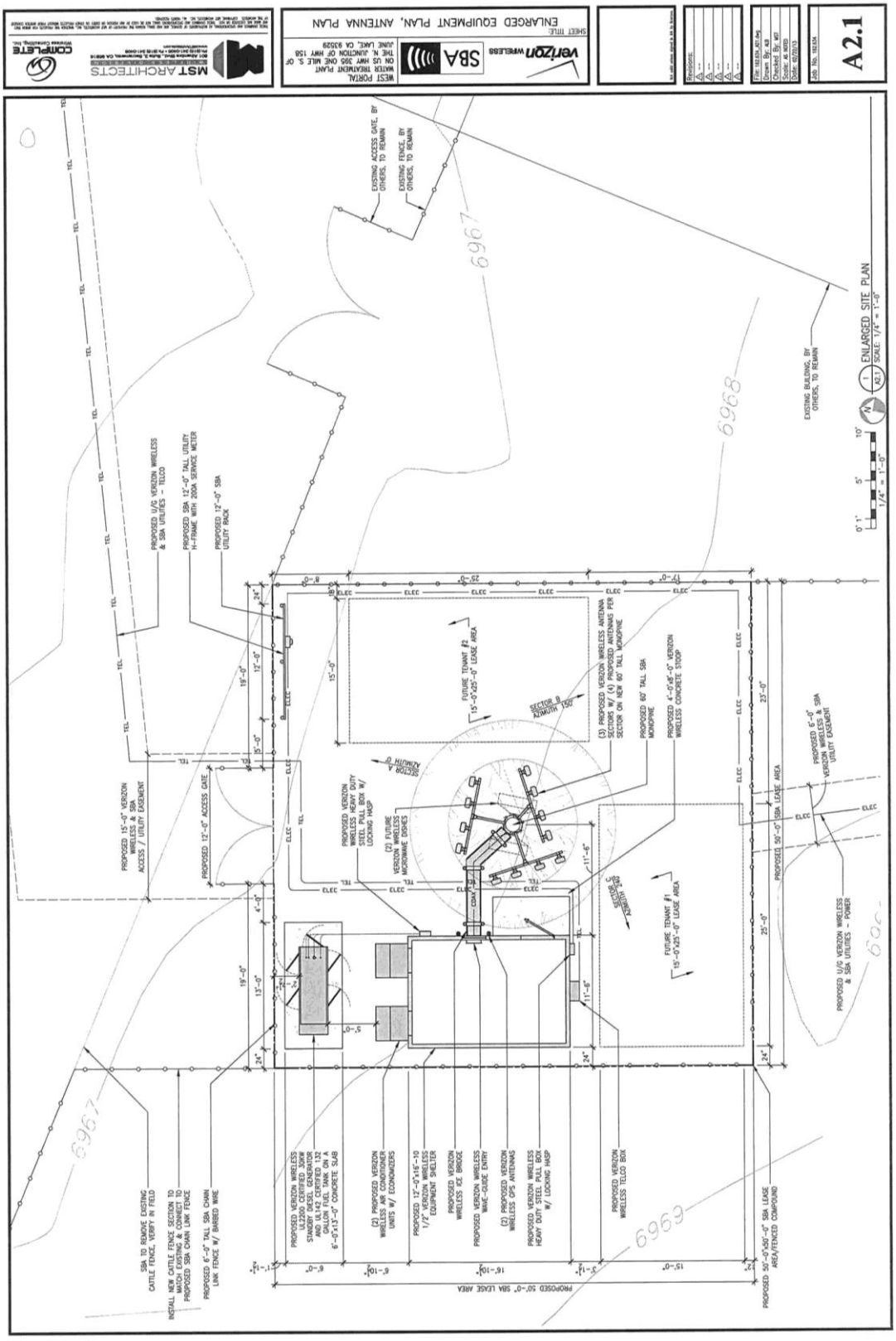


FIGURE 3 Elevations

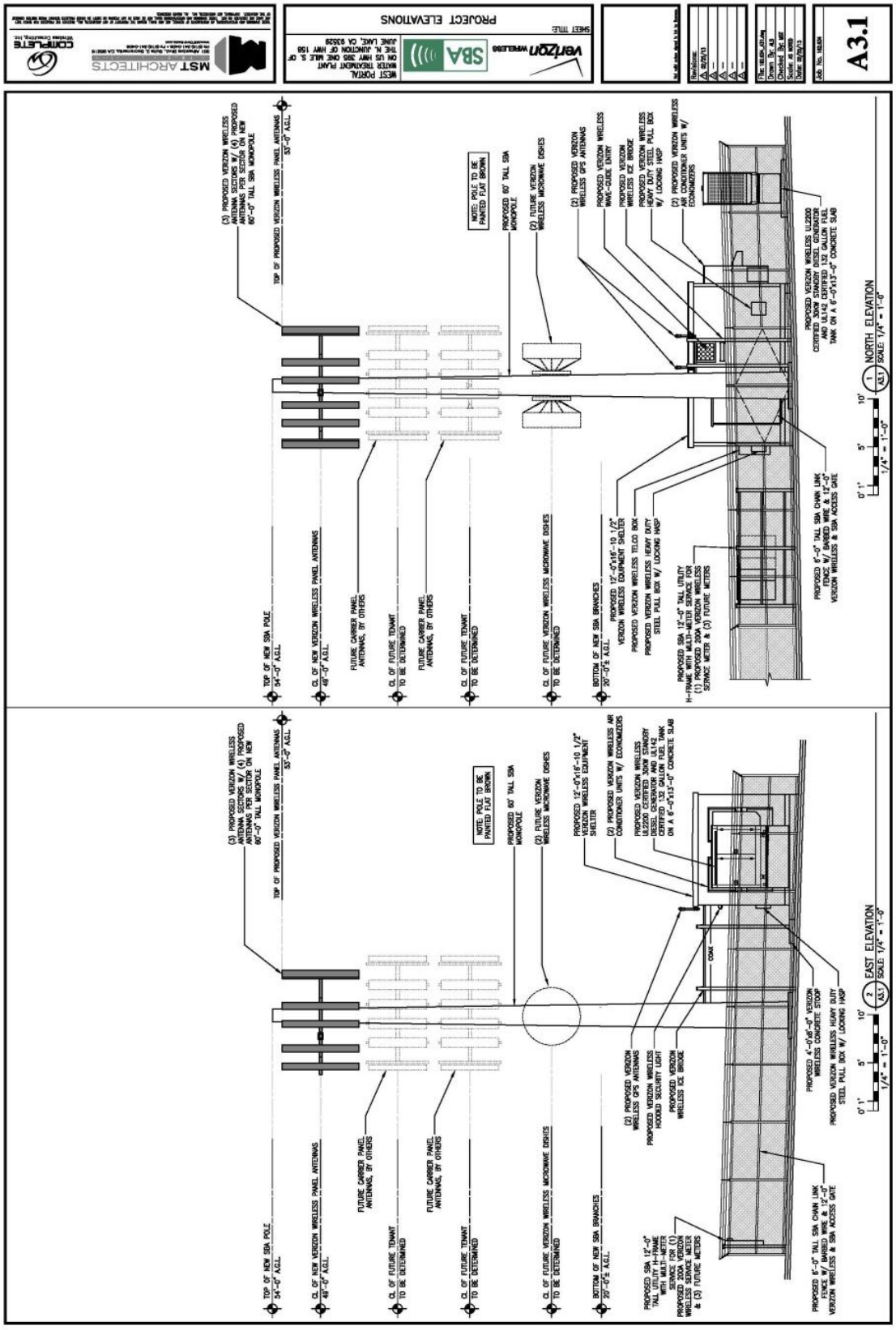


FIGURE 4 Existing Site Photos

Photo Point Locations

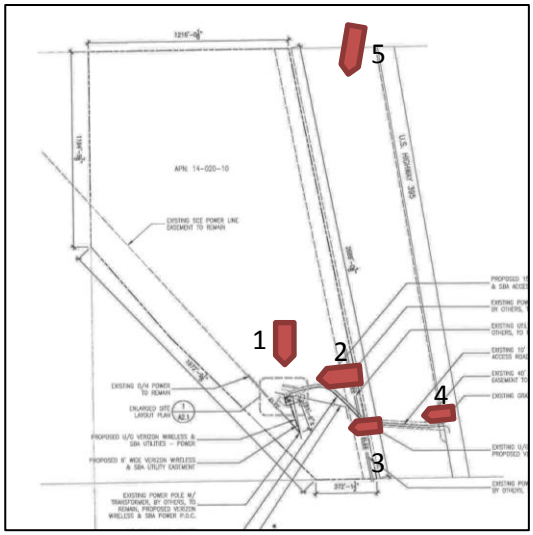


Photo Point 2

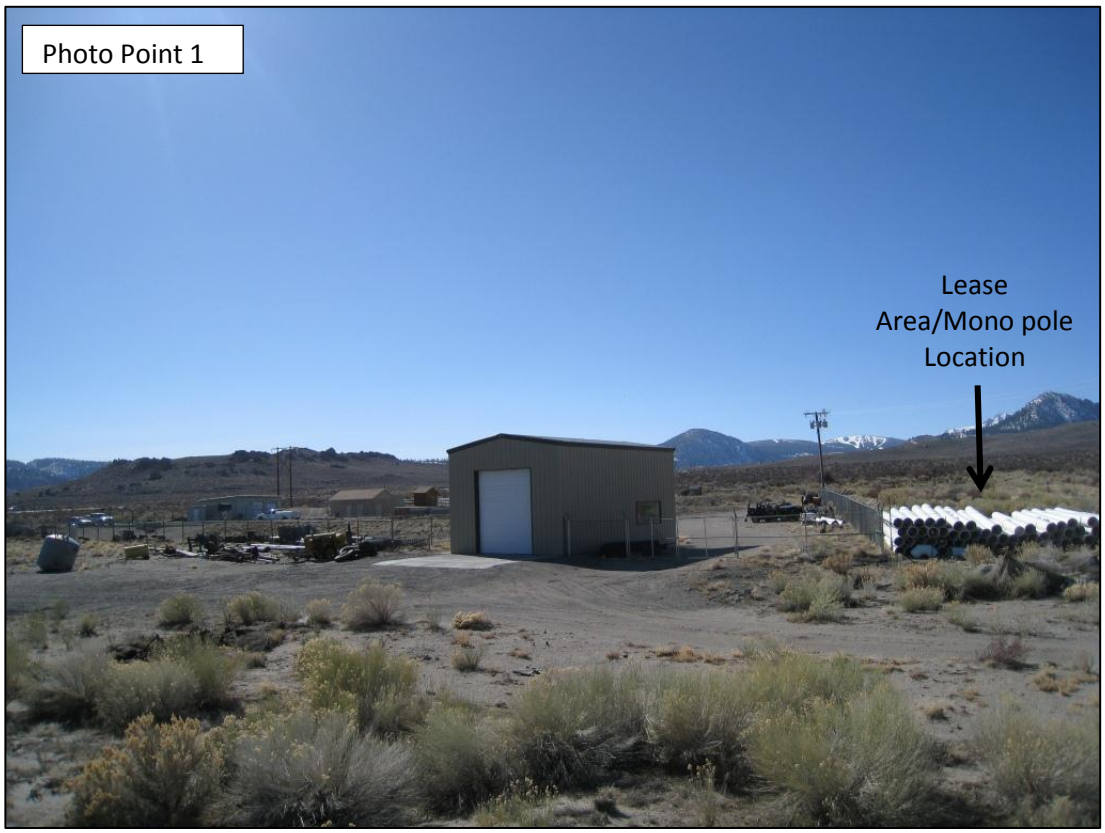
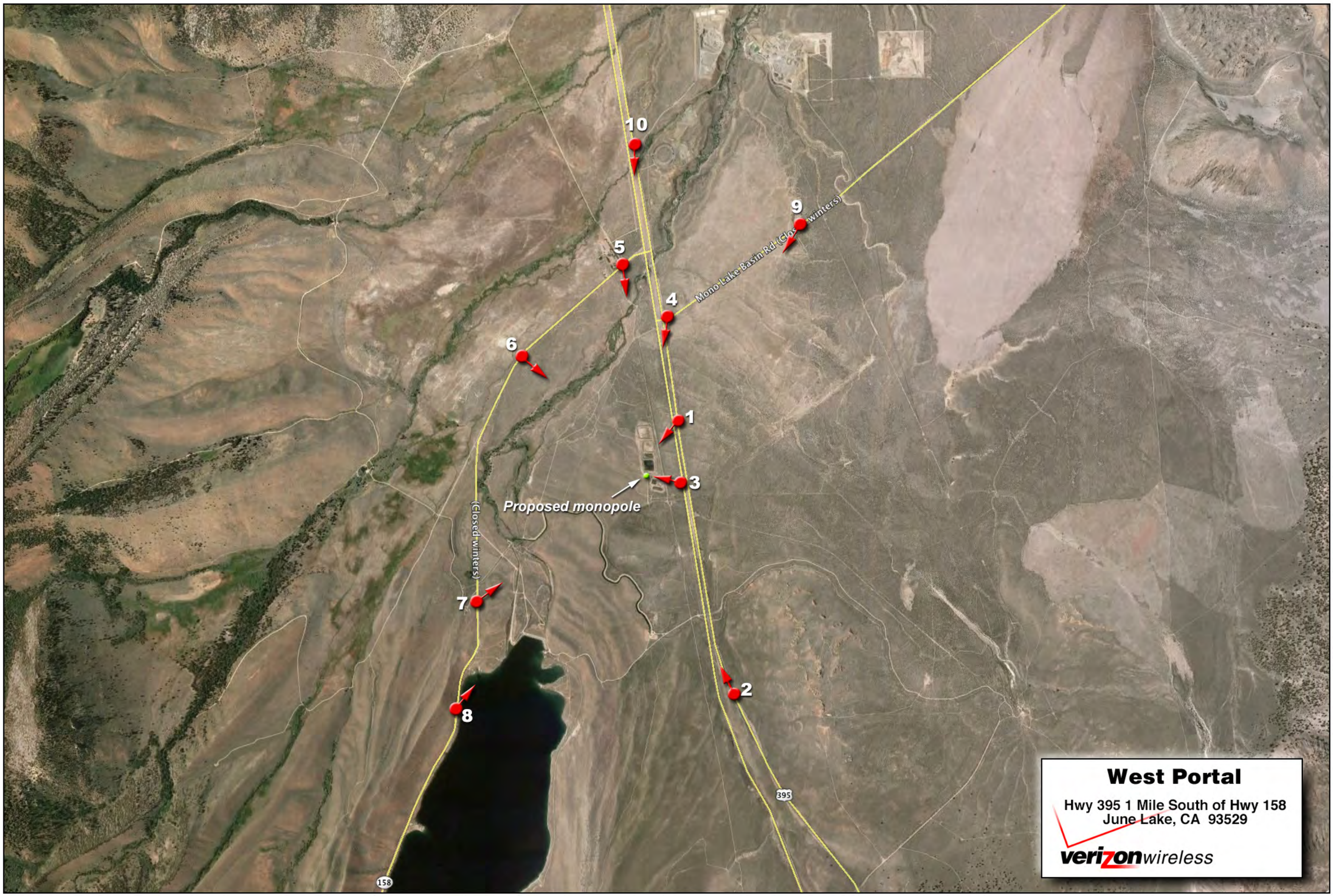


Photo Point 3

Photo Point 4

Photo Point 5

Aerial photograph showing the viewpoints for the photosimulations.



July 26, 2013

Photosimulation of view looking southwest from Hwy 395.

West Portal

Hwy 395 1 Mile South of Hwy 158
June Lake, CA 93529

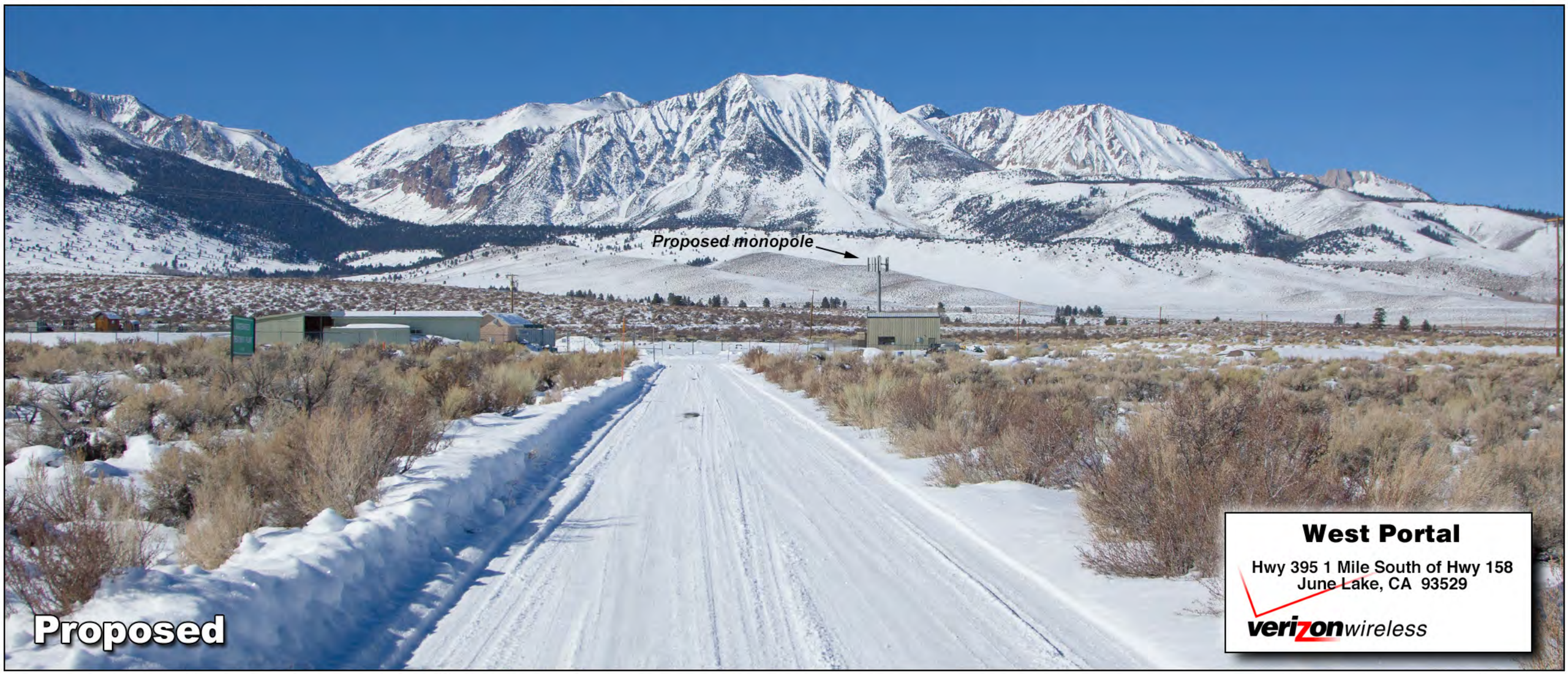
verizonwireless

Photosimulation of view looking northwest from northbound Hwy 395.

This photosimulation is based upon information provided by the project applicant. Questions or comments? call 1-877-799-3210 or visit www.photosim.com

Previsualists Inc. Custom Computer Graphics

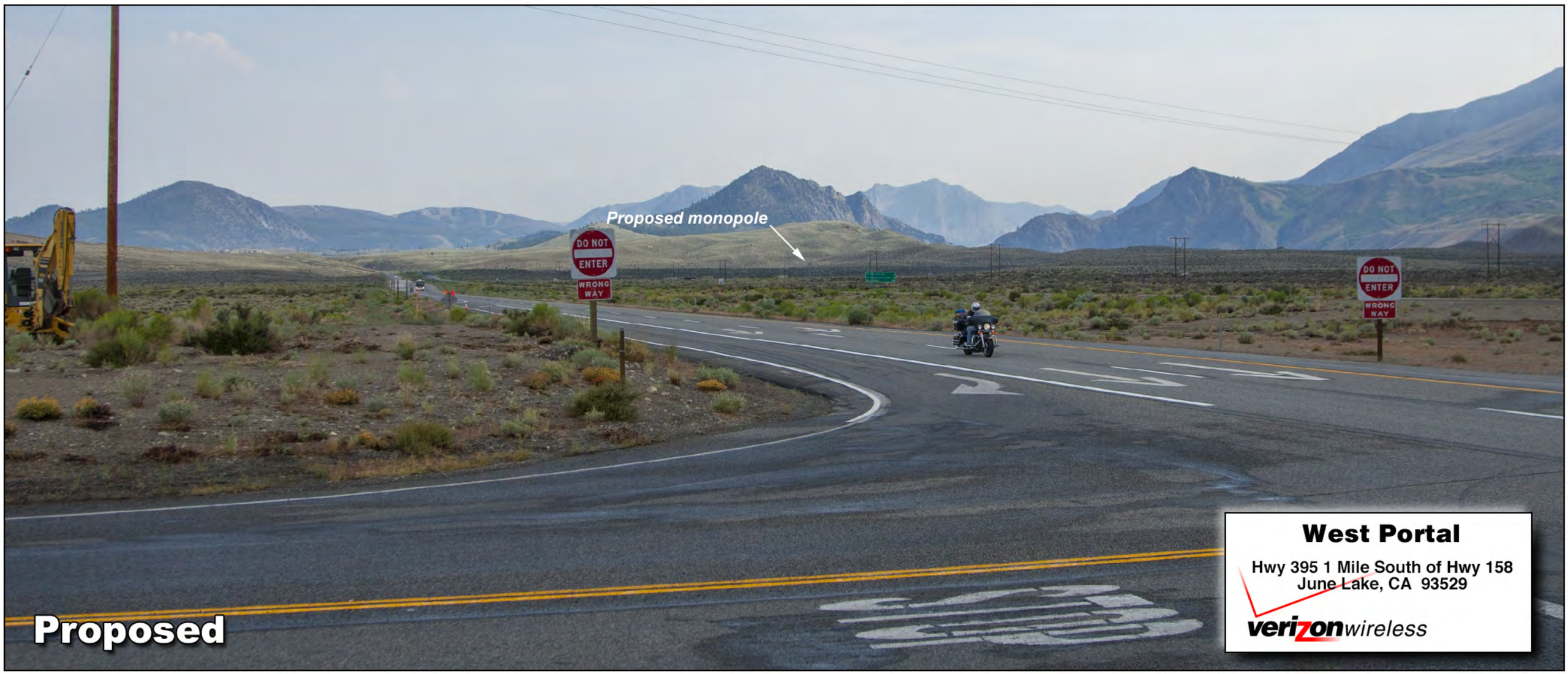
Photosimulation of view looking west from the access road.



This photosimulation is based upon information provided by the project applicant. Questions or comments? call 1-877-799-3210 or visit www.photosim.com

Previsualists Inc. Custom Computer Graphics

Photosimulation of view looking south from the intersection of Hwy 395 and Mono Lake Basin Road.



July 26, 2013

Photosimulation of view looking due south from Hwy 158 - June Lake Road at the Old State Hwy Road.

This photosimulation is based upon information provided by the project applicant. Questions or comments? call 1-877-799-3210 or visit www.photosim.com

Previsualists inc. Custom Computer Graphics

July 26, 2013

Photosimulation of view looking southeast from Hwy 158 - June Lake Road, about a mile from the site.

July 26, 2013

Photosimulation of view looking northeast from Hwy 158 just west of the Grant Lake dam.

This photosimulation is based upon information provided by the project applicant. Questions or comments? call 1-877-799-3210 or visit www.photosim.com

Previsualists inc. Custom Computer Graphics

July 26, 2013

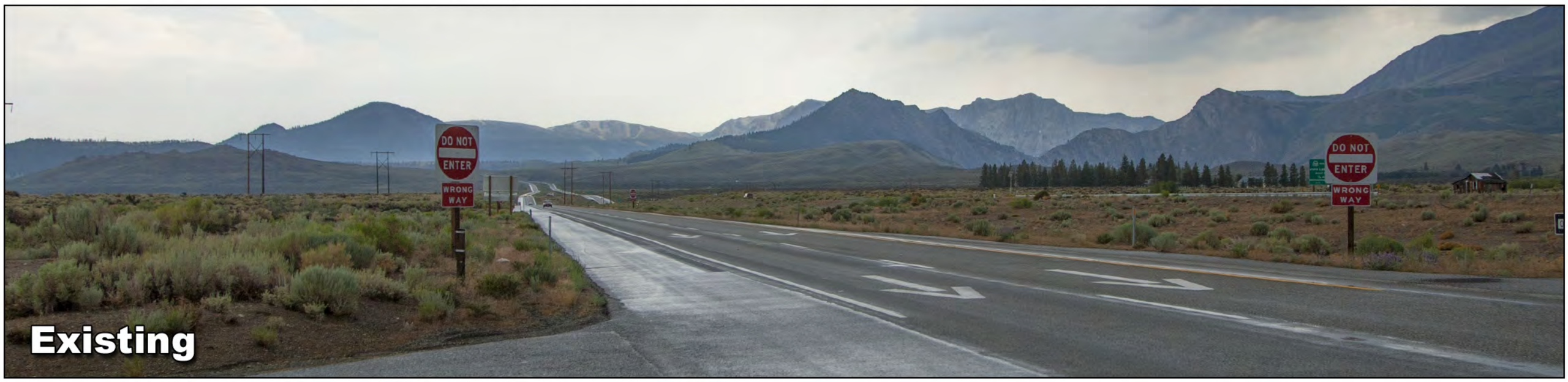
Photosimulation of view looking northeast from Hwy 158 - June Lake Road, at Grant Lake.

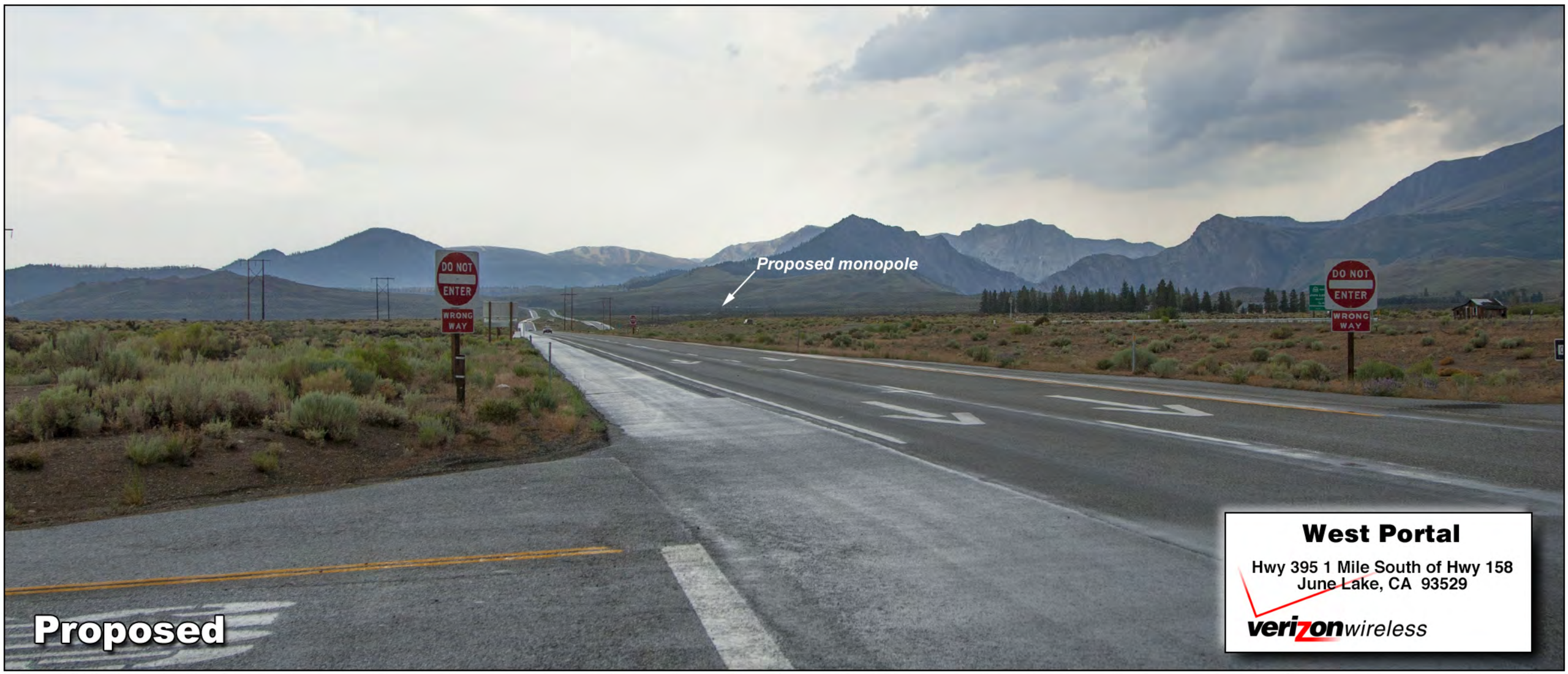
This photosimulation is based upon information provided by the project applicant. Questions or comments? call 1-877-799-3210 or visit www.photosim.com

Previsualists Inc. Custom Computer Graphics

Photosimulation of view looking southwest from Mono Lake Basin Road (Hwy 120), 0.9 mile east of Hwy 395.

Photosimulation of view looking south from the quarry road at Hwy 395, a half mile north of June Lake Road.





APPENDIX A

Assessment of Biological Resources

West Portal Wireless Telecommunications Facility
Assessment of Biological Resources

June 28, 2013

prepared by:
Jim Paulus, Ph.D.
P.O. Box 1605
Mammoth Lakes, CA 93546

prepared for:
Mono County Community Development Department
P.O. Box 347
Mammoth Lakes, CA 93546

Introduction

A review of biological resources that occur or may potentially occur at the location of proposed construction and operation of a wireless telecommunications tower facility at the June Lake Public Utilities District (PUD) West Portal facility was conducted in May-June 2013. The West Portal facility is located near Highway 395 in the southwestern Mono Basin, Mono County, California (Figure 1), within APN 14-020-10. The wireless telecommunications tower project would include 200 linear ft of new buried cable, an enclosed 2500 square ft pad, and a 60 ft tall tower. Construction and maintenance would use an existing approach road that is currently used for PUD daily maintenance. Construction would remove vegetation and disturb the soil profile within an already disturbed area. Buried cable will connect the tower to a long-standing overhead power pole line that serves PUD sewage treatment operations at West Portal. Maintenance of the proposed tower would require infrequent visits by vehicle or snowmobile. The entire area that could be potentially affected by project construction or by tower maintenance, and also a 200 ft wide buffer beyond the project footprint, were included in the biological resources assessment.

The West Portal proposed project site occupies relatively level ground in Mono Basin, near the base of the steeply sloping eastern flank of the central Sierra Nevada Range. The site elevation is 6980 ft (2120 m). Winter and spring precipitation as mainly snow averages 15.8 inches. The frost-free growing season averages 165 days (Western Regional Climate Center, 2013). The xeric summer typically includes warm daytime temperatures and low humidity, periodically interrupted by thunderstorms. Nights of successive freezing temperatures usually first occur in October. Snowfall often begins in September, but is most likely to accumulate in this area during November – March. Forage vegetation at West Portal is typically free of snow and is growing by mid-April.

Plant communities

Portions of the proposed project area, and most of the surrounding slopes and moraine features upon which the West Portal facility is situated, support a single scrub vegetation type classified as Big Sagebrush Scrub. This community has been historically disturbed and recently has been removed from nearly all the area that would be directly impacted by construction of the proposed project. All native habitat to the immediate east of the buried cable and pad has long been displaced and fenced for the PUD sewage treatment facility. The seral scrub that remains elsewhere within 200 ft of the proposed pad installation (Figure 2) shows evidence of intense historical use. Low earthen berms, dump piles, and multiple scrapes for roads and firebreaks interrupt a stand that also appears to have burned recently. Big Sagebrush Scrub – in this local context of multiple historical disturbances – now exhibits various stages of recovery.

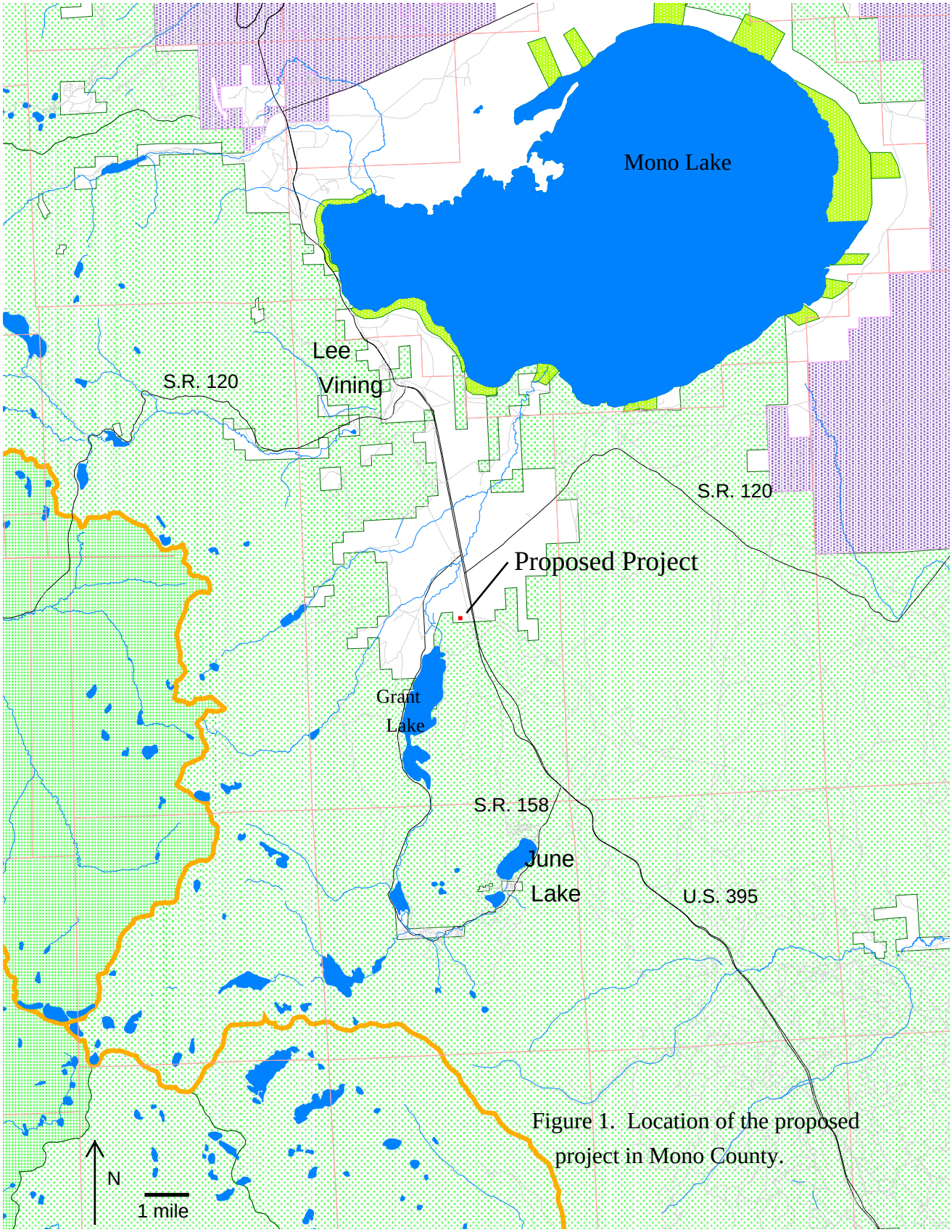


Figure 1. Location of the proposed project in Mono County.

Big Sagebrush Scrub is California Department of Fish and Wildlife community code 35.110.07 (CDFG, 2010), and is treated as 35100 Great Basin Mixed Scrub by Holland (1986). It is an *Artemisia tridentata – Purshia tridentata* association within the Artemisia tridentata Alliance (Sawyer, *et al.*, 2009). The Big Sagebrush Scrub community is a Great Basin scrub type that is common within Mono County (Mono County Planning Dept., 2001), and widespread in the Sierra Nevada and throughout the Great Basin Floristic Province (Sawyer, *et al.*, 2009). Where recovery has been relatively complete, the native shrub canopy near the project averages 2 ft in height and provides 10-20% living cover. Sampling along transects oriented toward the west and northwest to a distance of 1000 ft from the proposed tower location suggests a uniform local stand averaging 30-40% shrub canopy cover and 2 ft height. Patches of noticeably higher density were not encountered within the buffer or along these two transects.

Maturing big sagebrush (*Artemisia tridentata*) clearly dominate the canopy, comprising up to 80% of the shrub layer. The canopy also regularly includes bitterbrush (*Purshia tridentata* var. *tridentata*), yellow rabbitbrush (*Chrysothamnus viscidiflorus* ssp. *viscidiflorus*), desert peach (*Prunus andersonii*), and rubber rabbitbrush (*Ericameria nauseosa*). Bitterbrush contributes a relatively minor (10%) fraction of the shrub layer living cover. Its canopies (to 8 ft tall) near the proposed project consistently exhibit "topiary-like" pruning as evidence of intense herded sheep and deer grazing pressure. The understory is not diverse (Appendix A), and trees are absent. The total cover contributed by perennial silvery lupine (*Lupinus argenteus* var. *heteranthus*), Douglas sedge (*Carex douglasii*), prickly poppy (*Argemone munita*), and native grasses, averaged about 1% and rarely exceeded 5% in 2013. Diversity lowers and the shrub canopy dominance shifts to greater rubber rabbitbrush and desert peach relative abundance in all unfenced area within about 100 ft of the proposed project, where the level of recent disturbance in this community is highest. Due to long-standing use of the proposed pad area for pipe storage, construction would remove or crush only about 1700 square ft of sparse sagebrush, rabbitbrush and desert peach cover.

Big Sagebrush Scrub at West Portal extends westward to the base of the higher Sierran slopes as a contiguous upland stand. To the east, the stand is more interrupted, first by PUD facilities, then by a large overhead power line that approaches the proposed project to within a distance of 350 ft, and then by Hwy 395, which approaches within 900 ft (Figure 2). Disturbed areas and all scrub habitats within 200 ft of the proposed project area were uniformly xeric at the time of site assessment, with no mesic microhabitats (e.g., wetland swales, ephemeral stream beds) signaled by shifts in the species assemblage or otherwise detected. Historical and ongoing mechanical devegetation provides the best explanation for variances in total cover and relative frequencies of canopy dominants at this site.

The West Portal area is infested with non-native annual cheat grass (*Bromus tectorum*). This species has become widespread in Mono County scrub habitats, and most habitats in close proximity to Hwy 395 are either currently supporting naturalized populations or in high danger of being invaded by this noxious weed. Cheat grass, which is the most abundant annual found within the project area assemblage in 2013, is an invasive and noxious weed as defined by the California Exotic Pest Plant Council (CalEPPC code A-1: "are the most invasive pest plants, and are already widespread"), and has a CalIPC priority rating of High (CalIPC, 2013). High density cheat grass stands are thought to increase the risk and frequency of wildfire (CalEPPC, 1999). Russian thistle (*Salsola tragus*, CalIPC rating Limited) occurs at the devegetated facility grounds and in nearby Big Sagebrush Scrub. Further disturbance to the project area's vegetation (for example, trenching to bury cable) may encourage the local spread of Russian thistle. Otherwise, the current assemblage within the project and buffer area is entirely native.

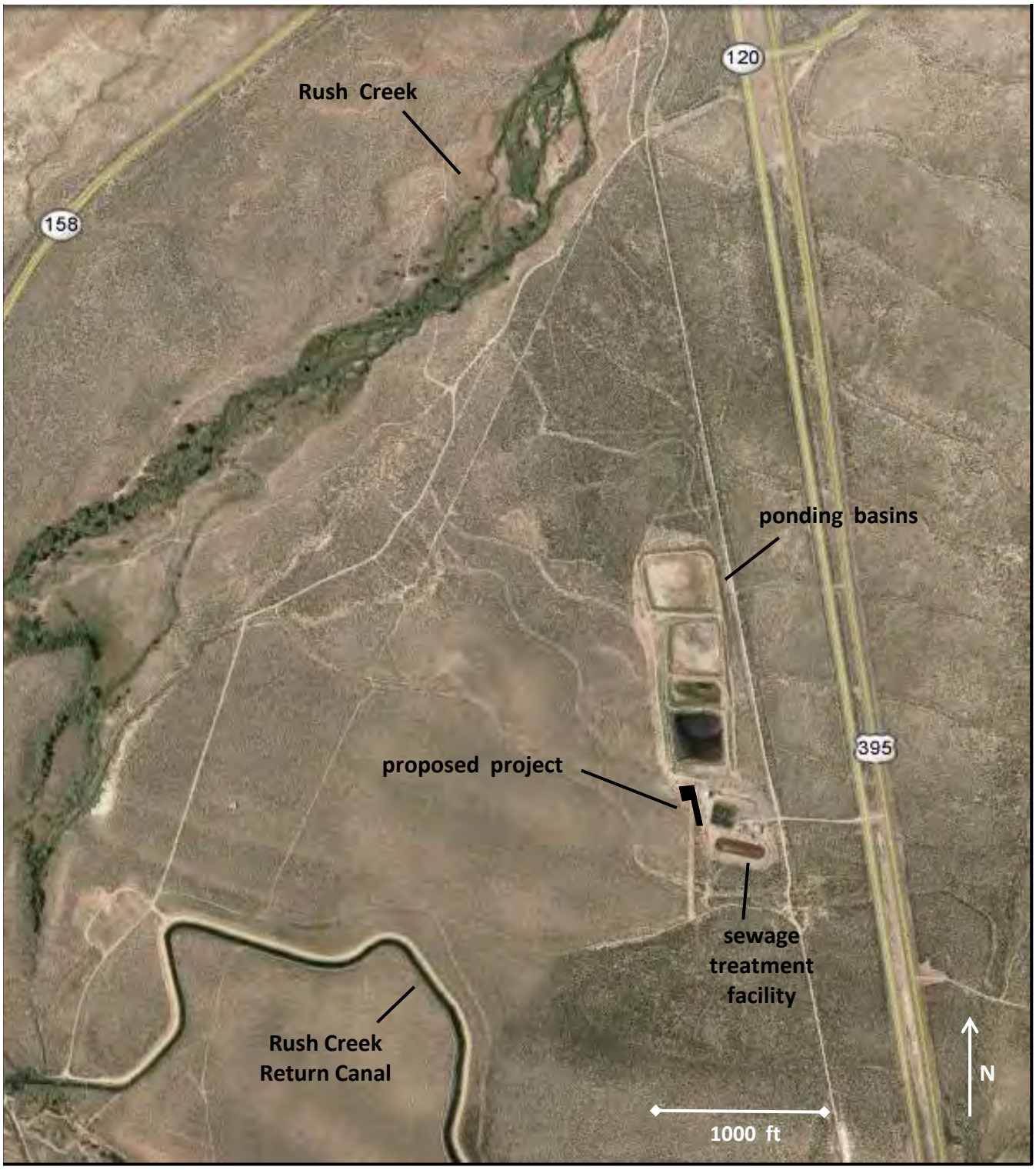


Figure 2. Landscape position of the proposed West Portal Wireless Telecommunications Project (shaded) in Mono Basin. The new telecommunications tower facility would be located adjacent to the June Lake Public Utilities District sewage treatment works (fenced) and 200 ft south of a series of periodically ponded basins.

Plant communities and species

A list of rare plant species that could have some potential to occur within Big Sagebrush Scrub at the project site was compiled (Table 1), based upon a review of regional data (Mono County Planning Department, 2001, Halford and Fatooh, 1994, California Native Plant Society (CNPS), 2001, 2013, CalFlora, 2013, California Department of Fish and Wildlife (CDFW), 2013a, 2013b), published regional floras (Baldwin, *et al.*, 2012, Jepson Herbarium, 2013), botanical surveys that have been performed for the preparation of environmental documents for nearby projects (Bagley, 2002, Chambers Group, 2011, Paulus, 1998, 2012), and an April 2013 search of the California Natural Diversity Database (CNDDB) records for the USGS June Lake, Lee Vining, Mount Dana, Koip Peak, Mount Ritter, Mammoth Mtn., Old Mammoth, Crestview, and Mono Mills quadrangles (CDFW, 2013c). Consortium of California Herbaria records (2013) for the Western Mono Basin (north to Conway Grade) were also included in the literature search results (Appendix C). Potentially occurring plant species were considered to be "rare" if they have state or federal status as rare, threatened or endangered (CDFW, 2013a), or are listed in the CNDDB list of special plants (CDFW, 2013b), or are listed by CNPS in their inventory of sensitive California plants (CNPS, 2001, 2013), or are included in the most recent sensitive plant or watch lists prepared by Inyo National Forest (U.S. Forest Service, 2006a, 2006b).

Table 1. Rare plant species that potentially could occur at the proposed project. Flowering period data is from CNPS (2013). None of these species are federally listed. A key to the rank or status symbols follows the table. NL = not listed.

Scientific Name Common Name Life Form	Rank or Status				Available Habitat	Flowering Period
	USFS	CDFG	CNPS	NDDB		
Astragalus johannis-howellii Long Valley milkvetch herbaceous perennial	S	R	1B.2	S2.2	sagebrush scrub	June-August
Astragalus monoensis Mono milkvetch herbaceous perennial	S	R	1B.2	S2.2	open gravel or pumice soils	June-August
Boechera cobrensis Masonic rock cress herbaceous perennial	NL	NL	2.3	S1S2	sagebrush scrub	June-July
Eremothera boothii ssp. *boothii* Booth evening primrose herbaceous annual	NL	NL	2.3	S2	sagebrush scrub	April-September
Eremothera boothii ssp. *intermedia* Booth hairy evening primrose herbaceous annual	NL	NL	2.3	S2.3	sagebrush scrub	May-June

Scientific Name Common Name Life Form	Rank or Status				Available Habitat	Flowering Period
	USFS	CDFG	CNPS	NDDB		
Lupinus duranii Mono Lake lupine herbaceous perennial	S	NL	1B.2	S2.2	open scrub, pumice	May-August
Mentzelia torreyi Torrey blazing star herbaceous perennial	NL	NL	2.2	S2.2	sagebrush scrub	June-August
Viola purpurea ssp. *aurea* foxtail thelypodium herbaceous perennial	NL	NL	2.2	S2S3	sandy sagebrush scrub	April-June

Rank or status, by agency:

USFS = US Forest Service, Inyo National Forest, Bishop Office (2006a, 2006b)
S = Sensitive List, October 2006

CDFG = California Department of Fish and Game listings under the Native Plant Protection Act and the California Endangered Species Act (CDFW, 2013a).
R = Rare

CNPS = California Native Plant Society listings (CNPS, 2001, 2013)
1B = rare and endangered in California and elsewhere
2 = rare, threatened or endangered in California, but more common elsewhere
Threat Code extensions:
.1 is Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 is Fairly endangered in California (20-80% of occurrences threatened)
.3 is Not very endangered in California (< 20% of occ's threatened or no current threats known.

NDDB = California Natural Diversity Data Base rankings by the CDFG (CDFW, 2013b)
S1 is < 6 occurrences or < 1000 individuals or < 1000 acres
S2 is 6-20 occurrences or 1000-3000 individuals or 2000-10000 acres
S3 is 21-100 occurrences or 3000-10000 individuals or 10000-50000 acres
"threat numbers" follow decimal:
.1 = very threatened, .2 = threatened, .3 = no threat currently known.

The CNDDB records and literature search results indicate that eight rare plant species and one sensitive plant community (Mono Pumice Flats) occur within 20 miles of the project and in native or disturbed scrub settings that bear some resemblance to habitats available within the project. Potentially occurring rare plant species, except the two *Eremothera boothii* subspecies, are herbaceous perennials. They would be expected to be exhibiting leaves, flowers, and in most cases maturing or mature fruit in May and June. Expected phenologies of the *Eremothera* would be flowering and setting fruit at the May sample, and would be bearing mature fruits at the June sample (Table 1). There is no potential for federally listed or candidate species to occur at the proposed project, however the milkvetches *Astragalus johannis-howellii* and *A. monoensis* are state listed as Rare.

No previously documented on-site occurrences of rare plant species appear in CNDDB records (Appendix C). This information, however, must be interpreted in the general context that the absence of records concerning the project area does not signify that rare plants are absent, it merely means that none have been reported. Nearby known *Astragalus monoensis*, *Eremothera boothii* ssp. *boothii*, and *Lupinus duranii* populations were readily located when visited on May 13 and June 8, 2013, suggesting that climatic conditions for annual and perennial plant growth and flowering were locally favorable. Annual species germinated abundantly in 2013 at the reference location of the potentially occurring annual *E. boothii* ssp. *boothii* near Navy Beach (CNDDB Occ. 22). Plants that were identified as *E. boothii* exhibited leaves and flowers on May 13, and leaves, flowers, and mature fruits on June 8. Reference populations of *Astragalus monoensis* at June Lake Junction (Occ. 19) and *Lupinus duranii* at Big Sand Flat (Occ. 1) exhibited leaves and immature inflorescence structures on May 13, and leaves, flowers and maturing fruit on June 8.

Rare plants known to occur in nearby alkaline meadow or scrub habitats (*Atriplex pusilla*, *Crepis runcinata* ssp. *hallii*, and *Phacelia inyoensis*) may be excluded as very unlikely to occur at the project site, because their relatively moist habitat and alkaline or saline soil habitats are not present. Similarly, locally occurring rare plants that are restricted to freshwater streamside and lakeside or wet meadow habitats (e.g., *Botrychium* spp., *Carex scirpoidea* ssp. *pseudoscirpoidea*, *Draba praealta*, *Epilobium howellii*, *Mimulus glabratus* ssp. *utahensis*, *Potamogeton robbinsii*, and *Stuckenia filiformis*) and mosses (e.g., *Bruchia bolanderi*) may be excluded because the scrub vegetation present across the entire project area is uniformly xeric. Suitably wet habitat for these species does not occur. Rare plants that are known to occur in the Sierra Nevada alpine zones nearby to the west (*Agrostis humilis*, *Boechera pinzliae*, *Boechera tiehmii*, *Boechera tularensis*, *Carex petaseta*, *Carex tiogana*, *Claytonia megarhiza*, *Draba asterophora*, *Draba cana*, *Festuca minutiflora*, *Minuartia stricta*, and *Salix nivalis*) would be excluded by the large differences between the elevation ranges of the known populations and the Mono Basin elevation of West Portal.

Field Surveys for Rare Plants

Community descriptions were developed and searches for rare plant populations were conducted (per CDFG, 2009, 25 ft transect spacing) within the area that would be disturbed and 200 ft wide buffers in all directions on May 15 and June 9, 2013. All species encountered were identified. Any species that were not recognized at once were keyed by the consulting botanist using The Jepson Manual (Baldwin, *et al.*, 2012). Plants were identified to a level of taxa that was sufficient to determine rare species presence or absence. One population of the perennial rock cress *Boechera cobrensis* was identified as intercepting the southwestern edge of the buffer (Figure 3). Rare plants were not found in the project footprint. Only common plant species occur in the area that would be disturbed by cable burial or displaced by pad installation (Appendix A).

The species *Boechera cobrensis* (Masonic rock cress) is relatively rare in California, but is widespread elsewhere in Nevada, Oregon, Idaho and Wyoming (CNPS, 2013). Populations have been documented widely across Mono County (e.g., Paulus, 2007, 2010) and there are known occurrences very near to the proposed project (e.g., Howe, 1978). The two individuals that were found on May 15 within the proposed telecommunication tower project's 200 ft wide construction buffer (Figure 3) are members of a population that extends to the west and south. The entire population may be avoided by the project if equipment is restricted from working or turning more than 100 ft to the south or west from where connection to the existing power supply is proposed.

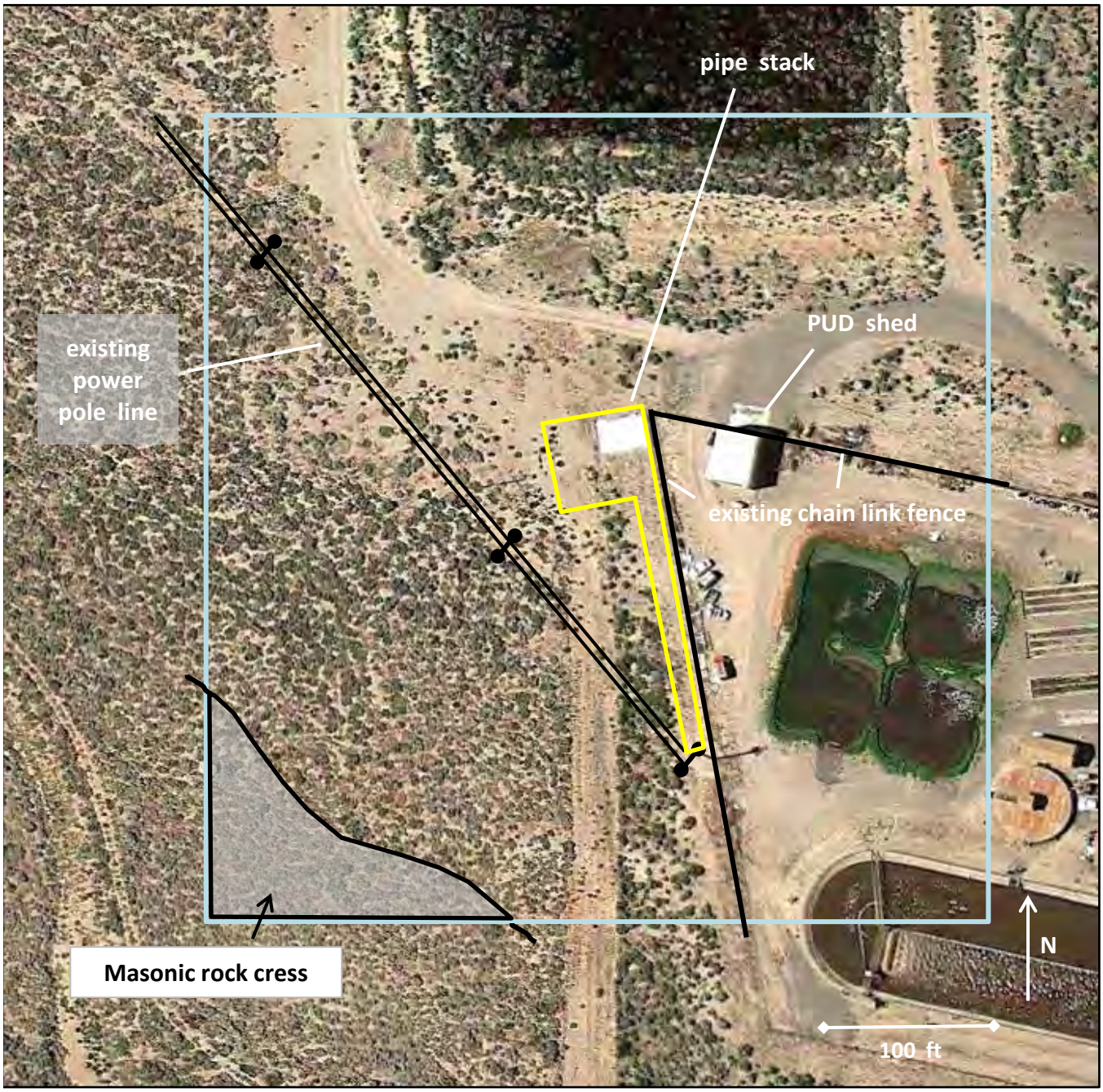


Figure 3. Survey extent for biological resources in May and June 2013 (blue outline) at the proposed West Portal Wireless Telecommunications Project, and extent of occurring Masonic rock cress (gray shading). The area where installation of project elements is proposed (yellow outline) is now largely occupied by a stack of large diameter pipes. The existing fencing and overhead power supply are highlighted. Base image is dated July 2011.

No members of the genera *Astragalus*, or *Viola* occur in the project area. All occurring *Mentzelia* encountered in 2013 were annuals (senescent or becoming so in June). The scattered *Lupinus argenteus* var. *heteranthus* consistently attained a relatively tall and lanky growth form, allowing them to be readily separated from the potentially occurring rare species *L. duranii*. The soil is locally dominated by pumice, but there are no clear frequency shifts in the shrub canopy that would signal the presence of the sensitive *Ericameria parryi – Achnatherum occidentale* association known as Mono Pumice Flats, which occurs nearby in Pumice Valley. The project area's fine sands, mid-slope position, and disturbed environmental conditions contrast sharply with the gravelly pumice substrate and internally drained, relatively undisturbed basin landforms that typify Mono Pumice Flats and known occurrences of *Astragalus monoensis* and *Lupinus duranii*. No populations of relatively stout-stemmed annuals bearing white flowers or sessile dehiscent fruits were found, as would be expected if the evening primrose *Eremothera boothii* were present. Rather, all occurring evening primrose were wiry-stemmed, with relatively small leaves, and were separated as *Camissonia pusilla* based upon their yellow flowers in May or pedicelled fruits in June.

Habitat for Wildlife

A review of wildlife that may potentially occupy or use the Big Sagebrush Scrub habitat available at the proposed West Portal telecommunications facility project was conducted in May 2013. Construction would occur in historically and recently disturbed and burned upland scrub. Existing development that may influence wildlife usage of the project site includes the June Lake Public Utilities sewage treatment facility, a series of ponding basins that are used for disposal of treated effluent, two sets of power poles, and the 4-lane Hwy 395. Sewage treatment operations are continuous, create constant noise and nighttime lighting, and enclose (i.e., exclude larger wildlife use from) an area of 3.8 acres within sturdy chain link fencing. This enclosure and one of the sturdy aluminum shop buildings therein would directly abut the east edge of the new tower pad as proposed (Figure 3). Ponding basins to the immediate north are enclosed by simple earthen berms, and were mostly dry at the time of the survey. One overhead power line from the northwest terminates in the area where the project proposes trenching to bury cable. A taller, environmentally more "apparent" double-pole power line approaches to within a distance of 350 ft to the east. The 4-lane Hwy 395, which approaches within 900 ft, may represent a significant ecological barrier to movements between the West Portal area and dry scrub habitats of Pumice Valley to the east. The nearest dependable surface waters are at the Rush Creek return channel, 1750 ft to the west of the proposed project, and the Rush Creek riparian corridor, which at its nearest passes 3150 ft to the north. Scrub habitat between the project area and these perennial water sources is relatively unimpeded by existing development and historical disturbance.

Special Status Wildlife Species

"Special status wildlife species", as used in this report, meet the definitions of rare or endangered under the California Environmental Quality Act (Section 15380 CEQA Guidelines), or are considered candidates for state or federal listing as threatened or endangered, or are listed by local agencies as locally rare. Based upon a review of available regional data (Mono County Planning Dept., 2001, CDFW, 2013d, 2013e,), and a May 2013 search of CNDDB records for the USGS June Lake, Lee Vining, Mount Dana, Koip Peak, Mount Ritter, Mammoth Mtn., Old

Mammoth, Crestview, and Mono Mills quadrangles (CDFW, 2013c), there are five special status wildlife species that are identified as having some potential to occur at the project site (Table 2). It is possible although unlikely (for reasons described below) that these species use the available habitats for nesting, foraging, or movement. The CNDDB records review did not uncover any previously documented occurrences of special status wildlife species within the area that would be directly disturbed by construction of the proposed project. This information, however, must be interpreted in the general context that the absence of CNDDB records concerning the project area does not signify that special status wildlife species are absent, rather that none have been reported.

Table 2. Special status wildlife species that could potentially occur within the area of the proposed West Portal wireless telecommunications facility. A key to codes for species status as given by CDFW (2013e) is given below, NL = not listed.

	status		
species	**State**	**Federal**	**habitat**
birds			
Centrocercus urophasianus greater sage grouse (nesting, leks)	SC	FC	sagebrush scrub
mammals			
Brachylagus idahoensis pygmy rabbit	SC	NL	sagebrush scrub
Eumops perotis californicus western mastiff bat	SC	NL	sagebrush scrub
Lepus townsendii townsendii white-tailed jackrabbit	SC	NL	sagebrush scrub
Taxidea taxus American badger	SC	NL	sagebrush scrub

State = CDFG under the California Endangered Species Act (SC = Species of Special Concern)
Federal = USFWS under the Endangered Species Act (FC = Federal Candidate for Listing)

Greater sage grouse (Bi-State Distinct Population Unit), pygmy rabbit, western mastiff bat, and white-tailed jackrabbit are known to have occurred within 1-2 miles of the proposed project site at West Portal (Appendix C), as documented in CNDDB records. Populations of greater sage grouse and pygmy rabbits in this near proximity have been included in recent and ongoing research programs, and the proximity of the site to these populations is documented in published papers. The potential for white-tailed jackrabbit occurrence is more speculative, as the local records for that species are sparse and the nearest is dated nearly 100 years ago. American badger has been included based upon input from a CDFW biologist who is very familiar with the area (T. Taylor, personal communications 4/11/13, 5/28/13).

The available habitat for these species that will be displaced (the proposed 50 ft x 50 ft pad) or directly but temporarily disturbed (the proposed 200 ft of buried cable) is moderately to completely disturbed already in terms of native vegetation and topsoil integrity. The new pad

would displace a stack of large diameter pipes that has been in place for several years (thus 0% existing cover by vegetation) and about 1700 square ft of sparse Big Sagebrush Scrb. New cable would be trenched adjacent to the existing PUD chain link fence (Figure 3), within an area where remnant Big Sagebrush Scrub cover is less than 10% due to recent mechanical scraping to create a firebreak.

Big Sagebrush Scrub immediately adjacent to the project could be affected by the added presence of a new 60 ft tower, but this would occur in a habitat has been compromised by prior development. Two wooden pole lines that pass near to where the project would be implemented provide long-standing perches. Single and double poles and upper crossarms at 40-50 ft height oversee the project area from the east and west. Adult ravens, apparently attracted by the sewage treatment buildings and activity, were seen perching on these poles and the facility fencing on every survey date in 2013. Raptors that pass through the area may be using the existing perches for predatory advantage. Foraging raptors could include bald eagle (*Haliaeetus leucocephalus*), which have been observed perching on poles near the airport 20 miles south (Jones & Stokes, 2001), and other known predators of sage grouse, pygmy rabbit, or white-tailed jackrabbit.

Myotis bats (including *Myotis evotis* and *M. yumaensis*) and Townsend's big-eared bat (*Corynorhinus townsendii*) may use structural habitat elements for day roosting, breeding and hibernation. No trees, stumps, mines, or caves that could be used by potentially occurring special status bats occur at or near the proposed project site. Three large glacial erratic boulders within the buffer were searched closely for roosting bats during the June 9 survey, finding no animals, crevices or guano accumulations. The PUD shop that abuts the project was also inspected for signs of bat use. This modern aluminum building is sturdily constructed, with no available eaves, crevices or entrances that could be used by bats. No guano accumulations were found in May and June. While suitable foraging habitat for bats may be present nearby, an absence of inhabited roosting structures makes it unlikely that any bats will be affected by project construction.

No sensitive wildlife species were observed during survey work conducted on May 15, May 22-23, May 25-26, and June 9, 2013. No nests were observed within or under the scattered shrub canopies that would be removed or possibly crushed by removal of the pipe stack or by project construction. No nest structures were observed on power poles that are near the proposed tower location. No large burrows or burrows that have been enlarged by foraging predators were found within 100 ft of the area that may be disturbed. Wildlife observed on those dates included common species (Appendix B) such as green-tailed towhee (*Pipilo chlorurus*), raven (*Corvus corax*), and ground squirrel (*Spermophilus beecheyi*). The shrubby vegetation would typically provide foraging and cover (including burrowing) habitat for deermice (*Peromyscus*), and pocket mouse (*Perognathus parvus*). Wildlife signs included rabbit pellets in the area of the proposed pad construction, prompting additional May evening and morning surveys (see "pygmy rabbit", below), badger claw marks on enlarged burrows at the southern edge of the 200 ft wide buffer area (see "American badger"), and coyote (*Canis latrans*) tracks. In May and June, mule deer (*Odocoileus hemoinus*) apparently moved through the buffer area regularly to access a dripping pipe (leak) in the southernmost ponding basin.

No critical habitat designations currently intersect the project area. Limited habitats that are considered crucial to survival (limited nesting locations for gulls on islands in Mono Lake is an example) were not uncovered for any special status wildlife species that may occur within the project area. The absence of forest habitat would preclude substantial use of the area by northern goshawk (*Accipiter gentiles*), great grey owl (*Stryx nebulosa*), Sierra Nevada red fox (*Vulpes vulpes necator*), and fisher (*Martes pinnanti*). Native aquatic habitat does not occur within the

West Portal area. Managed ponding at the 12 acres of constructed basins beginning 200 ft north of the proposed pad does occur, but is ephemeral, and has no seasonal timing, although snowmelt may briefly pond prior to infiltration in some years (PUD staff interview, 6/15/13). Neither the effluent processing ponds nor infiltration basins have developed riparian vegetation. The absence of direct construction or maintenance interactions with aquatic habitats precludes any impacts to Yosemite toad (*Anaxyrus canorus*), Sierra Nevada yellow-legged frog (*Rana sierrae*), Mt. Lyell salamander (*Hydromantes platycephalus*), nesting willow flycatcher (*Empidonax traillii*), yellow warbler (*Dendroica petechia breweri*), northern harrier (*Circus cyaneus*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*), Sierra Nevada mountain beaver (*Aplodontia rufa californica*), Mt. Lyell shrew (*Sorex lyallii*) and spotted bat (*Euderma maculatum*). There are no meadows or farmed fields that could be used by foraging Swainson's hawk (*Buteo swainsonii*).

The project's 6980 ft (2120 m) elevation is outside the normal range of Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*), whose preferred year-round habitat is steep mountain slopes at elevations greater than 9000-10000 ft (2750-3050 m). The documented range of the Mount Gibbs Herd Unit includes rocky ridges west of Grant Lake (7600 ft elevation, 4.4 miles southwest of the project site, but no habitat of this type occurs east of Grant Lake or near West Portal. The buffer area, which includes lands administered by the U.S. Forest Service (Inyo National Forest), is subject to grazing by domestic sheep. Signs of herded grazing use of the proposed project site and ponding basins to the north were present on May 15.

Greater Sage Grouse

Greater sage grouse are specialist species that in Mono County are more or less restricted to a single habitat type, open sagebrush scrub (Mono County Planning Dept., 2001). The grouse subpopulation residing nearest to the proposed project, known as the Parker Meadows Unit, is somewhat isolated geographically (Casazza, *et al.*, 2007) and genetically (Oyler-McCance and Casazza, 2011). Bi-State grouse are threatened by development that fragments the habitat or disrupts breeding, and by historically increasing predatory pressure (Bi-State Technical Advisory Committee, 2012). Documented uses of sagebrush scrub habitat within one mile of West Portal by members of the Parker Meadows Population Management Unit include foraging, nesting, and breeding. The nearest lek site and associated nesting and brooding area is located in expansive, relatively undisturbed sagebrush scrub to the northwest. Evidence obtained from radio-collared grouse indicate that some members of the population move seasonally from such habitat on the west side of Hwy 395 to similar, less snowy habitat east of the highway. These data raise the possibilities that at least some grouse pass through the West Portal area during migration and that some could disperse from a nearby lek to favorable habitat near West Portal for brood raising.

Based upon a June 10 observation of the vegetation that surrounds a nearby occupied lek site (2.2 miles northwest), scrub that is available within the outermost western portion of the 200 ft wide buffer area at the proposed project (and generally across the moraine to the west) appears to be similar to sagebrush scrub known to be used by Parker Meadows grouse, in terms of shrub canopy composition. The near-lek reference stand, however, clearly includes patches of greater shrub density and greater bitterbrush relatively frequency. It is infrequently divided/fragmented by lightly travelled roads, but in contrast to vegetation at the proposed project site, the known use area is not widely disturbed by human activity, mechanical scraping and debris piling, or other development, and was not adjacent to pole lines or other predator perches.

Existing habitat modifications, especially those associated with the Hwy 395 corridor, the adjacent sewage treatment facility, and long-standing pole line emplacements, have reduced the likelihood that greater sage grouse use scrub resources available near the project site for nesting or brood raising. Rather than moving to areas of disturbed or recovering, relatively thin scrub for these uses, Parker Meadows grouse are more likely to choose areas of vegetation where canopy closure is about 50% (Kolada, et al., 2009a). Brood success is more likely in scrub where greater canopy and subcanopy plant species diversity has developed (Kolada, et al., 2009b). Scrub that meets these criteria does not occur at the proposed project site or the West Portal site generally. Dense and relatively diverse scrub, at its closest approach, occurs in extensive stands beginning 750 ft to the south and 1375 ft to the north (Figure 2), where recent wildfire is not evident. It is very unlikely that grouse would choose the recovering 20 to 30% cover that is available nearer West Portal for nesting or brood raising, and nesting and brood success of the Parker Meadows Unit are therefore very unlikely to be affected by the project.

Grouse may choose to pass through the West Portal area, as the only physical barrier to movement there is the existing PUD chain link fencing. It is possible that the presence of a new 60 ft tower could impact grouse mortality during seasonal or dispersal movement, if the tower is used by raptors for predatory advantage. The highway, the emplacement of high poles that are not fitted with deterrence to perching, and the clearing of vegetation for firebreaks and for daily access to maintain the existing facilities, currently present substantial barriers to movement. The new tower would thus only incrementally increase predatory risk. However, further diminishing the overall availability of the entire area for movement or foraging use can be readily avoided in this case by fitting the tower with spikes or other deterrents to raptor perching.

Pygmy Rabbit

Pygmy rabbit, like greater sage grouse, are widely distributed across the western United States, but Owens Basin populations are somewhat isolated (Collins, 1998). In California, the species is vulnerable due to small local population sizes, fragmented distribution, difficulty of dispersal (due to restrictive, narrow habitat requirements), and small home ranges. Their burrows are nearly always found in “sagebrush islands’, which are noticeably denser and taller patches of sagebrush that spot the landscape. The likelihood of pygmy rabbit occupancy at a site has been shown to increase with increasing sagebrush cover, decreasing understory stem density, absence of cheatgrass, and absence of cottontail rabbits or rodent burrows (Larrucea and Brussard, 2008). Populations are relatively contemporaneously known to occur throughout the Mono Basin, including sites within one mile to the north of West Portal (Larrucea, 2007).

As discussed above for greater sage grouse, the available habitat for pygmy rabbit would be considered marginal for foraging, due to relatively high levels of nearby human development, and regular disturbance of the scrub habitat. Loss of a small area of this scrub habitat would not have a significant effect on pygmy rabbit that enter the area for foraging. No sagebrush islands occur adjacent to the project area, and the nearest sufficiently dense and tall sagebrush scrub that is available for potential burrowing and residency is 750 ft to the south and 1375 ft to the north (Figure 2). Pygmy rabbit that may occasionally use the project site would not be affected by its construction, as they are highly mobile and can escape to more favorable habitat. Maintenance visits to the project would not potentially increase mortality of pygmy rabbit (also, greater sage grouse and western white-tailed jackrabbit) if personnel are instructed to drive very slowly and leash dogs. The potential for increased mortality due to increased predator presence encouraged by the project can be avoided if raptor deterrence is installed and trash is effectively contained.

No burrows attributable to pygmy rabbit were found during searches of the 200 ft buffer to the west of the proposed project. Scrub that occurs there in various degrees of recovery from disturbance averages 20-30% cover, facilitating the finding of currently occupied burrows. All burrows found were less than 4 inches in diameter, except scattered examples of slightly larger size that were attributed to ground squirrels, and scattered single burrows that had been enlarged by predatory excavation. No burrows were found in tight groupings, and none were associated with rabbit pellets. No burrows greater than 1 inch diameter were found along the alignment of the proposed buried cable. However ground squirrels, a common sight at West Portal on all survey dates, were observed emerging from the ground-level "burrow"-like voids in and under the stacked pipe that covers the site of the proposed tower pad, and they may nest there.

The potential for pygmy rabbit to be directly impacted by removal of the existing stack of large diameter pipe was given additional attention, as rabbit pellets were found in the shade of this stack on May 15. A sample of these pellets was measured, finding average diameter (n = 20) to be 9 mm, with a range of 6 mm to 10 mm. The accumulation at the open ends of the pipe stack was uneven in color, likely signaling use for more than one year (the pipe stack has been in place five years), and never consistently of one size. Pellets otherwise were found only very near the existing PUD chainlink fence and the ponding basins and not within recovering nearby scrub. All tracks and pellets were buried and a fresh tracking surface was created at the northern edge of the pipe stack by spreading soil there on May 22. Crepuscular activity was monitored using a scope throughout the evening of May 22 and dawn of May 23. The sample was repeated on May 25-26 and pellets accumulated as of May 26 were measured. While no rabbits were seen on any sample date, 11 new pellets were collected during the period May 22-26, indicating use is current. The diameters of these pellets, ranging from 9 to 10 mm, is not consistent with the 4-6 mm diameter that would be expected if pygmy rabbit were present, or with the 10-11 mm diameter that would be expected of western white-tailed jackrabbit (Ulmschneider, 2004). Due to size, the pellets are attributed to mountain cottontail rabbit (*Sylvilagus nuttallii*). It is likely that the only current lagomorph use of the pipe stack is by cottontails seeking cover and shade, but it is possible that these commonly occurring rabbits also use the stack for nesting. Direct impacts to cottontail rabbits during pipe removal can be avoided if it is begun after September 1, when the period of parturition is safely passed, and before the birth of offspring begins in March.

Western Mastiff Bat

Western mastiff bats may roost in scrub habitat, as this is a primary habitat type where they forage. However, evidence of bat roosting was not found during June 9 searches of nearby boulders, project-adjacent buildings and equipment, and the pipe stack, and roosting habitat appears to be absent. The PUD shop building that is adjacent to the proposed pad site has been constructed in a manner that effectively excludes small mammal use (no cracks, openings, or eaves). It is very unlikely that individuals or colonies of any bat species currently use the immediate project area for roosting. The only observed use by bats of the project footprint, the adjacent sewage treatment facility, and the scrub vegetation within the surveyed 200 ft buffer area was for foraging. Bats were seen flying above the project area during evening surveys on May 22 and 25, and foraging especially at sewage treatment facility ponds. Western mastiff bats, if present, would forage for insects above the proposed project. Conversion of 2500 square feet of habitat that is currently stacked with pipes into a pad and telecommunications tower will not negatively affect foraging bats, as this amount of habitat is small in comparison to the habitat available in the surrounding landscape. The availability of insects at the project and at existing

facility ponds in the area will not be diminished by the project. Construction that avoids creating new habitat for roosting would help avoid project maintenance related impacts to roosting bats.

Western White-tailed Jackrabbit

Western white-tailed jackrabbits inhabit a variety of montane habitats across the Eastern Sierra Nevada and western United States, but are most commonly documented in areas that have a significant shrub component. Sightings are very uncommon. Records in Mono County include one historical (1916) collection near Wilson Butte, about 2.5 miles north of the proposed project. While typically associated with subalpine habitats, western white-tailed jackrabbits may migrate to lower elevation scrub during summer months in this region (C.A. Joseph and Assoc., 2007). It is mainly nocturnal when foraging. Survey efforts at the pipe stack that would be removed prior to project construction (see "Pygmy Rabbit", above) support the conclusion that rabbits currently using the area are cottontails. No jackrabbits were seen during survey work on any date, and no forms or shallow, rounded excavations under shrub canopies were detected.

Burrows found within the buffer area where disturbed Big Sagebrush Scrub is recovering from historical disturbance were generally too small for use by rabbits. All active burrows there with opening diameters greater than 4 inches were attributed to ground squirrels. Some burrows had been excavated by predators, in effect creating hare-sized burrows that could be appropriated by western white-tailed jackrabbit, but pellets attributable to a rabbit or hare species were never found at excavated burrows. The small area of project-related disturbance and scrub habitat loss would not have a significant effect on highly mobile hares that may travel through the area. As discussed above for greater sage grouse and pygmy rabbit, any project element that increases the local availability of high perches for predators, or which attracts them by creating trash, would further diminish the overall suitability of the nearby area for use by foraging western white-tailed jackrabbits. The potential for increased mortality due to increased predator presence encouraged by the project can be avoided if raptor deterrence is installed and trash is effectively contained.

American Badger

American badger are highly mobile and adaptive animals that occupy a wide range of habitats and elevations in California. They produce abundant sign in areas where they forage or reside in enlarged burrows. The holes created as badgers dig for small mammalian prey are large and conspicuous. Badgers occurrences within Mono County are only sparsely documented in CNDDB records (CDFW, 2013e), but recent observations do include scrub habitat near West Portal (T. Taylor, personal communication 4/11/13).

Signs of badger were present within the southern margin of the surveyed buffer area on May 15, the first survey date at the proposed project site. Small rodent burrows that had been excavated by badger were identified by often faint, parallel claw marks on inner burrow side walls, and the relatively large amount of excavated soil that was piled nearby. Piles of excavated soil were oval or truncate in shape, rather than linear as might be expected if created by fox. This predatory activity was all assigned to pre-winter 2012, based upon the consistently weathering of sign, and germination of wildflowers uniformly from every pile of excavated soil, as observed in May-June 2013 (annual native plant abundance was high in this area in 2013). All animal sign associated with the pipe stack at the proposed pad was attributed to rabbits and ground squirrels, with no large excavations found there. The area that will be disturbed by the project represents a very small fraction of regionally available habitat, and is more highly disturbed than the habitat used by badger as recently as 2012. It is unlikely that the removal of potential foraging habitat

will significantly affect any American badger. Direct impact to a new residence burrow can be avoided if the project footprint and corridors for construction equipment access are checked for newer digging just prior to starting.

Mule Deer

Mule deer are considered important harvest species by the CDFW. Mule deer herds in Mono County are defined by their pattern of movement between summer and winter ranges. The West Portal project site is located within a traditional migration corridor that is used by the Casa Diablo Herd (Taylor, 1988). A large fraction of the herd's estimated 2800 animals (CDFG, 2011) pass through or near the existing habitat at West Portal in the Spring (normally during the period April to June) and Fall (October to November), with high year-to-year fidelity (Jones & Stokes Associates, 1999). West Portal is not within an identified holding area (H.A. 4, a.k.a. "Reversed Peak" is within three miles to the south), yet it is known that the general West Portal area is used by mule deer. During the seasonal period of their esidency (normally about April through about November), deer would be recovering from migration as well as birthing and raising fawns.

The disturbed habitat within and immediately adjacent to the project site appears to only marginally provide for the requirements of mule deer that reside in the area or that pass through during migration. Migrating Casa Diablo herd members tend to choose habitats of greater scrub cover and greater bitterbrush relative frequency, and so would tend to avoid the open, sagebrush-dominated stand at West Portal. Scrub habitats must include a palatable browse component such as bitterbrush in order to provide crucial resources for reconditioning of adults and fawn survival (Monteith, *et al.*, 2009). Bitterbrush is only a minor component of the nearby scrub assemblage, and no bitterbrush will be removed by project construction. Tall, bitterbrush-dominated stands occur only proximally, beginning 750 ft to the south and 1350 ft to the north of West Portal. Loss of approximately 1700 square ft of existing scrub at the proposed pad will not affect mule deer. The ponding basins at West Portal, which currently are not fenced, have been described as an important source of water for deer, especially during normal fall drought (Jones & Stokes, 1999). During a June 8 visit to the site, PUD staff characterized the availability of water at the ponding basins (Figure 2) as intermittent (as opposed to regularly scheduled) and ephemeral. Access to water is dependent upon PUD operations and therefore not seasonally dependable. The project will not influence water delivery or directly impede deer access to any existing basin.

Mortality data collected in 1993-1998 where Highway 395 intersects the migration path of the Casa Diablo Herd suggest that West Portal is an area of relatively frequent deer-vehicle collisions (Jones and Stokes, 1999). Collision, especially along Hwy 395, is considered one of the main causes of deer mortality in Mono County (Mono County Planning Dept., 2001). CDFW has developed specific plans for management of deer herds that emphasize the importance of designing projects so that a minimum of new barriers to migration are emplaced. The proposed project would occur adjacent to the existing sewage treatment facility's chain link fencing, so no significant new physical barrier to deer movement will be created. Treatment facility operations already cause daily human activity, constant noise, and night lighting. The proposed project will not substantially add to these factors if night lighting is shielded. Project-related linear barriers, and increased presence of predators such as bear and coyote, which during the residency period in particular could redirect deer movement toward Hwy 395 (and thereby increasing the number of crossings), can be avoided if temporary construction fencing is not used when deer are present (April-November), if trash that could attract predators is properly contained, and if dogs brought to the site are strictly leashed.

Conclusions

No rare plant species or sensitive communities will be affected by devegetation proposed for a small area during project implementation, and temporary loss of this habitat along the proposed buried cable alignment is not significant. Habitat similar to disturbed Big Sagebrush Scrub that will be affected is widespread in the region

To avoid direct impact to the CNPS List 2 species Masonic rock cress:

1) Equipment should not be allowed to travel more than 100 ft to the south or west from the corridor where cable burial is proposed.

Significant effects upon special status wildlife species are unlikely, due primarily to the site's degraded habitat condition at its location adjacent to existing sewage treatment operations. There will be no substantial effect on the availability of West Portal's marginal scrub habitat to foraging greater sage grouse, pygmy rabbit, and western white-tailed jackrabbit unless usable high perches for predators are created, additional predators are attracted to the site by trash, or unleashed pet dogs are allowed to roam the area. American badger have used the buffer area as recently as 2012. Highly mobile badgers would not be affected by the project, unless a burrow is newly created in the project construction footprint prior to the start of soil disturbance. There will be no effect on the important wildlife movement corridors used by members of the Casa Diablo mule deer herd, and no effect on deer mortality, unless the project creates new lighting or linear barriers to movement of mule deer that lead to increases highway crossings, or if implementation causes loss of access to surface water at the nearby ponding basins. The PUD pipe stack, having been in place for several years, has become habitat (possibly nesting) for rodents. They could be affected when the stack is removed prior to project construction.

To avoid these identified potential effects of the project as proposed, the measures listed here may be considered:

1) Any surface that could serve as a high perch for raptors will be fitted with Nixalite or other effective means of perch deterrence.
2) Trash will not be stored at the project site, or will be stored in a manner that is secure from all wildlife.
3) Dogs brought to the site during construction or maintenance will be strictly leashed.
4) The limited area of soil disturbance due to project construction will be surveyed for indication of new occupancy by American badger. In the unlikely occurrence that a badger burrow is found in the construction footprint, the best method for avoidance will be decided in consultation with CDFW.
5) Any new night lighting will be shuttered.
6) Construction will not include installation of any linear barriers outside the immediate footprint of the project. Construction/maintenance vehicle speed limit will be 15 mph.
7) PUD pipe stack removal, being a necessary component of project implementation, will be subject to mitigations put in place during project approval. Pipe stack removal will be completed during the period September 1 to March 1, which is outside the breeding and parturition period for potentially occurring nesting rodents.

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Appendix A. List of plant species observed within the Verizon West Portal Wireless Telecommunications Tower Project survey area in May and June 2013. Habit codes are defined below.

Plant Families and Species	Habit	Occurrence in scrub	Occurrence in disturbed
Angiosperms			
Dicots			
Asteraceae			
Ambrosia acanthicarpa	NAH		x
Artemisia tridentata ssp. *vaseyana*	NS	x	x
Chaenactis xantiana	NAH		x
Chrysothamnus viscidiflorus ssp. *viscidiflorus*	NS	x	
Ericameria nauseosa var. *hololeuca*	NS	x	x
Ericameria nauseosa var. *oreophila*	NS	x	
Ericameria parryi	NHS		x
Stephanomeria virgata ssp. *pleurocarpa*	NPH	x	
Boraginaceae			
Cryptantha circumscissa var. *circumscissa*	NAH	x	x
Cryptantha echinella	NAH	x	x
Nama depressum	NAH	x	x
Phacelia fremontii	NAH	x	x
Plagiobothrys kingii var. *harknesii*	NAH		x
Tiquilia nuttallii	NAH	x	x
Brassicaceae			
Boechera cobrensis	NPH	x	
Chenopodiaceae			
Chenopodium atrovirens	NAH	x	x
Chenopodium leptophyllum	NAH	x	
Chenopodium sp.	NAH	x	
Salsola tragus	IAH		x
Fabaceae			
Lupinus argenteus var. *heteranthus*	NPH	x	x
Loasaceae			
Mentzelia albicaulis	NAH	x	x
Mentzelia congesta	NAH	x	x
Mentzelia montana	NAH	x	x
Onagraceae			
Camissonia pusilla	NAH	x	
Gayophytum diffusum ssp. *parviflorum*	NAH	x	x

Plant Families and Species	Habit	scrub	disturbed
Phrymaceae			
Mimulus nanus	NAH		x
Polemoniaceae			
Aliciella monoensis	NAH	x	x
Eriastrum sparsiflorum	NAH	x	x
Polygonaceae			
Eriogonum sp. 1	NAH	x	
Oxytheca dendroidea ssp. *dendroidea*	NAH	x	x
Rosaceae			
Prunus andersonii	NS	x	x
Purshia tridentata var. *tridentata*	NS	x	
Cyperaceae			
Carex douglasii	NPGL	x	
Poaceae			
Bromus tectorum	IAG	x	x
Elymus cinereus	NPG	x	
Elymus elymoides	NPG	x	x
Stipa comata var. *comata*	NPG	x	x
Stipa hymenoides	NPG	x	x
Stipa occidentalis var. *californica*	NPG		x

key to growth habit codes:

A	annual	I	introduced
B	biennial	N	native
G	grass	P	perennial
GL	grass-like	S	shrub
H	herb		
HS	halfshrub		

Appendix B. List of common wildlife species observed or potentially present in October 2011 within the survey area for the proposed wireless telecommunications tower project at West Portal.
* signifies species that were observed within the study area.

Potentially Occurring Species

Amphibians and Reptiles

Elgaria coerulea	northern alligator lizard
*Sceloporus graciosus**	sagebrush lizard
Sceloporus occidentalis	western fence lizard

Birds

*Amphispiza belli**	sage sparrow
*Corvus corax**	common raven
Cyanocitta stelleri	Steller jay
*Falco sparverius**	American kestrel
*Pica hudsonia**	black-billed magpie
*Pipilo chlorurus**	green-tailed towhee
Sturnus vulgaris	European starling
*Tachycineta bicolor**	tree swallow
*Zenaida macroura**	mourning dove
*Zonotrichia leucophrys**	white-crowned sparrow

Mammals

Canis latrans	coyote
Lynx rufus	bobcat
Mephitis mephitis	striped skunk
Odocoileus hemonius	mule deer
Perognathus parvus	Great Basin pocket mouse
Peromyscus maniculatus	deer mouse
*Spermophilus beecheyi**	California ground squirrel
Sylvilagus nuttallii	mountain cottontail rabbit
*Tamias minimus**	least chipmunk
Thomomys bottae	Botta pocket gopher
Ursus americanus	black bear

Appendix C. Results of CNDDB search of the USGS June Lake, Lee Vining, Mount Dana, Koip Peak, Mount Ritter, Mammoth Mountain, Old Mammoth, Crestview, and Mono Mills quadrangles conducted in May 2013. Consortium of California Herbaria records for the northwestern portion of the Mono Basin have also been included. The project area supports a single plant community type, Big Sagebrush Scrub, which is an upland, non-alkaline tolerant assemblage dominated by native shrubs. Trees are absent. The average elevation is 2120 m (6980 ft).

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Federal Listed or State Listed**							
Astragalus johannis-howellii		Rare	1B.2	2040-2530	sandy loam in Great Basin scrub, Mono County and Nevada	sandy volcanic soil supporting Big Sagebrush Scrub at Whitmore Hot Springs, 6900 ft (2090 m), 19 miles southeast.	**some likelihood** exists due to soil and vegetation type similarity.
Astragalus monoensis		Rare	1B.2	2100-3350	sand, gravelly pumice in Great Basin scrub or Mono Pumice Flats, Inyo and Mono Counties	along State Highway 158 west of June Lake Junction, 7680 ft (2330 m), 5.0 miles south	pumice flat openings in the scrub canopy are not present, but **some likelihood** exists due to soil and scrub vegetation similarity.

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed**							
Agrostis humilis			2.3	2600-3200	alpine slopes, subalpine coniferous forest, meadows, widespread in Central Sierra Nevada, western states	meadow-like on outcrops, near Upper Sardine Lake at Mono Pass, 10,350 ft (3140 m), 6.3 miles west	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Atriplex pusilla			2	1300-2000	alkaline soil near hot springs, Great Basin scrub or meadows, western Great Basin	likely in alkaline scrub near Hot Creek (in 1938), 2100 m (6900 ft), 20 miles southeast	**very unlikely** due to lack of suitable habitat
Boechera cobrensis			2.3	1370-3100	Great Basin scrub or Pinyon-Juniper Woodland, Mono County and western states	Big Sagebrush Scrub along U.S. Highway 395, about 1.9 miles south, 7300 ft (2210 m)	**some likelihood** exists due to soil and scrub vegetation similarity and proximity of known populations

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Boechera pinzliae			1B.3	3000-3350	alpine and subalpine rocky slopes, scree, Mono County (all California occurrences), Nevada	open ridgetop east of Two Teats Mountain, 10,650 ft (3230 m), 11 miles south	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Boechera tiehmii			1B.3	2970-3590	alpine rocky slopes, mainly Tioga Crest, Mono and Nevada Counties	open slope above Ellery Lake near Tioga Pass, 9950 ft (3020 m), 8.9 miles northwest	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Boechera tularensis			1B.3	1825-3350	subalpine and upper montane coniferous forest, endemic to central Sierra Nevada mainly west of Sierra crest	granitic sand at Lundy Lake, 7000 ft (2120 m), 13 miles northwest	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Botrychium crenulatum			2.2	1300-3300	bogs, seeps, moist shaded coniferous forest, Sierra Nevada and Transverse Range, western states	mossy talus at Nunatak Nature Trail near Tioga Pass, 9800 ft (2970 m), 9.6 miles northwest	**very unlikely** due to lack of suitable habitat
Botrychium lunaria			2.3	1980-3400	bogs, seeps, moist shaded coniferous forest, widely distributed in U. S.	shaded riparian woodland at Convict Creek, 6500 ft (1970 m), 6.8 miles north	**very unlikely** due to lack of suitable habitat
Carex davyi			1B.3	1500-3200	subalpine and upper montane coniferous forest, west of Sierra Nevada crest (no Mono County occurrences)	alpine zone near Summit Lake at Mono Pass (1944), 10,600 ft (3200 m), 7.3 miles west, possibly extirpated	**very unlikely** due to lack of suitable habitat
Carex petasata			2.3	600-3320	upland broadleaf and coniferous forests, pinyon-juniper woodland, meadows, northern Sierra Nevada and western states	streamside, Deadman Creek, 10,000 ft (3030 m), 13 miles south	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Carex scirpoidea ssp. *pseudoscirpoidea*			2.2	3200-3700	alpine meadows and seeps, mesic forest, Inyo, Mono Counties and western states	riparian zone among willows at Deadman Creek east of U.S. Highway 395, 7380 ft (2240 m), 11 miles southeast	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Carex tiogana			1B.3	3100-3530	meadows and seeps, Mono County near Sierra Nevada crest	meadow-like among rocks, Upper Sardine Lake near Mono Pass, 10,350 ft (3140 m), 6.3 miles west	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Claytonia megarhiza			2.3	2600-3300	alpine boulder fields and subalpine forest, central Sierra Nevada and western states	open ridgetop near Mount Lyell (in 1950), 11,500 ft (3490 m), 13 miles southwest	**very unlikely** due to lack of suitable habitat
Crepis runcinata ssp. *hallii*			2.1	1250-1450	seasonally mesic meadow margins, alkaline, mainly Inyo and Mono Counties, Nevada	alkaline meadow near Dexter Creek, Adobe Ranch, 6650 ft (2020 m), 21 miles east	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Draba asterophora			1B.2	2500-3500	alpine rocks and scree, northern Sierra Nevada and Nevada	alpine zone at Mount Gibbs (in 1916), 11500 ft (3490 m), 6.5 miles west	**very unlikely** due to lack of suitable habitat
Draba cana			2.3	3000-3500	alpine boulder fields, subalpine coniferous forest, meadows, Mono County and northern states	moist habitat in upper montane coniferous forest east of Mono Pass, 10,550 ft (3200 m), 6.6 miles west	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Draba praealta			2.3	2500-3400	subalpine and alpine meadows and seeps, central Sierra Nevada and western states	moist alpine meadow, west slope of Mount Gibbs, 11,500 ft (3490 m), 6.2 miles west	**very unlikely** due to lack of suitable habitat
Epilobium howellii			4.3	2000-3100	meadows and seeps, subalpine coniferous forest, central Sierra Nevada	seasonally wet meadow margin near Lyell Fork Creek, Tuolumne Meadows, 7690 ft (2330 m), 13 miles west	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Eremothera boothii ssp. *boothii*			2.3	800-2400	pinyon-juniper and Joshua tree woodland, Great Basin scrub, Inyo and Mono Counties, scattered Great Basin	sagebrush at Mono Craters 7650 ft (2320 m), 4.3 miles northeast, and riparian scrub at Rush Creek, 6500 ft (1970 m), 4.6 miles north	**some likelihood** exists due to soil and vegetation similarity and proximity of known populations
Eremothera boothii ssp. *intermedia*			2.3	1500-2150	Great Basin scrub, pinyon-juniper woodland, sandy western Great Basin	scrub near South Tufa, southern Mono Basin, 6440 ft (1950 m), 5.9 miles northeast	**some likelihood** exists due to soil and vegetation similarity and proximity of known populations
Festuca minutiflora			2.3	3200-4050	alpine rocks and scree, central Sierra Nevada and western states	alpine open slope near Koip Peak pass, 12,300 ft (3730 m), 6.9 miles southwest	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Hulsea brevifolia			1B.2	1500-3200	montane coniferous forest, often sandy, disturbed roadsides, western central Sierra Nevada	disturbed forested trailside near Crater Creek, Devil's Postpile National Mon., 7990 ft (2420 m), 18 miles south	**very unlikely** due to large ecological distance between project site and all known populations

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Lupinus duranii			1B.2	2000-3000	gravelly pumice in open flats, sagebrush scrub, montane coniferous forest, Mono County	open flats and scrub, gravel, Pumice Valey, 6850 ft (2080 m), 3.1 miles northeast, and north of Oh Ridge Camp, 7650 ft (2320 m), 4.5 miles south	**some likelihood** due to broad similarity of scrub vegetation and proximity of known populations
Mimulus glabratus ssp. *utahensis*			2.1	600-2000	meadows and seeps, riparian scrub, pinyon-juniper woodland, Inyo and Mono Counties	riparian scrub at Rush Creek, 6500 ft (1970 m), 4.6 miles north	**very unlikely** due to lack of suitable habitat
Mentzelia torreyi			2.2	1170-2850	Great Basin scrub, Mojave desert scrub, pinyon-juniper woodland, rocky, often alkaline, volcanic	pumice soil, sagebrush scrub near Black Point, northern Mono Basin, 6400 ft (1940 m), 10 miles north	**some likelihood** exists due to broad similarity of scrub vegetation
Minuartia stricta			2.3	2450-3950	alpine, rocky or very coarse soils, meadows, central Sierra Nevada, Rocky Mountains	meadow-like among rocks, Upper Sardine Lake near Mono Pass, 10,350 ft (3140 m), 6.3 miles west	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Phacelia inyoensis			1B.2	900-3200	drying margins of seeps and meadows, alkaline soil, Mono and Inyo Counties	alkaline meadow near Owens River at Arcularias Ranch, Long Valley, 7170 ft (2150 m), 13 miles southeast	**very unlikely** due to lack of suitable habitat
Potamogeton robbinsii			2.3	1530-3300	aquatic, marshes, lake margins, northern and central California, widely distributed in United States	shallow submerged margin of Walker Lake, 7930 ft (2400 m), 4.2 miles west	**very unlikely** due to lack of suitable habitat
Salix nivalis			2.3	3100-3500	alpine scrub, seeps, central Sierra Nevada and western states	streamside at headwaters of Parker Creek, 11,000 ft (3300 m), 6.4 miles west	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and all known populations
Silene oregana			2.2	2250-2820	subalpine coniferous forest, scrub, central and southern Sierra Nevada, western states	subalpine forest with scrub understory, Warren Canyon, 9300 ft (2820 m), 10 miles northwest	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants **Not Federal or State Listed (cont.)**							
Stuckenia filiformis			2.2	300-2150	aquatic, shallow freshwater lake margins, widely scattered in California and United States	shallow lake margin at June Lake Marina, 7630 ft (2310 m), 6.4 miles south	**very unlikely** due to lack of suitable habitat
Viola purpurea ssp. *aurea*			2.2	1000-2500	sagebrush scrub, pinyon-juniper woodland, sandy, central and southern California, Nevada	sagebrush scrub on moraine east of Grant Lake, 7575 ft (2300 m), 2.3 miles south	**some likelihood** exists due to soil and vegetation similarity and proximity of known populations
Wildlife **Federal Listed or State Listed**							
Amphibians							
Anaxyrus canorus	Candidate	SC		2730-3200	subalpine to alpine marshes, lakes, streams, montane wet meadows, central Sierra Nevada	Shoreline of Summit Lake near Mono Pass, 10,600 ft (3220 m), 6.9 miles west	**very unlikely** due to lack of suitable habitat and large elevation difference between project site and known populations

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife **Federal or State Listed (cont.)**							
Amphibians (cont.)							
Rana sierrae	Candidate	SC		2300-3500	very near surface water, central and northern Sierra Nevada	stream near Summit Lake near Mono Pass, 10,600 ft (3220 m), 6.9 miles west	**very unlikely** due to lack of suitable habitat
Birds							
Buteo swainsoni (nesting)		Thr			nesting and foraging in grasslands or riparian scrub near meadows, fields	nesting (in 1985) at riparian scrub with wet meadow at Parker Creek, 7100 ft (2150 m), 1.4 miles west	**very unlikely** due to lack of suitable habitat (nearest meadow habitat is 1.4 miles to west)
Centrocercus urophasianus Bi-State DPS (nesting, leks)	Candidate	SC		2100-3000	foraging, nesting in sagebrush scrub, leks at openings in scrub, Bi-State DPS occurs in Mono County and Western Nevada	Parker Meadows lek area is broadly 6900 ft (2100 m), 2 miles northwest, year-long use of ridges west of Grant Lake, 7150 ft (2170 m), 0.5 miles southwest, annual migration may be through general area of project site	**some likelihood** due to similar vegetation type and proximity of radio-tracked movement of known Parker Meadows sub-population
Empidonax traillii (nesting)	Endang (ssp. *extimus*)	Endang (all ssp.)		600-2400	nesting in extensive willow riparian scrub stands, often near wet meadow habitat	Lower Rush Creek riparian zone, 6600 ft (2000 m), which approaches within 0.6 miles to the north	**very unlikely** due to lack of suitable habitat (nearest is 0.6 miles north)

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife **Federal or State Listed (cont.)**							
Birds (cont.)							
Strix nebulosa (nesting)		Endang		2400-2650	expansive mature and dense forest with snags and adjacent meadow area, Sierra Nevada north to Arctic Circle, Eurasia	nesting (1975) in dense coniferous forest at Valentine Camp near Mammoth Lakes, 8000 ft (2430 m), 18 miles south	**very unlikely** due to lack of suitable habitat
Mammals							
Gulo gulo	Candidate	Thr		2100-3650	many habitats, high elevation Sierra Nevada and northern Coast Ranges	subalpine coniferous forest near Mono Pass (in 1973), 11,000 ft (3340 m), 7.1 miles west	**very unlikely** due to large elevation difference between project site and all historically known regional occurrences
Martes pennanti West Coast DPS	Candidate	SC		1500-2400	expansive mature and dense forest with snags or downed logs and adjacent riparian area central Sierra Nevada and west coast of North America	coniferous forest and lake shoreline at urban fringe near June Lake (in 1973), 7700 ft(2340 m), 5.8 miles south	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife **Federal or State Listed (cont.)**							
Mammals (cont.)							
Ovis canadensis sierrae	Endang	Endang		2050-3150	open and steep alpine slopes, central Sierra Nevada (reintroduced to Modoc Plateau)	Mt. Gibbs Herd Unit range approaches Rush Creek at Grant Lake, 7600 ft (2300 m) 4.4 miles southwest	**very unlikely** due to lack of suitable habitat
Vulpes vulpes necator		Thr		2050-3170	forest and forest gaps, high elevation central Sierra Nevada, recent sightings indicate may use lower elevations in Eastern Sierra Nevada	near mouth of Walker Canyon (in 1983), 7800 ft (2370 m), 2.8 miles west	**some likelihood** exists due to habitat similarity and proximity of historically known occurrences
Wildlife **Not Federal Listed or State Listed**							
Fish							
Catostomus fumeiventris		SC		1250-2140	Owens River drainage in Mono and Inyo Counties	Marsh and pond at East Portal, Long Valley, 7000 ft (2120 m), 14 miles southeast	**very unlikely** due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife **Not Federal or State Listed (cont.)**							
Amphibians							
Hydromantes platycephalus		SC		1200-3500	rocky soil or talus in moist to wet habitat very near surface water, central Sierra Nevada	Lyell Canyon west of Donahue Pass, Yosemite NP, 11,100 ft (3370 m) 12 miles west	**very unlikely** due to lack of suitable habitat
Birds							
Accipiter gentilis (nesting)		SC		2300-3200	nesting in relatively closed coniferous forest, Sierra Nevada, circumpolar	eyries (in 1982) in riparian zone near Rush Creek, 6640 ft (2010 m), 4.2 miles north, and pine forest at southwest slope of Mono Craters, 8200 ft (2490 m), 4.3 miles southeast	**very unlikely** due to lack of suitable habitat
Circus cyaneus (nesting)		SC			nesting on ground in meadows, marshes, marshland scrub, foraging same habitats	riparian forest at lower Lee Vining Creek, 6400 ft (1940 m), 7 miles north	**very unlikely** due to lack of suitable habitat
Dendroica petechia breweri (nesting)		SC			nesting and foraging in riparian scrub/forest, may nest in shrubby montane forest gaps	Lower Rush Creek riparian zone, 6600 ft (2000 m), which approaches within 0.6 miles to the north	**very unlikely** due to lack of suitable habitat (nearest is 0.6 miles north)

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife **Not Federal or State Listed (cont.)**							
Birds (cont.)							
Xanthocephalus xanthocephalus (nesting)		SC			nests in freshwater emergent marsh, may nest in riparian forest	nesting in riparian zone at lower Rush Creek, 6640 ft (2010 m), 4.2 miles north	**very unlikely** due to lack of suitable habitat
Mammals							
Aplodontia rufa californica		SC			coniferous and riparian forest with dense understory, near surface water	mesic forest and lakeshore near urban zone at Gull Lake, 7600 ft (2300 m), 7.0 miles south	**very unlikely** due to lack of suitable habitat
Brachylagus idahoensis		SC			sagebrush, pinyon-juniper woodland with sagebrush understory, Inyo, Mono and Modoc Counties, western U.S.	tall, dense sagebrush scrub on both sides of U.S. 395 near Walker Creek, 6800 ft (2060 m), 2.4 miles north	**some likelihood** exists due to broad habitat similarity and proximity of recently recorded population
Euderma maculatum		SC			nests in crevices, caves, forages at aquatic and riverine habitats	Tioga Lake, 9900 ft (3000 m), 9.4 miles west	**very unlikely** due to lack of suitable habitat
Eumops perotis californicus		SC			nests in crevices, trees, buildings, forages at a wide variety of habitats	Poole Power Plant at Lee Vining Creek, 7850 ft (2380 m), 8.3 miles northwest	**some likelihood** exists due to broad habitat similarity