SOUTHERN CALIFORNIA EDISON
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N

LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

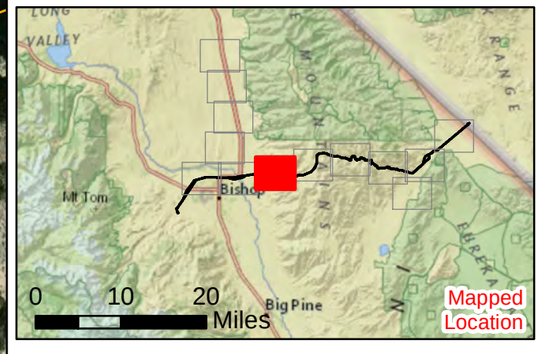
Sensitive Plant Locations

- crested onion *(Allium atrorubens var. cristatum)*
- desert shredding primrose *(Eremothera boothii ssp. intermedia)*
- naked milk vetch *(Astragalus serenoi var. shockleyi)*

Sensitive Plant Areas

- desert shredding primrose *(Eremothera boothii ssp. intermedia)*

0 2,000 4,000
Feet



CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-4-2_Sensitive Plant Species_CSP.mxd 03/16/2021 mgl01044
Coordinate System: NAD 1983 UTM Zone 11N

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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

White Mountain Substation

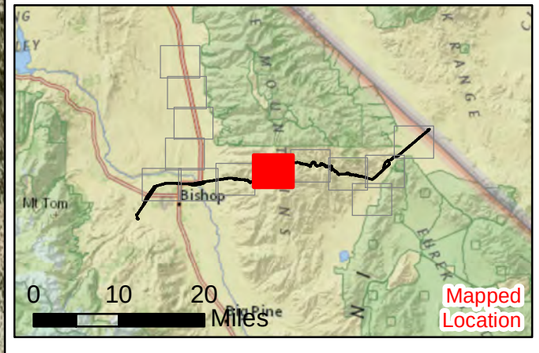
Sensitive Plant Locations

- bladder milk vetch *(Astragalus oophorus var. oophorus)*
- bristlecone pine *(Pinus longaeva)*
- crested onion *(Allium atrorubens var. cristatum)*
- desert shredding primrose *(Eremothera boothii ssp. intermedia)*

Sensitive Plant Areas

- bristlecone pine *(Pinus longaeva)*
- crested onion *(Allium atrorubens var. cristatum)*

0 2,000 4,000
Feet



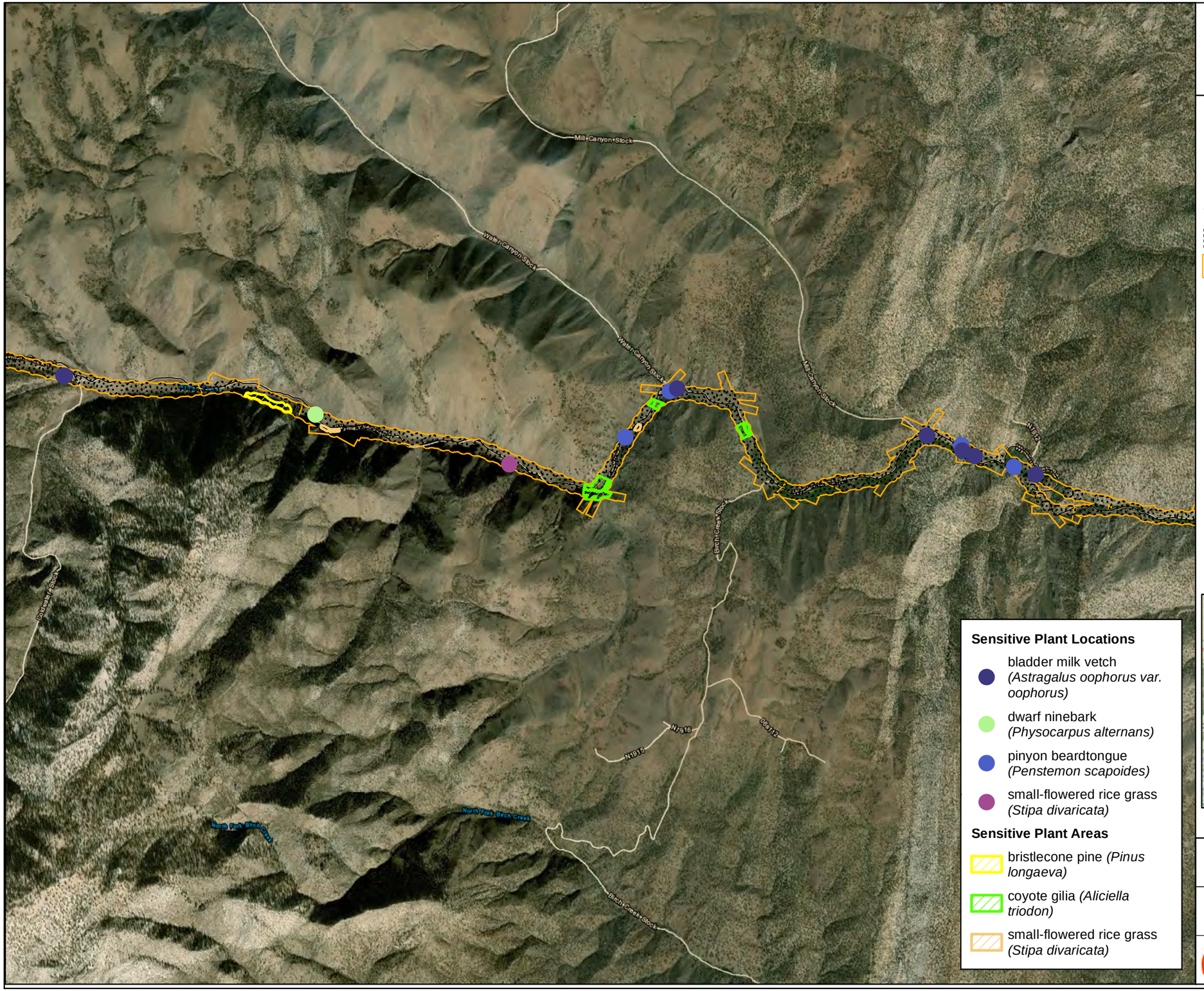
CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

\\corparcgis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSPIFigure5-4-2_Sensitive Plant Species_CSP.mxd 03/16/2021 mgl01044
Coordinate System: NAD 1983 UTM Zone 11N



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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

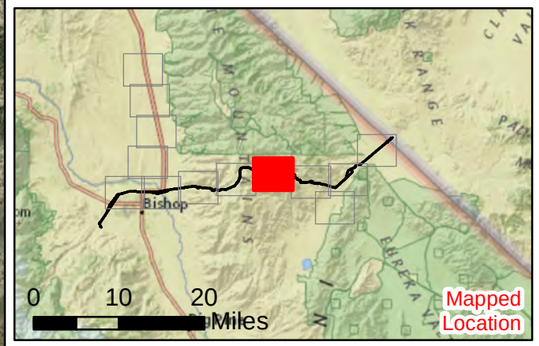
Sensitive Plant Locations

- bladder milk vetch *(Astragalus oophorus var. oophorus)*
- dwarf ninebark *(Physocarpus alternans)*
- pinyon beardtongue *(Penstemon scapoides)*
- small-flowered rice grass *(Stipa divaricata)*

Sensitive Plant Areas

- bristlecone pine *(Pinus longaeva)*
- coyote gilia *(Aliciella triodon)*
- small-flowered rice grass *(Stipa divaricata)*

0 2,000 4,000
Feet



CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

\\corparcgis\Data\ArcGisData\GIS\PROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-4-2_Sensitive Plant Species_CSP.mxd 03/16/2021 mgl01044
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SOUTHERN CALIFORNIA EDISON
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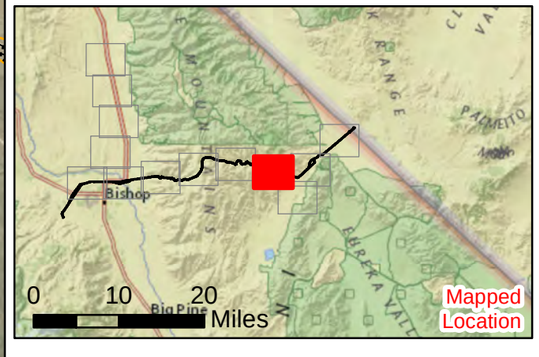


Sensitive Plant Locations

crested onion *(Allium atrorubens var. cristatum)*

Sensitive Plant Areas

crested onion *(Allium atrorubens var. cristatum)*

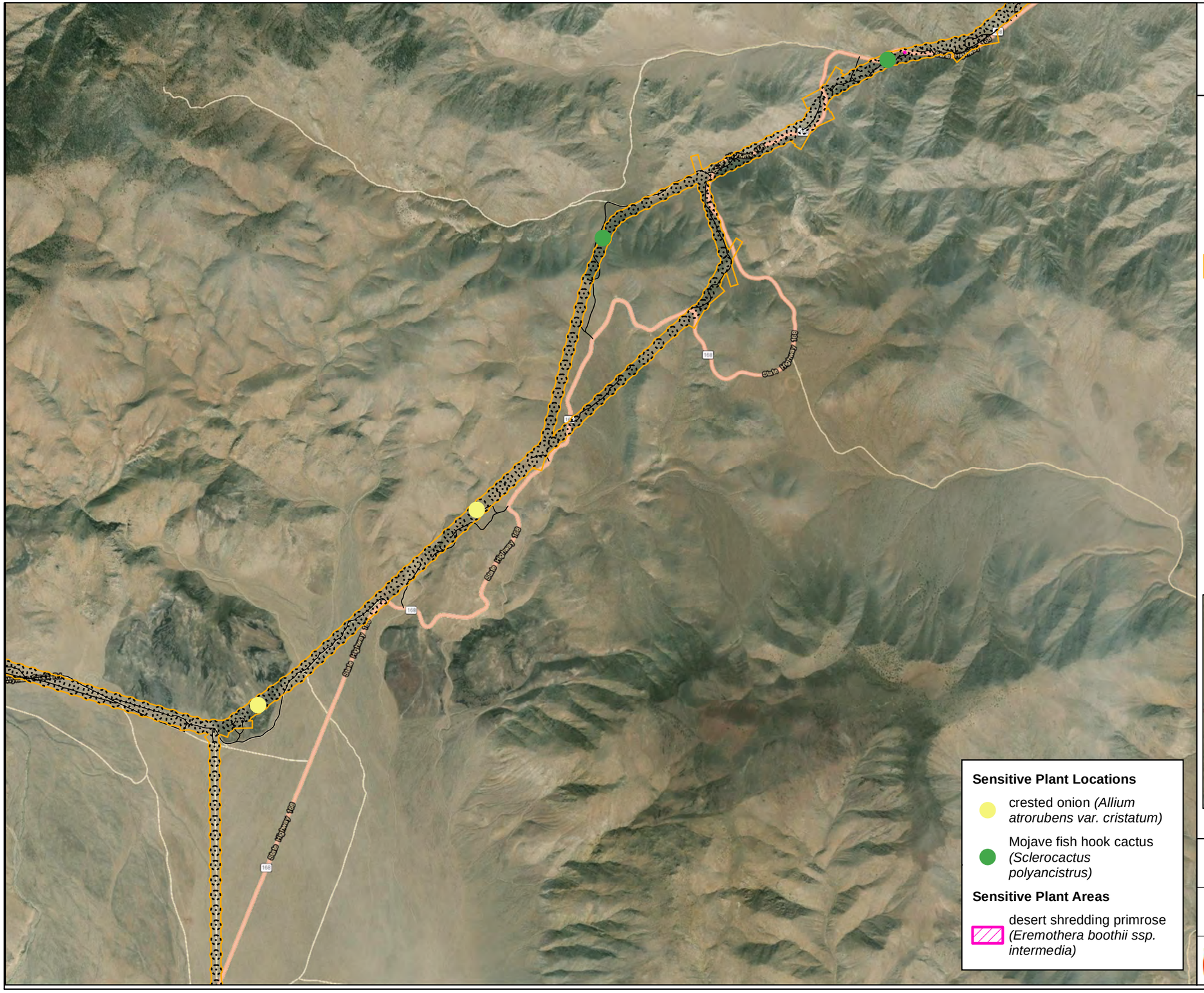
CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-4-2_Sensitive Plant Species_CSP.mxd 03/16/2021 mgl01044
Coordinate System: NAD 1983 UTM Zone 11N



SOUTHERN CALIFORNIA EDISON
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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

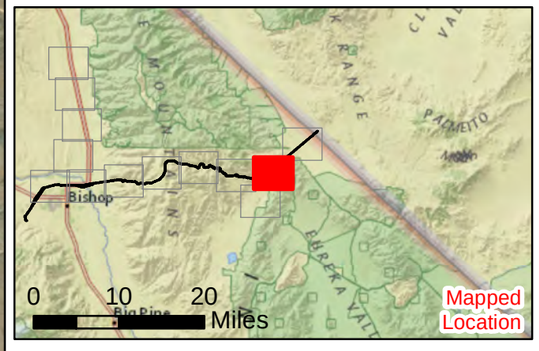
Sensitive Plant Locations

- crested onion *(Allium atrorubens var. cristatum)*
- Mojave fish hook cactus *(Sclerocactus polyancistrus)*

Sensitive Plant Areas

- desert shredding primrose *(Eremothera boothii ssp. intermedia)*

0 2,000 4,000
Feet



CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

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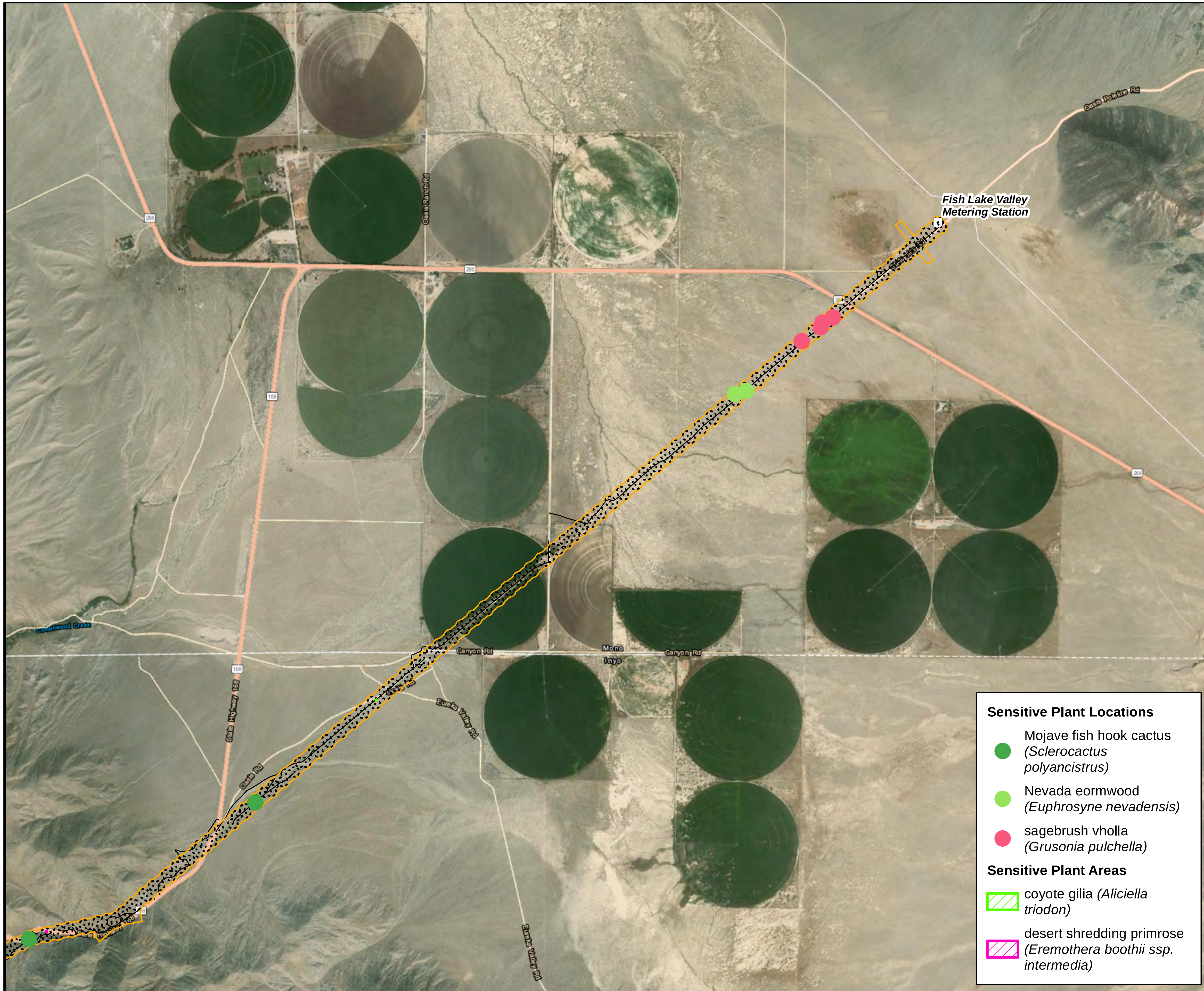

SOUTHERN CALIFORNIA EDISON
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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
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- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

Page 8 of 13

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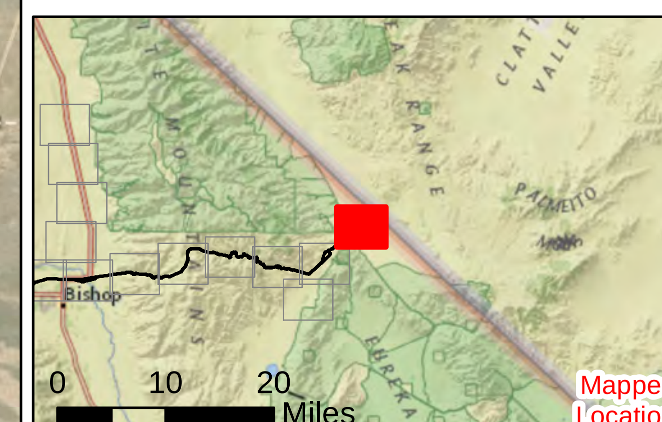
Feet



Sensitive Plant Locations

- Mojave fish hook cactus *(Sclerocactus polyancistrus)*
- Nevada eormwood *(Euphrosyne nevadensis)*
- sagebrush vholla *(Grusonia pulchella)*

Sensitive Plant Areas

- coyote gilia *(Aliciella triodon)*
- desert shredding primrose *(Eremothera boothii ssp. intermedia)*

CONTROL-SILVER
PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET:
5.4-2

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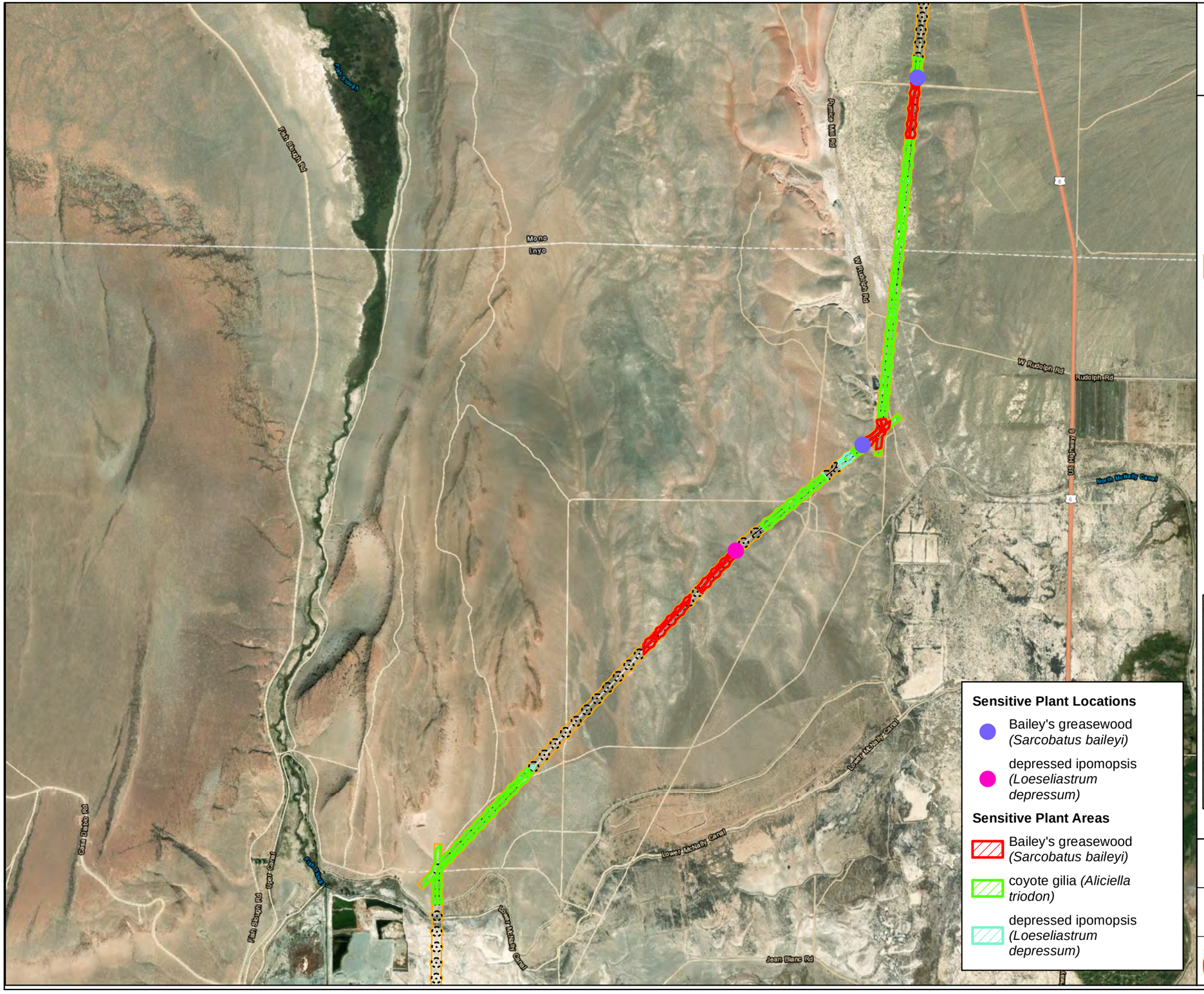

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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

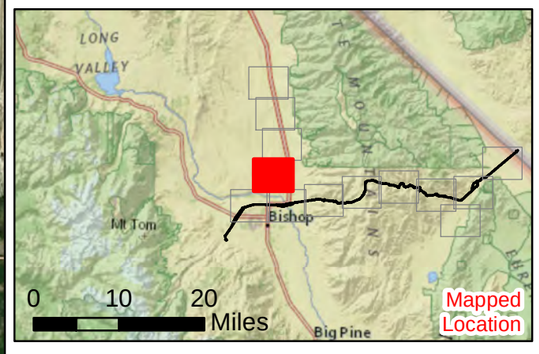
Sensitive Plant Locations

- Bailey's greasewood *(Sarcobatus baileyi)*
- depressed ipomopsis *(Loeseliastrum depressum)*

Sensitive Plant Areas

- Bailey's greasewood *(Sarcobatus baileyi)*
- coyote gilia *(Aliciella triodon)*
- depressed ipomopsis *(Loeseliastrum depressum)*

0 2,000 4,000
Feet



CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

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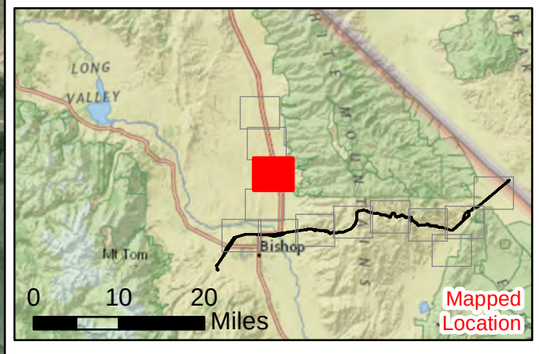

CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: 5.4-2

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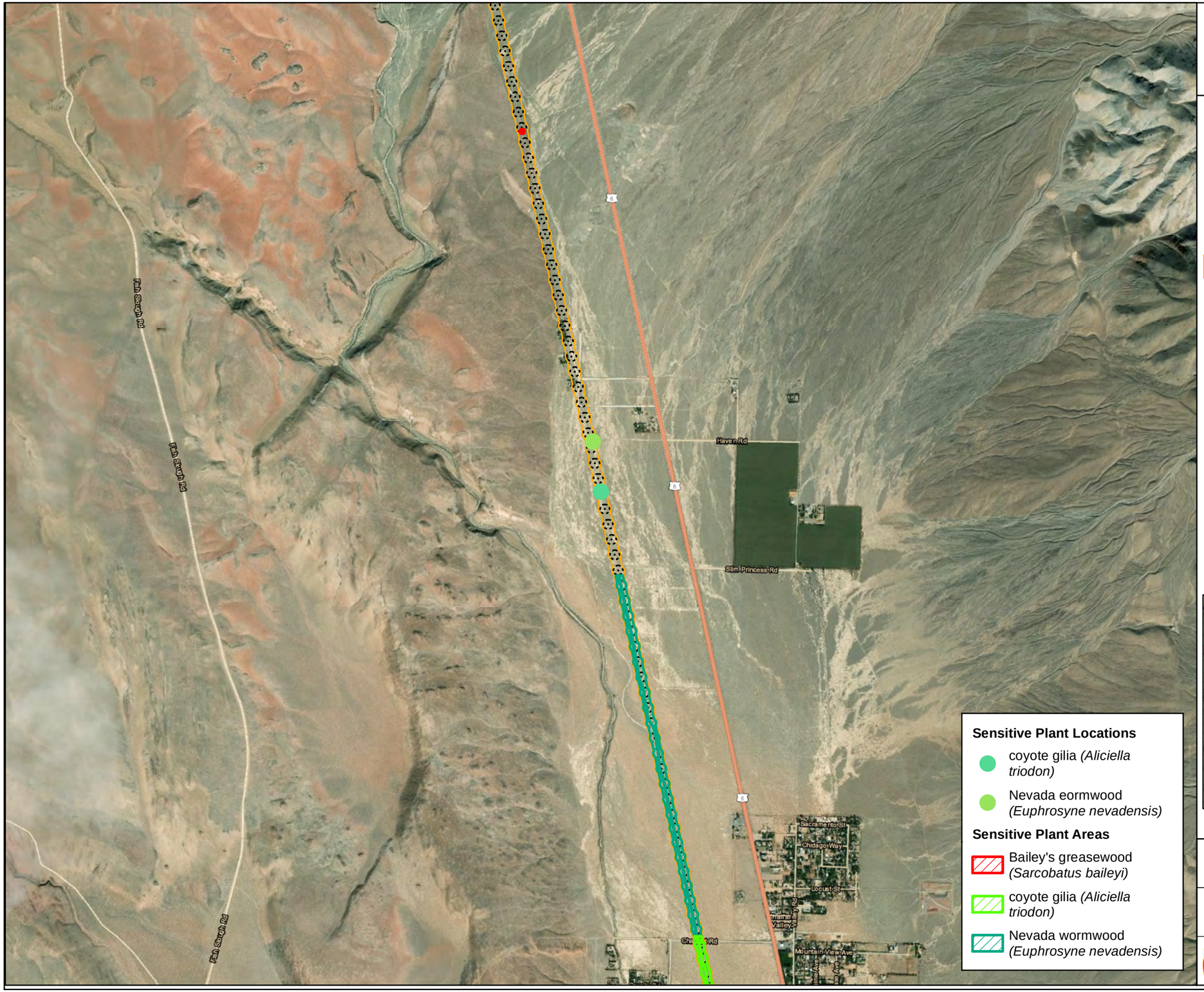

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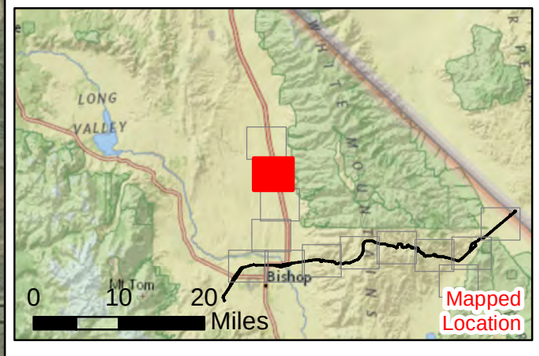

CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

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SOUTHERN CALIFORNIA EDISON
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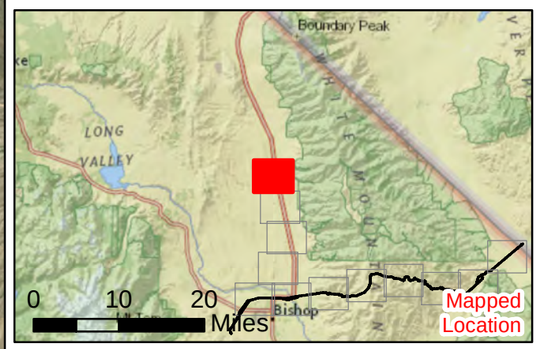

CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

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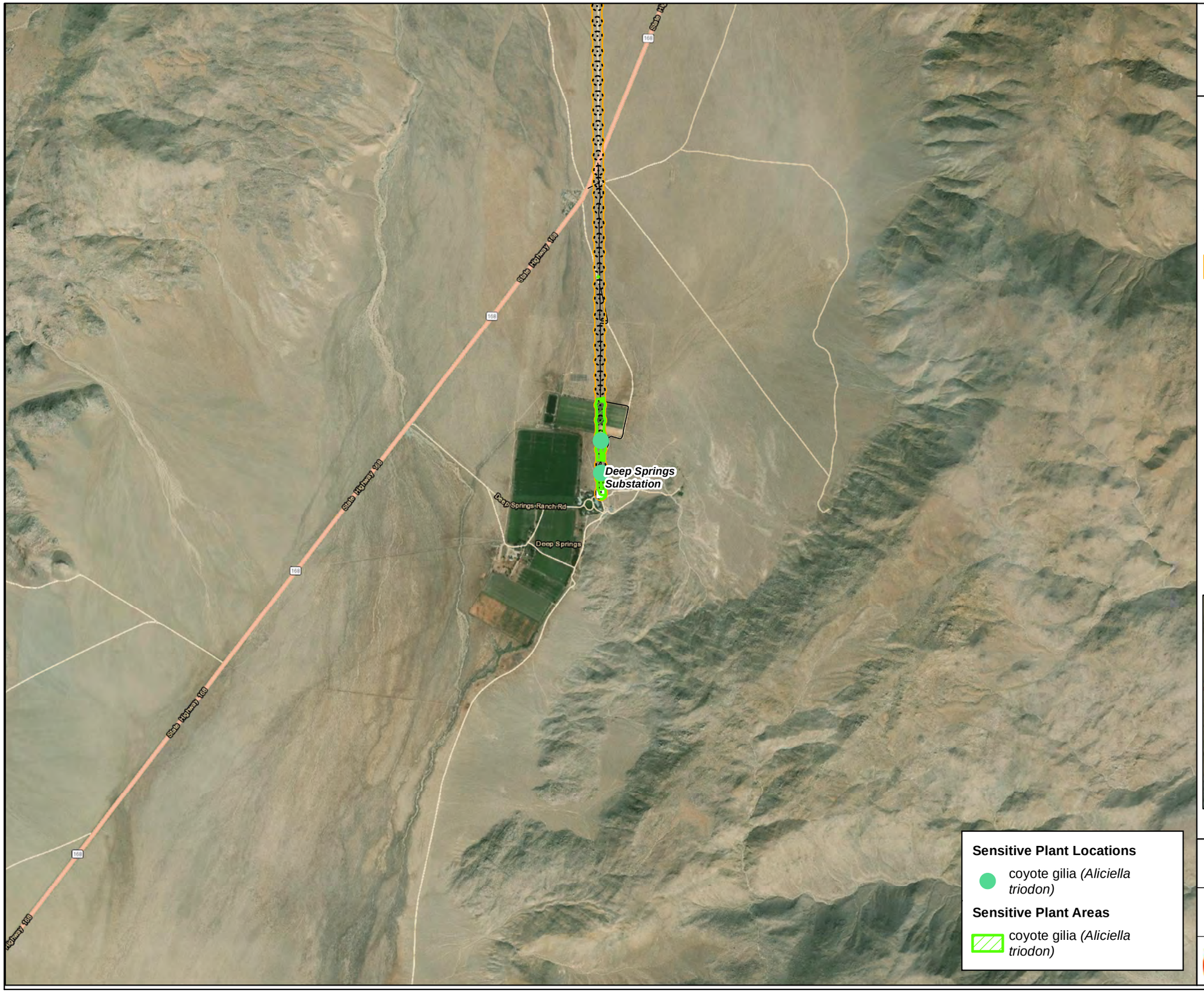

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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
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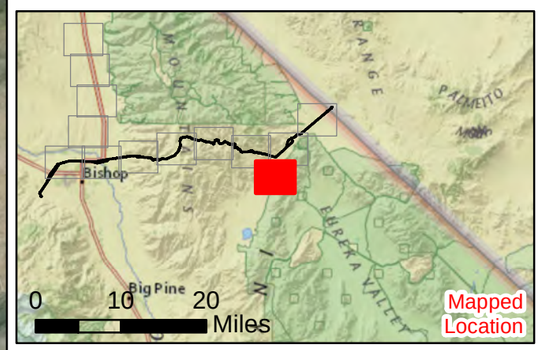

Sensitive Plant Locations

coyote gilia *(Aliciella triodon)*

Sensitive Plant Areas

coyote gilia *(Aliciella triodon)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-2**

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SOUTHERN CALIFORNIA EDISON
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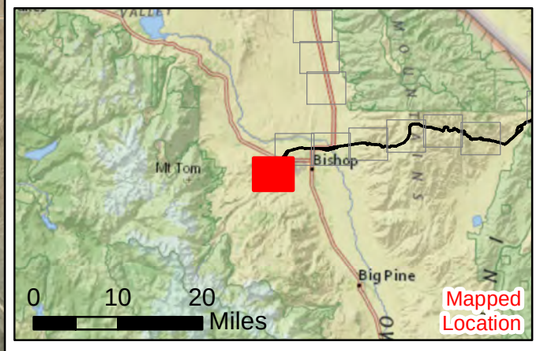

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

CNDDB Plant Species

Parish's popcornflower *(Plagiobothrys parishii)*

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-3**

\\corpargis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-4-3_CNDDB Plant Species_CSP.mxd 03/16/2021 mgl01044
Coordinate System: NAD 1983 UTM Zone 11N

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LEGEND

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- SURVEY AREA

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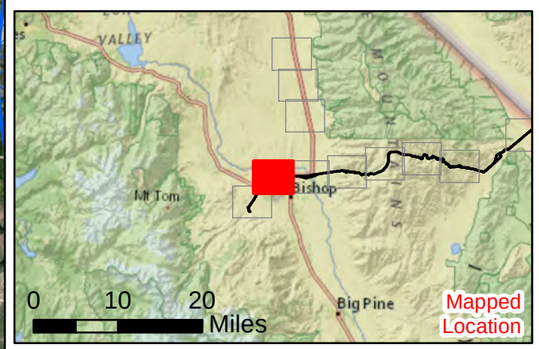


CNDDB Plant Species

Parish's popcornflower
(Plagiobothrys parishii)

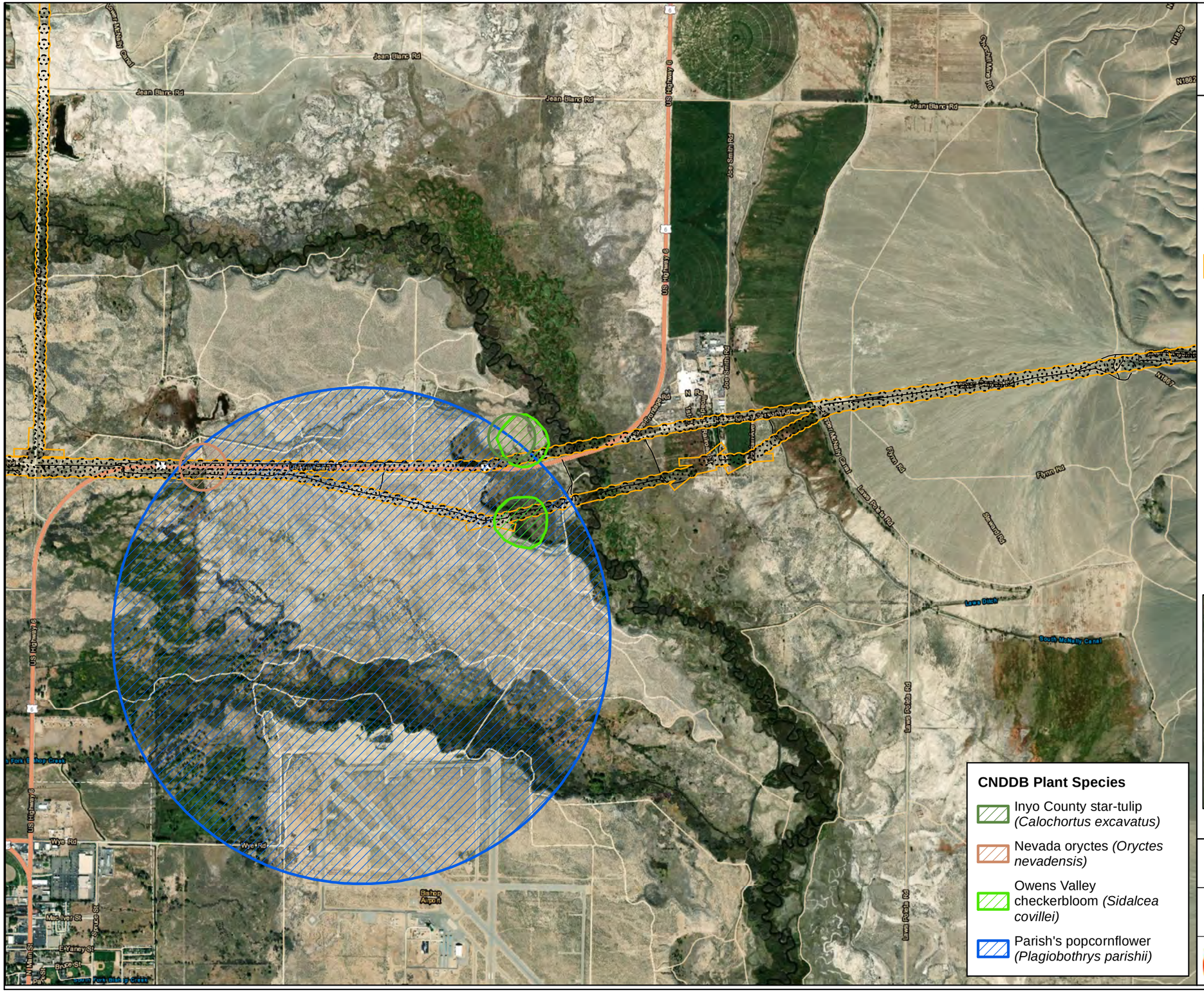
CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-3**

\\corpgis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-4-3_CNDDB Plant Species_CSP.mxd 03/16/2021 mgl01044
Coordinate System: NAD 1983 UTM Zone 11N



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LEGEND

- STRUCTURE LOCATION
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- SURVEY AREA

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: 5.4-3

\\corparcgis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSPVFigure5-4-3_CNDDB Plant Species_CSP.mxd 03/16/2021 mgl01044
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LEGEND

- STRUCTURE LOCATION
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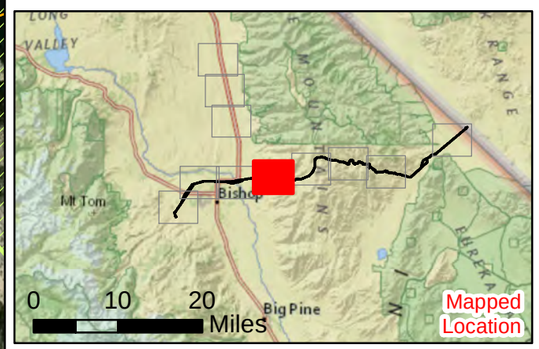
- SURVEY AREA

CNDDB Plant Species

- Inyo blazing star *(Mentzelia inyoensis)*
- Scribner's wheat grass *(Elymus scribneri)*
- Shockley's milk-vetch *(Astragalus serenoi var. shockleyi)*
- prairie wedge Grass *(Sphenopholis obtusata)*

0 2,000 4,000
Feet



CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

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FIGURESET: **5.4-3**

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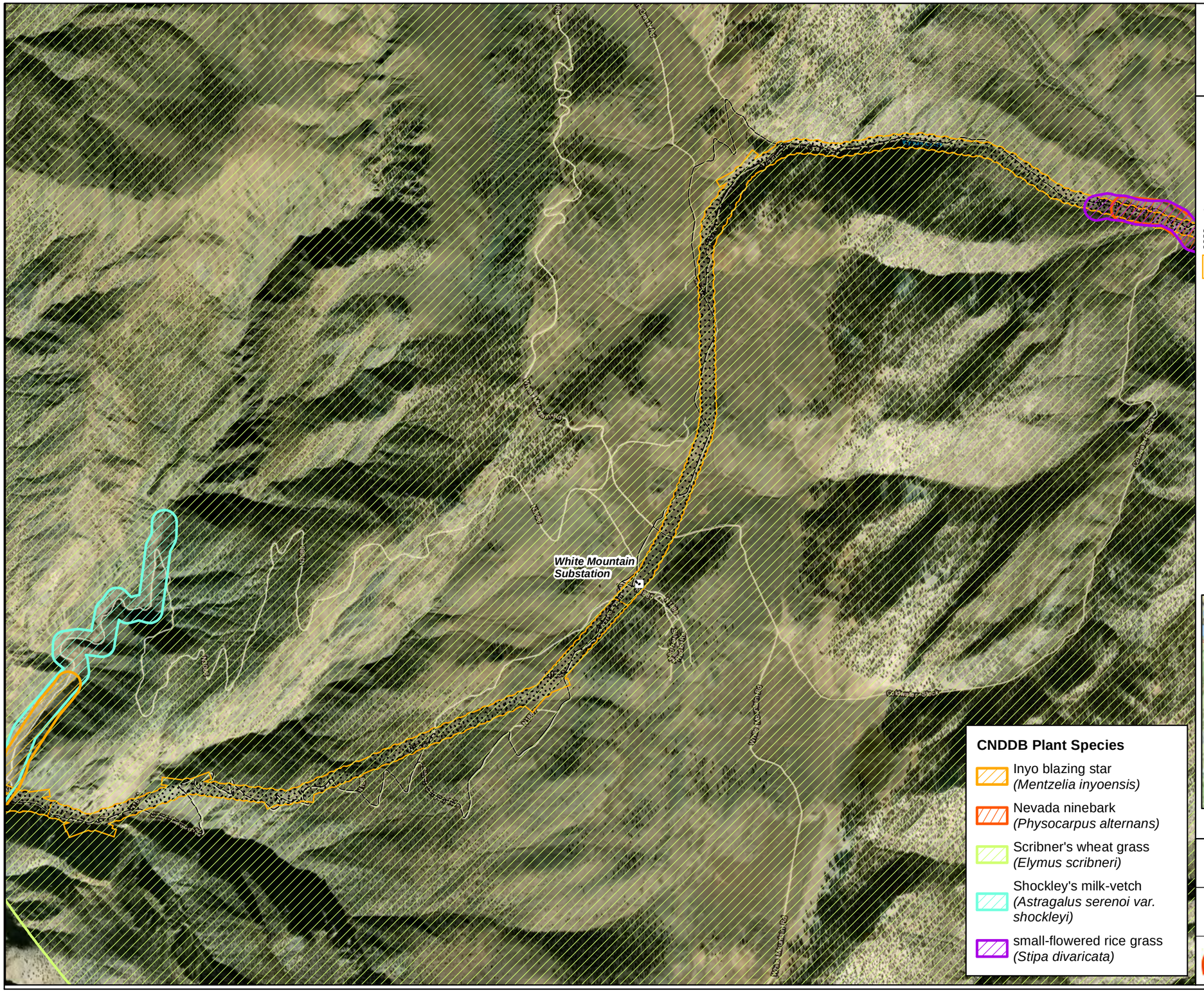

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CNDDB Plant Species

- Inyo blazing star *(Mentzelia inyoensis)*
- Nevada ninebark *(Physocarpus alternans)*
- Scribner's wheat grass *(Elymus scribneri)*
- Shockley's milk-vetch *(Astragalus serenoi var. shockleyi)*
- small-flowered rice grass *(Stipa divaricata)*

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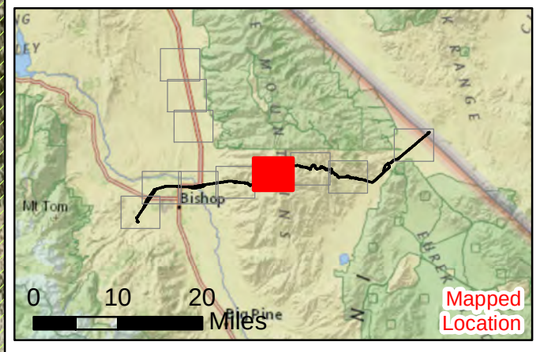
Feet



CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-3**

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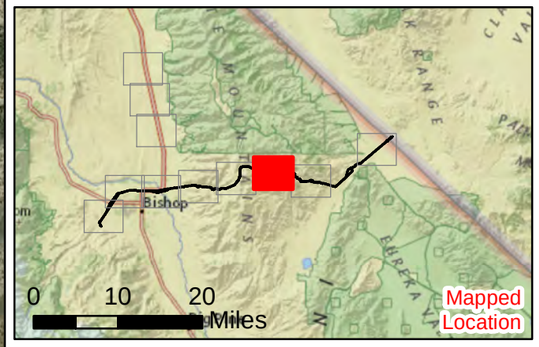

CNDDB Plant Species

- Nevada ninebark *(Physocarpus alternans)*
- Scribner's wheat grass *(Elymus scribneri)*
- foxtail tthelypodium *(Thelypodium integrifolium ssp. complanatum)*
- limestone daisy *(Erigeron uncialis var. uncialis)*
- small-flowered rice grass *(Stipa divaricata)*

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-3**

\\corparcgis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSPIFigure5-4-3_CNDDB Plant Species_CSP.mxd 03/16/2021 mgl01044
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SOUTHERN CALIFORNIA EDISON
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N

LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
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- SURVEY AREA

CNDDB Plant Species

- Dedecker's clover *(Trifolium dedeckerae)*
- Scribner's wheat grass *(Elymus scribneri)*
- prairie wedge Grass *(Sphenopholis obtusata)*

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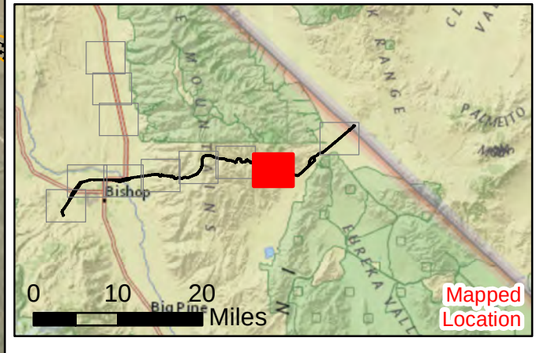
Feet



CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-3**

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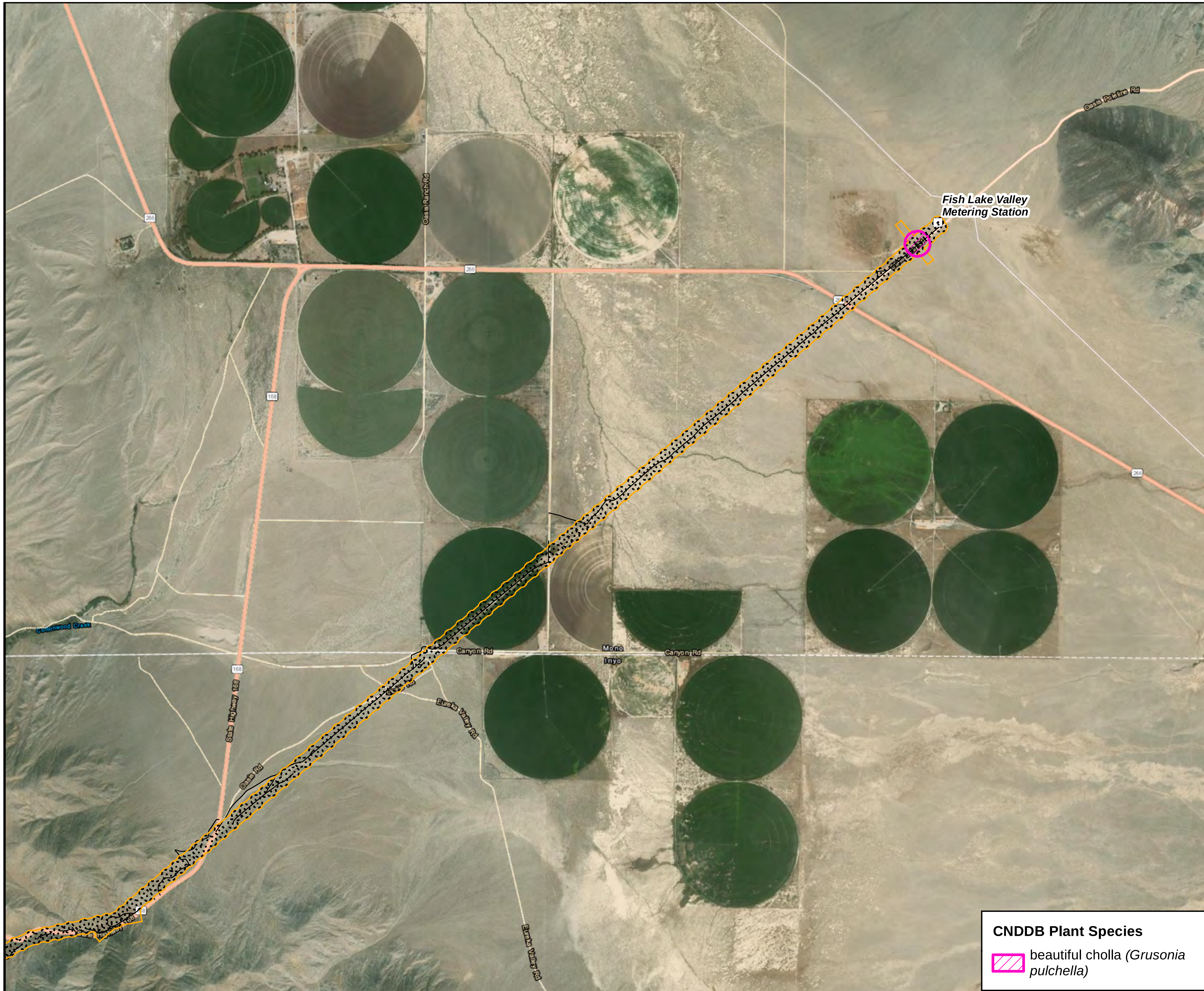
Coordinate System: NAD 1983 UTM Zone 11N



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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

Page 8 of 11

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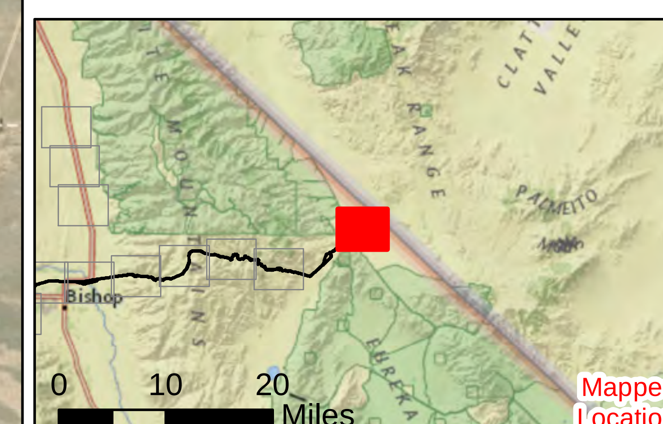

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: 5.4-3

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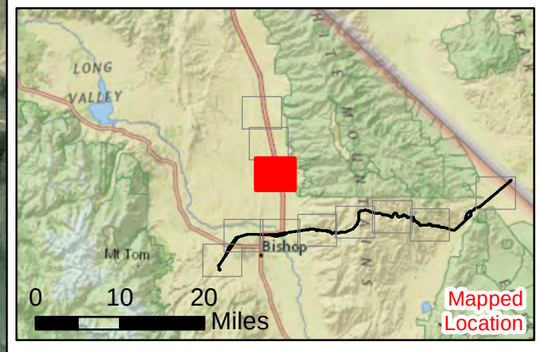

CNDDB Plant Species

Parish's popcornflower
(Plagiobothrys parishii)

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-3**

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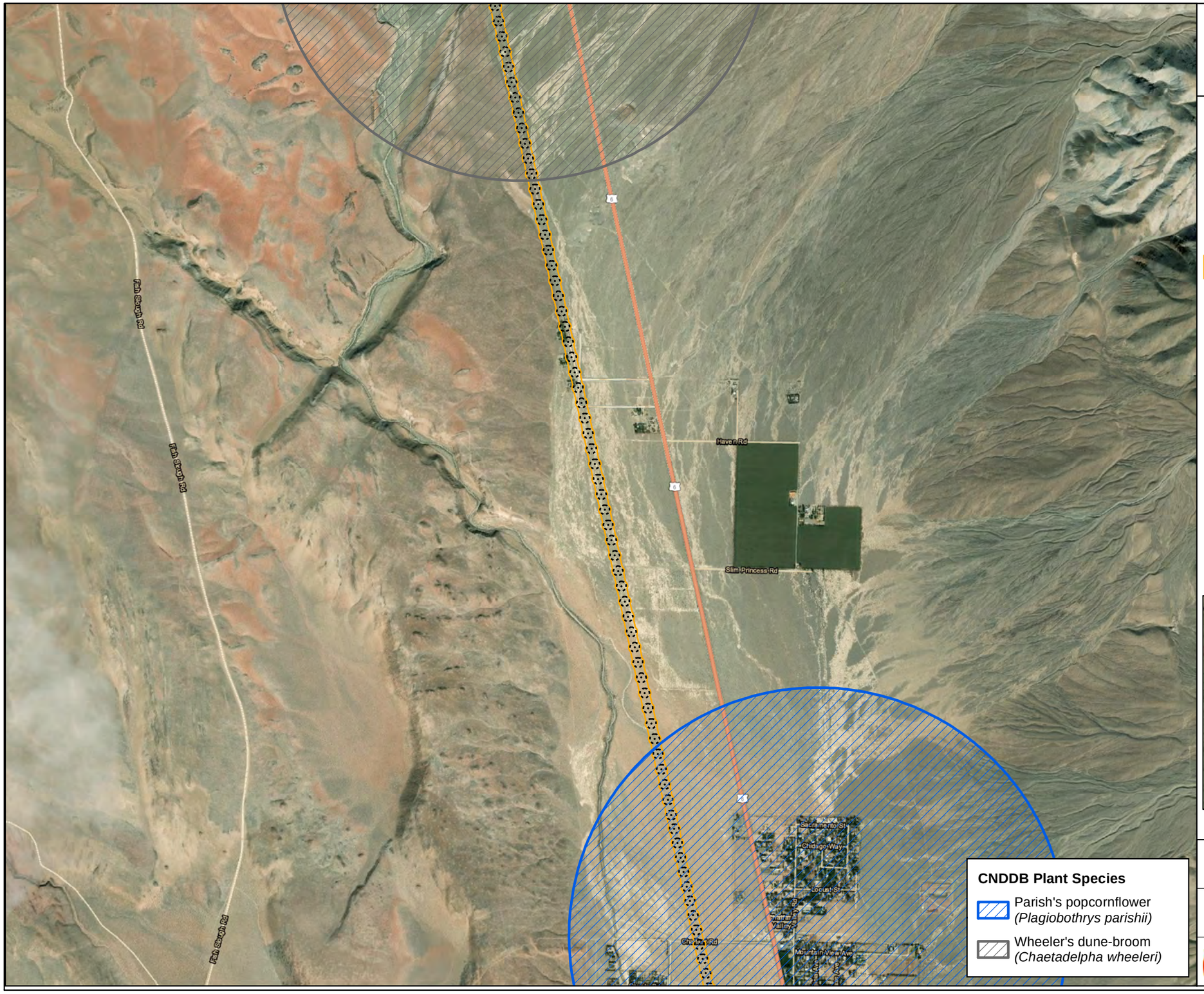

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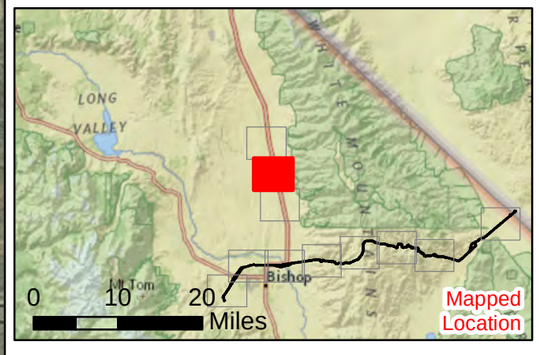

CNDDB Plant Species

- Parish's popcornflower *(Plagiobothrys parishii)*
- Wheeler's dune-broom *(Chaetadelpha wheeleri)*

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

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FIGURESET: **5.4-3**

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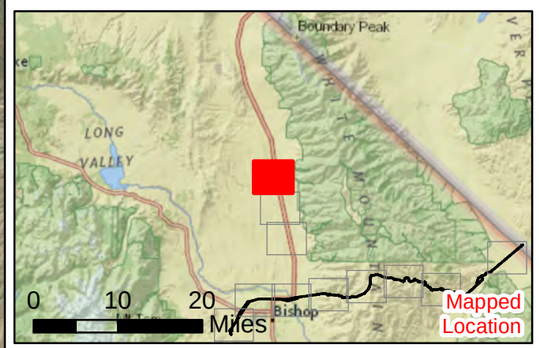

CONTROL-SILVER PEAK PROJECT

CNDDB PLANT SPECIES

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FIGURESET: **5.4-3**

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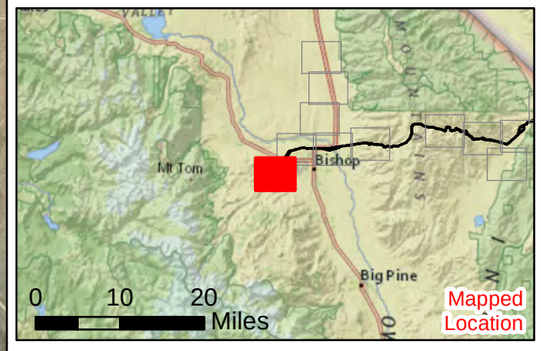

Sensitive Wildlife Locations

- loggerhead shrike *(Lanius ludovicianus)*
- northern sagebrush lizard *(Sceloporus graciosus graciosus)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

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FIGURESET: **5.4-4**

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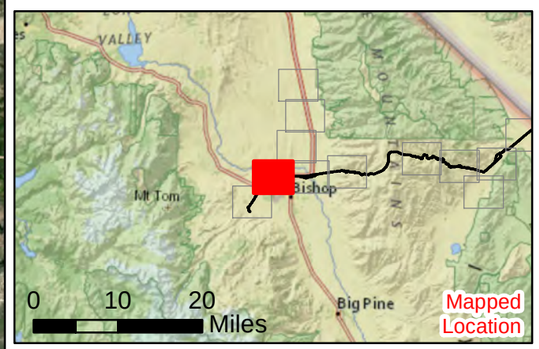

Sensitive Wildlife Locations

- loggerhead shrike *(Lanius ludovicianus)*
- yellow-headed blackbird *(Xanthocephalus xanthocephalus)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

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FIGURESET: **5.4-4**

\\corparcgis\Data\ArcGisData\GISPROJECTS_ENV T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-4-4_Sensitive Wildlife Species_CSP.mxd 03/16/2021 mgl01044
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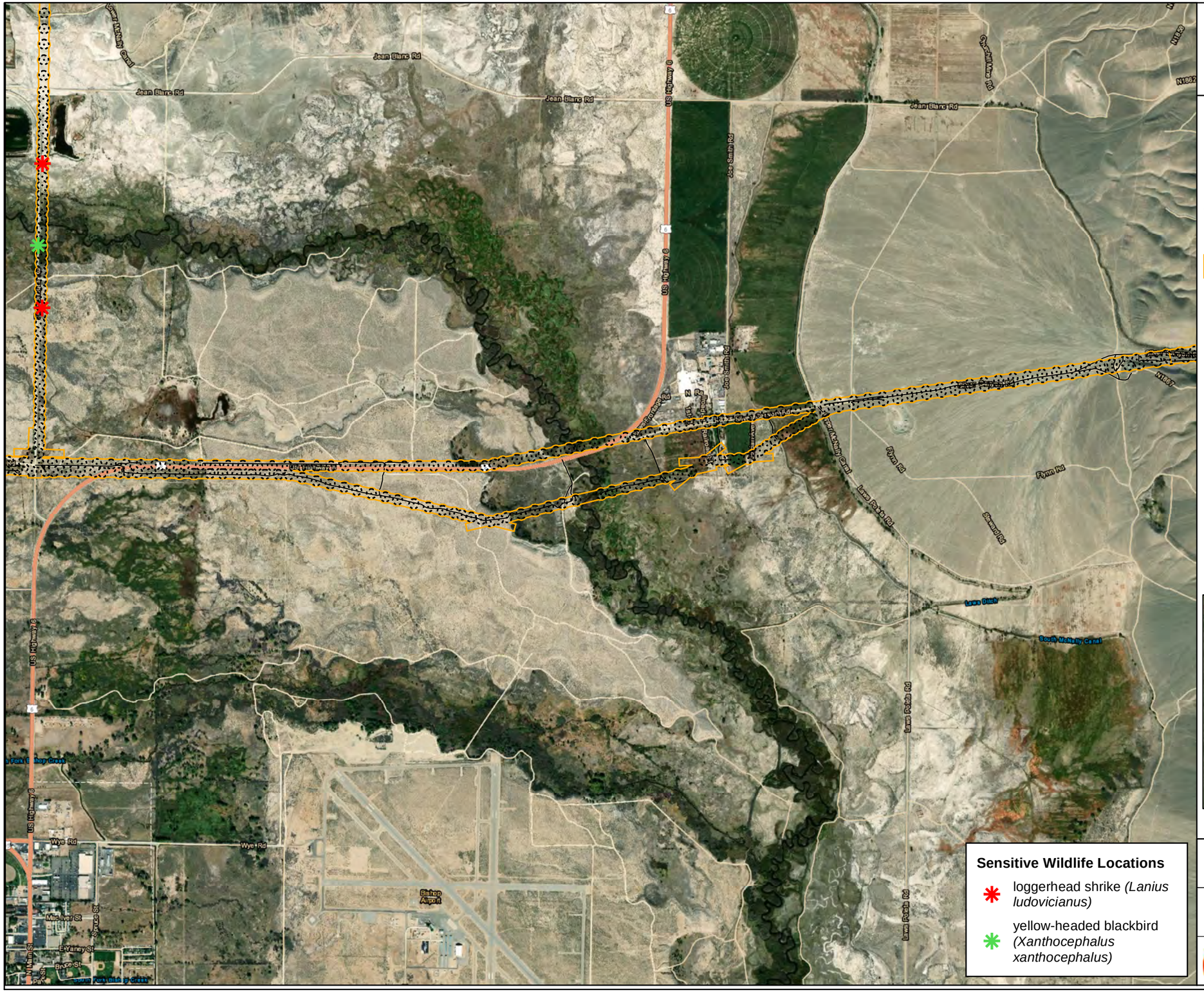

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Sensitive Wildlife Locations

- loggerhead shrike *(Lanius ludovicianus)*
- yellow-headed blackbird *(Xanthocephalus xanthocephalus)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-4**

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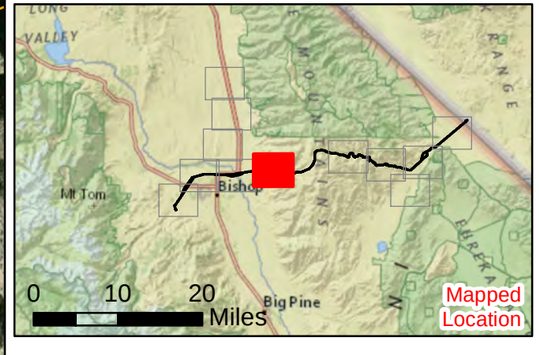

Sensitive Wildlife Locations

- desert bighorn sheep *(Ovis canadensis nelsonii)*
- yellow warbler *(Setophaga petechia)*

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SENSITIVE WILDLIFE SPECIES

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FIGURESET: **5.4-4**

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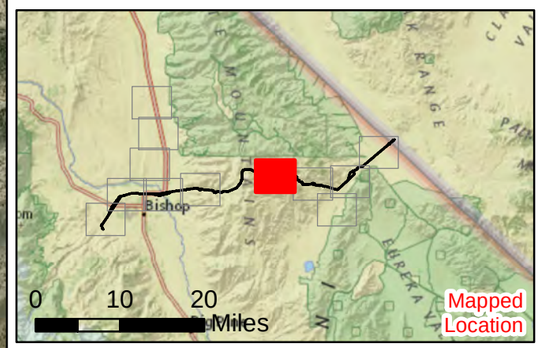

Sensitive Wildlife Locations

- Brewer's sparrow *(Spizella breweri)*
- gray-headed pika *(Ochotona princeps schisticeps)*
- prairie falcon *(Falco mexicanus)*

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SENSITIVE WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-4**

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Sensitive Wildlife Locations

- northern sagebrush lizard *(Sceloporus graciosus graciosus)*
- olive-sided flycatcher *(Contopus cooperi)*
- Virginia's warbler *(Oreothlypis virginiae)*

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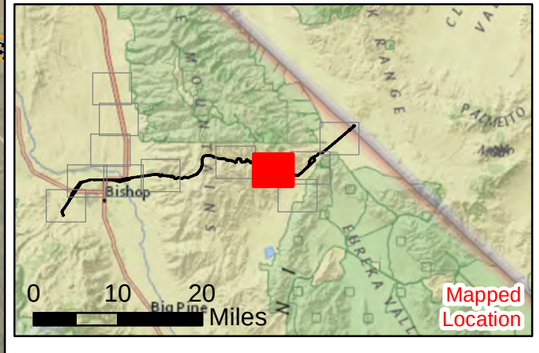

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SENSITIVE WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-4**

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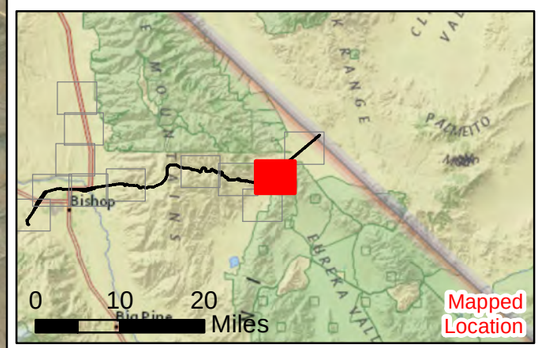

Sensitive Wildlife Locations

* black-tailed gnatcatcher *(Polioptila melanura)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

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FIGURESET: **5.4-4**

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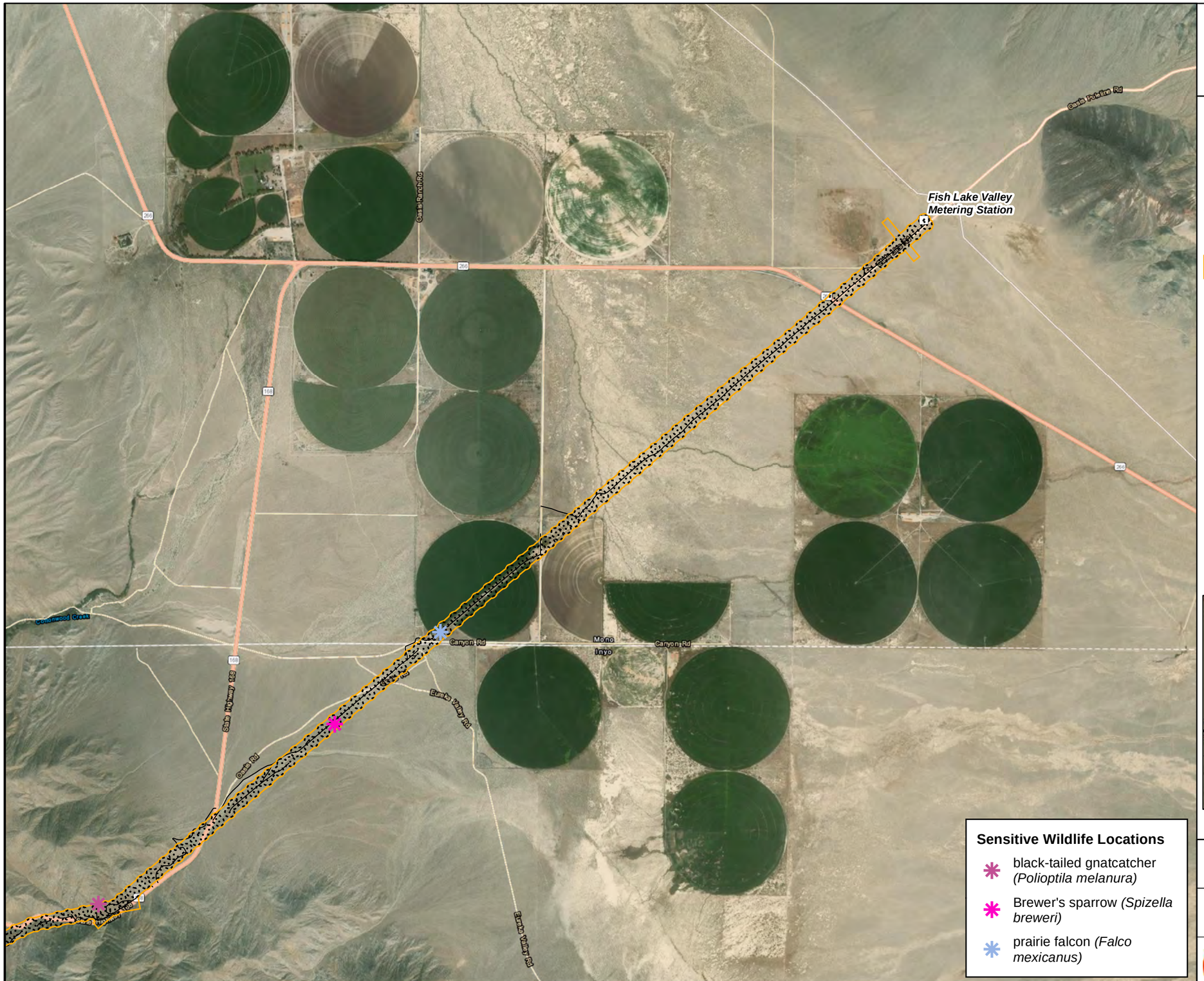

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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
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- SURVEY AREA

Page 8 of 12

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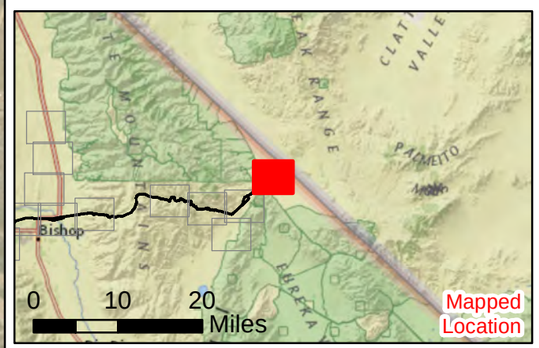

Sensitive Wildlife Locations

- black-tailed gnatcatcher *(Polioptila melanura)*
- Brewer's sparrow *(Spizella breweri)*
- prairie falcon *(Falco mexicanus)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-4**

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Sensitive Wildlife Locations

- prairie falcon *(Falco mexicanus)*

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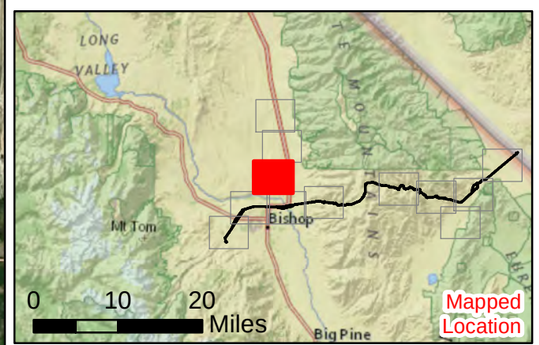

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-4**

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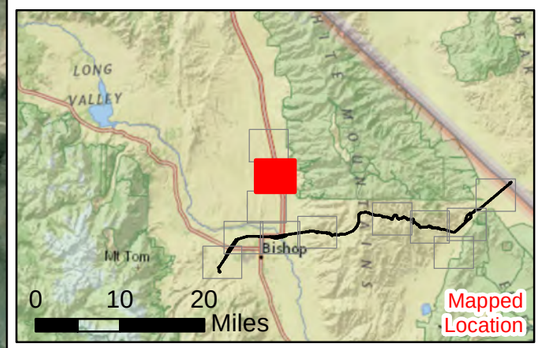

Sensitive Wildlife Locations

- Brewer's sparrow *(Spizella breweri)*
- loggerhead shrike *(Lanius ludovicianus)*
- Swainson's hawk *(Buteo swainsoni)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-4**

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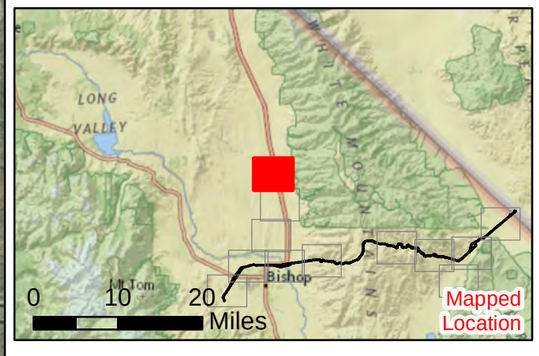

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

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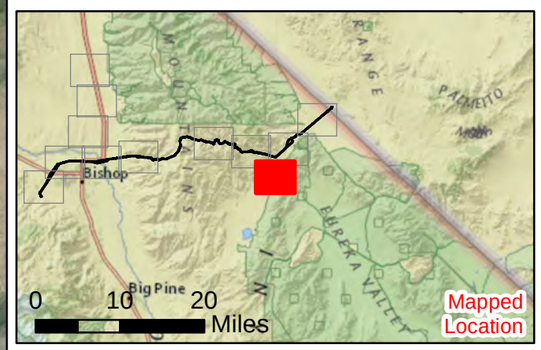

Sensitive Wildlife Locations

* prairie falcon *(Falco mexicanus)*

CONTROL-SILVER PEAK PROJECT

SENSITIVE WILDLIFE SPECIES

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FIGURESET: **5.4-4**

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LEGEND

- STRUCTURE LOCATION
- SUBSTATION LOCATION
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- SURVEY AREA

CNDDB Wildlife Occurrences

- California floater *(Anodonta californiensis)*
- Owens speckled dace *(Rhinichthys osculus ssp. 2)*
- Owens tui chub *(Siphateles bicolor snyderi)*
- northern leopard frog *(Lithobates pipiens)*

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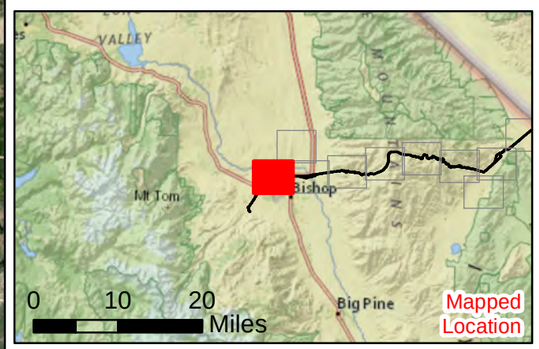

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

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FIGURESET: **5.4-5**

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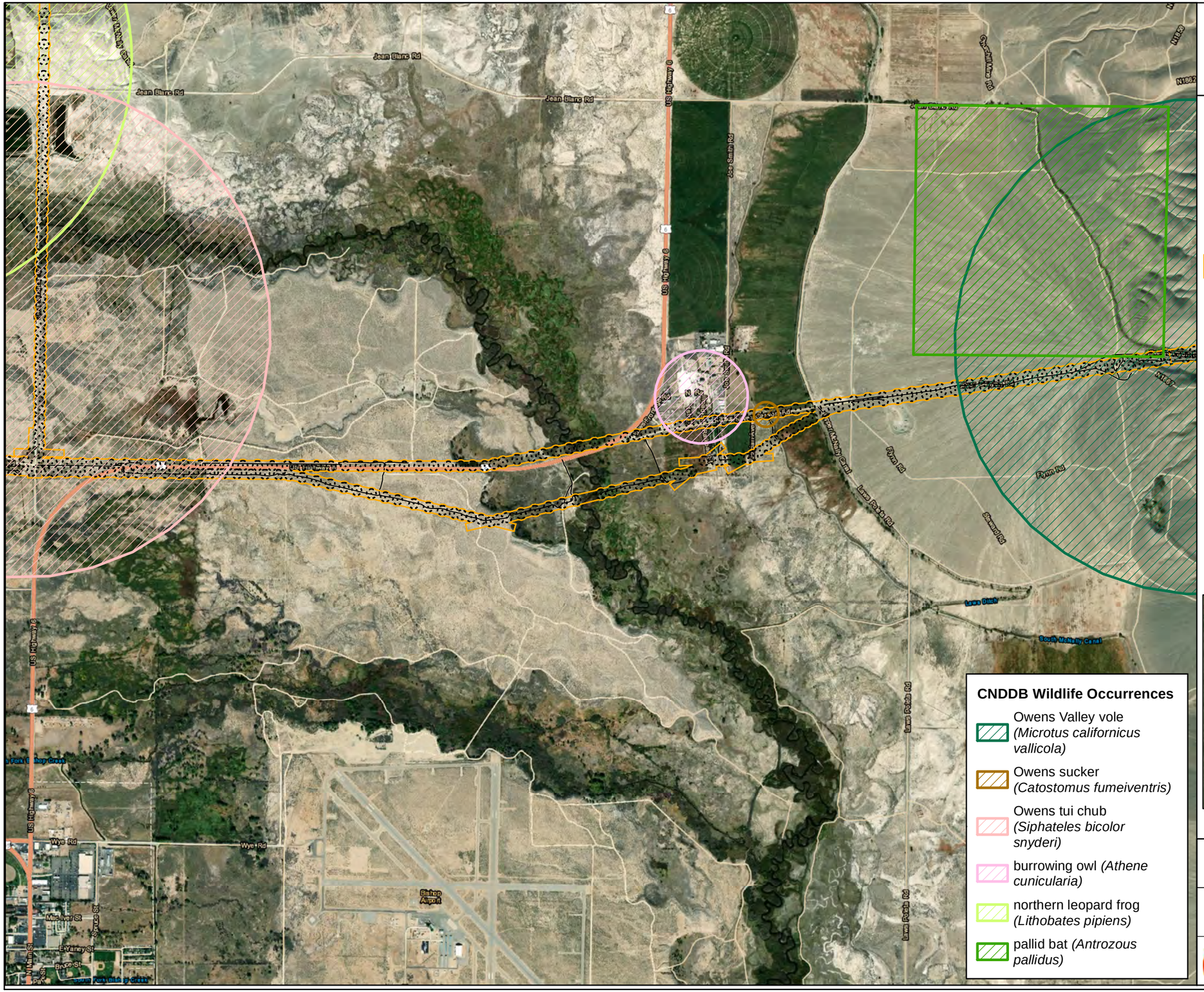

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- STRUCTURE LOCATION
- SUBSTATION LOCATION
- ACCESS ROADS
- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

CNDDB Wildlife Occurrences

- Owens Valley vole *(Microtus californicus vallicola)*
- Owens sucker *(Catostomus fumeiventris)*
- Owens tui chub *(Siphateles bicolor snyderi)*
- burrowing owl *(Athene cunicularia)*
- northern leopard frog *(Lithobates pipiens)*
- pallid bat *(Antrozous pallidus)*

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CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

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FIGURESET: **5.4-5**

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LEGEND

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- SUBSTATION LOCATION
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CNDDB Wildlife Occurrences

- American badger *(Taxidea taxus)*
- Owens Valley vole *(Microtus californicus vallicola)*
- panamint alligator lizard *(Elgaria panamintina)*
- Townsend's big-eared bat *(Corynorhinus townsendii)*
- pallid bat *(Antrozous pallidus)*

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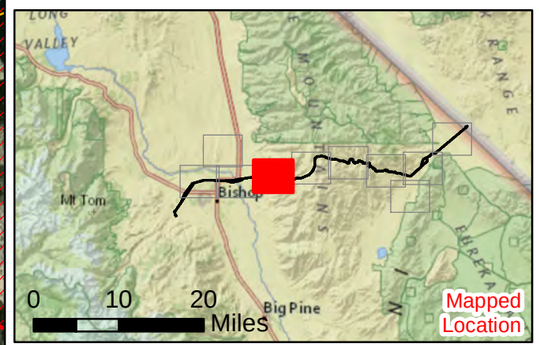

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

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FIGURESET: **5.4-5**

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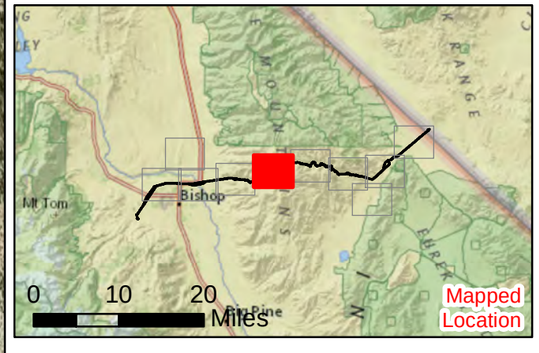

CNDDB Wildlife Occurrences

- American badger *(Taxidea taxus)*
- panamint alligator lizard *(Elgaria panamintina)*
- gray-headed pika *(Ochotona princeps schisticeps)*

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-5**

White Mountain Substation

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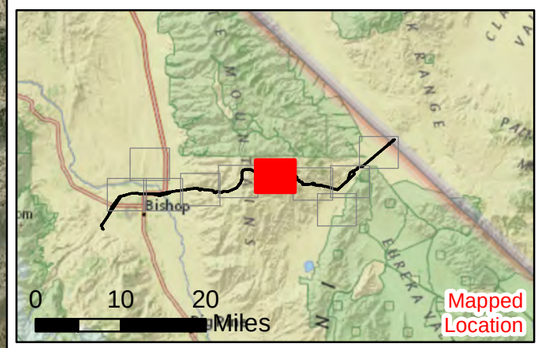

CNDDB Wildlife Occurrences

gray-headed pika
(Ochotona princeps schisticeps)

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-5**

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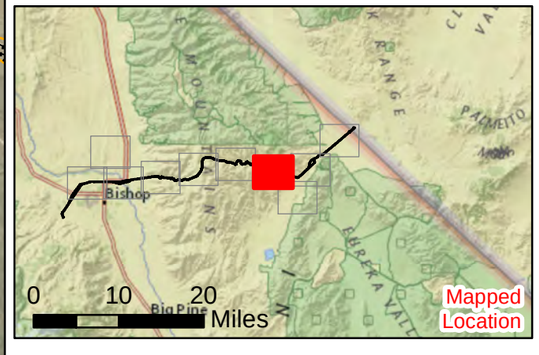

CNDDB Wildlife Occurrences

- Morrison bumble bee *(Bombus morrisoni)*
- hoary bat *(Lasiurus cinereus)*
- yellow-breasted chat *(Icteria virens)*

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-5**

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CNDDB Wildlife Occurrences

Morrison bumble bee
(Bombus morrisoni)

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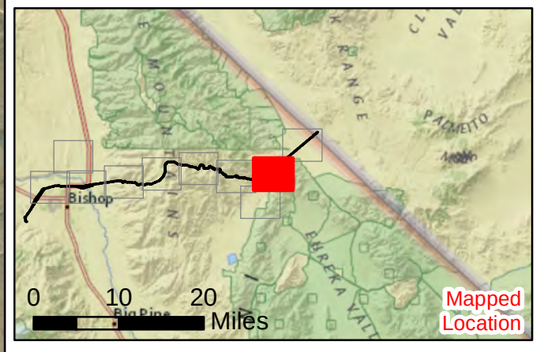

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-5**

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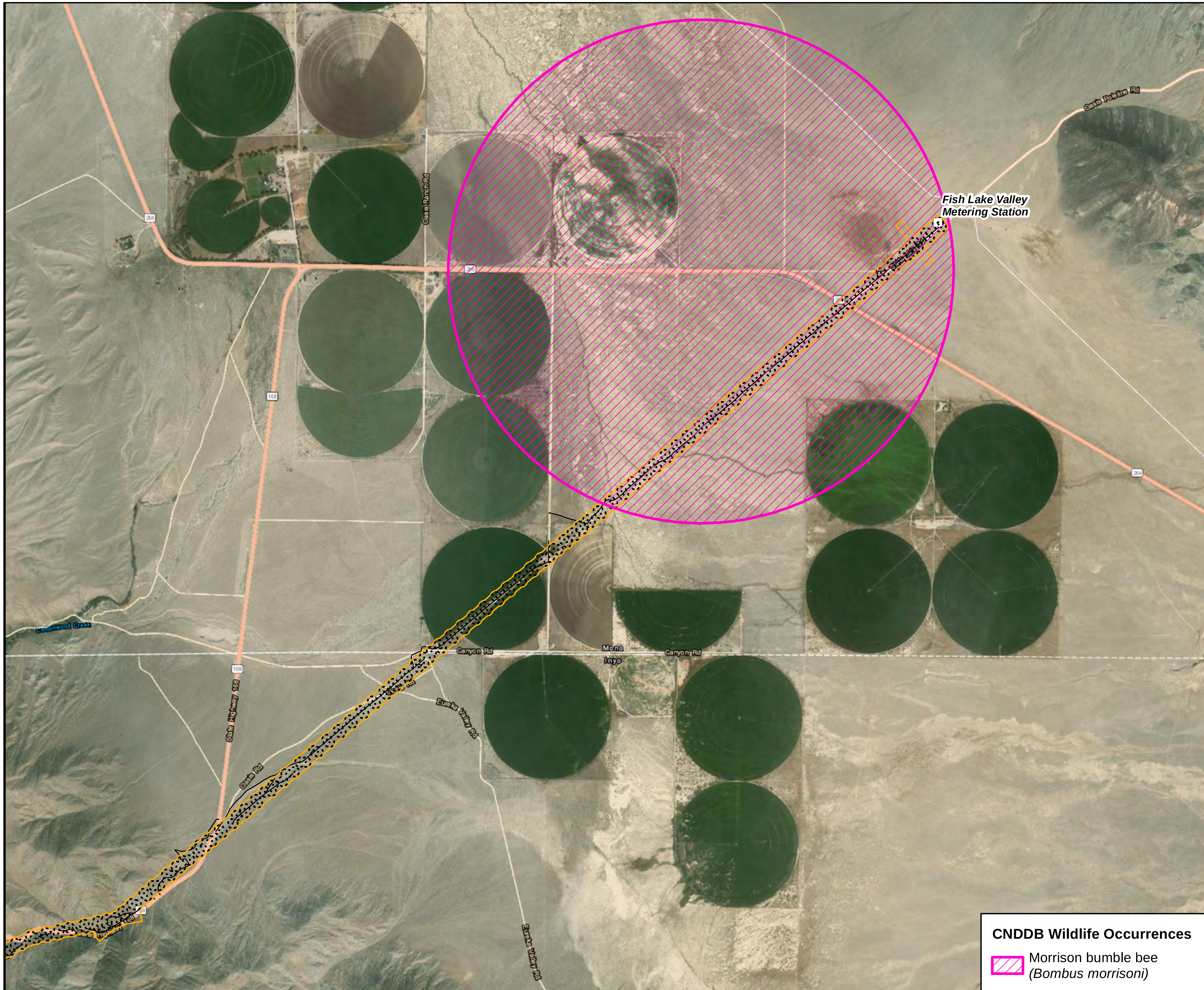

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- 100 FOOT RADIUS TOWER BUFFER
- SURVEY AREA

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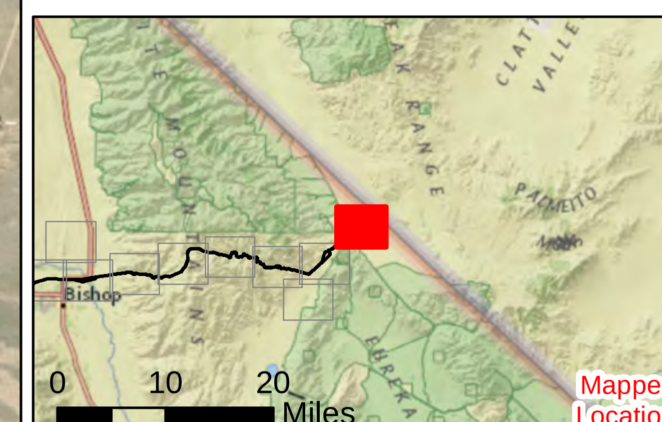

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

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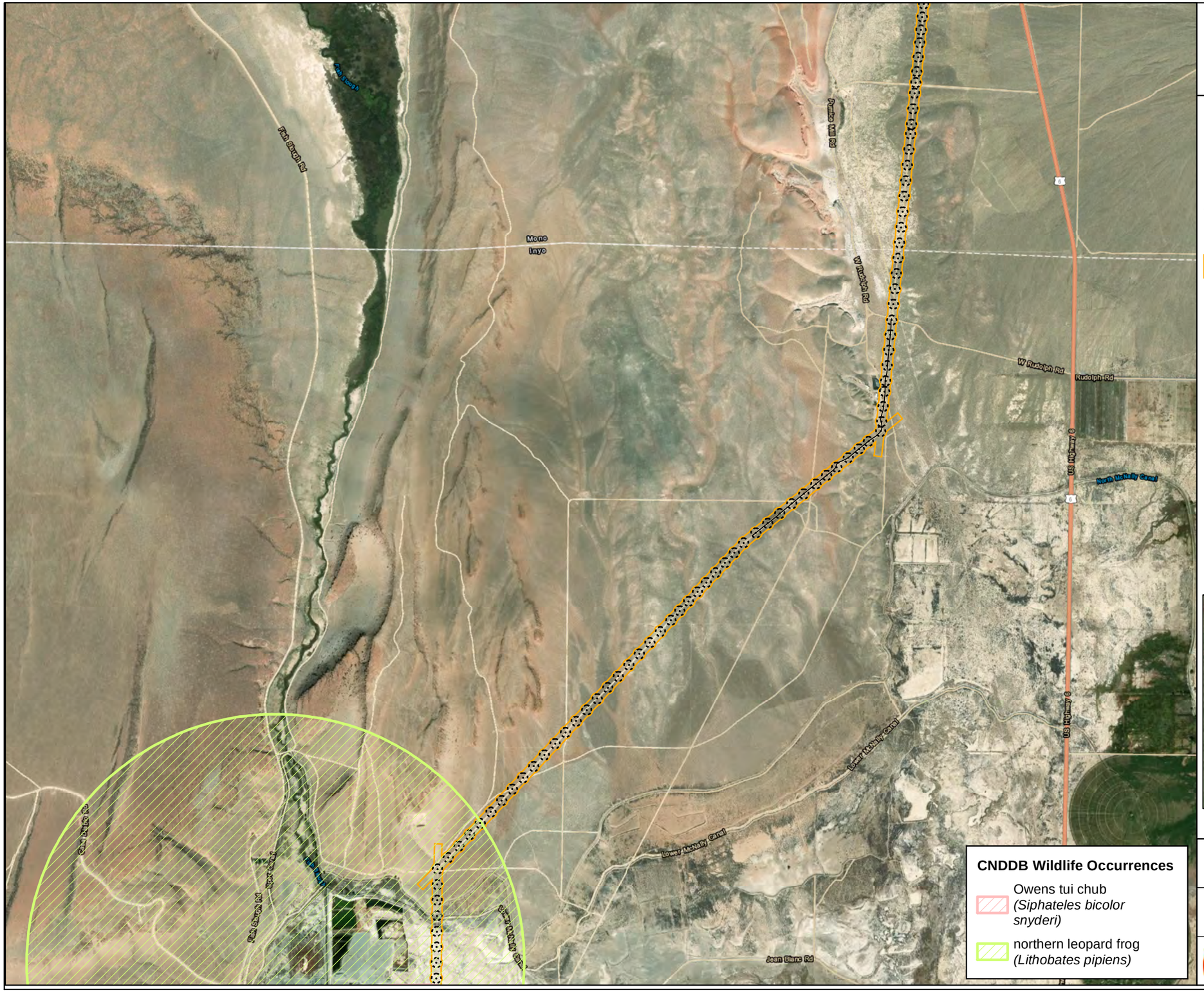

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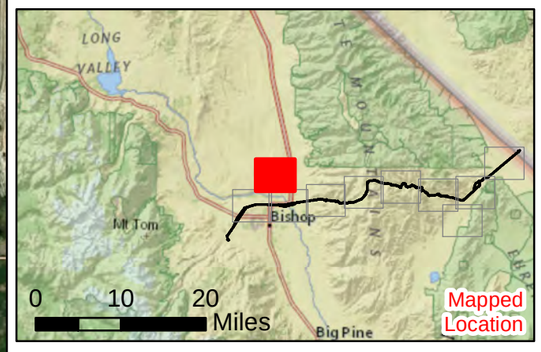

CNDDB Wildlife Occurrences

- Owens tui chub *(Siphateles bicolor snyderi)*
- northern leopard frog *(Lithobates pipiens)*

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-5**

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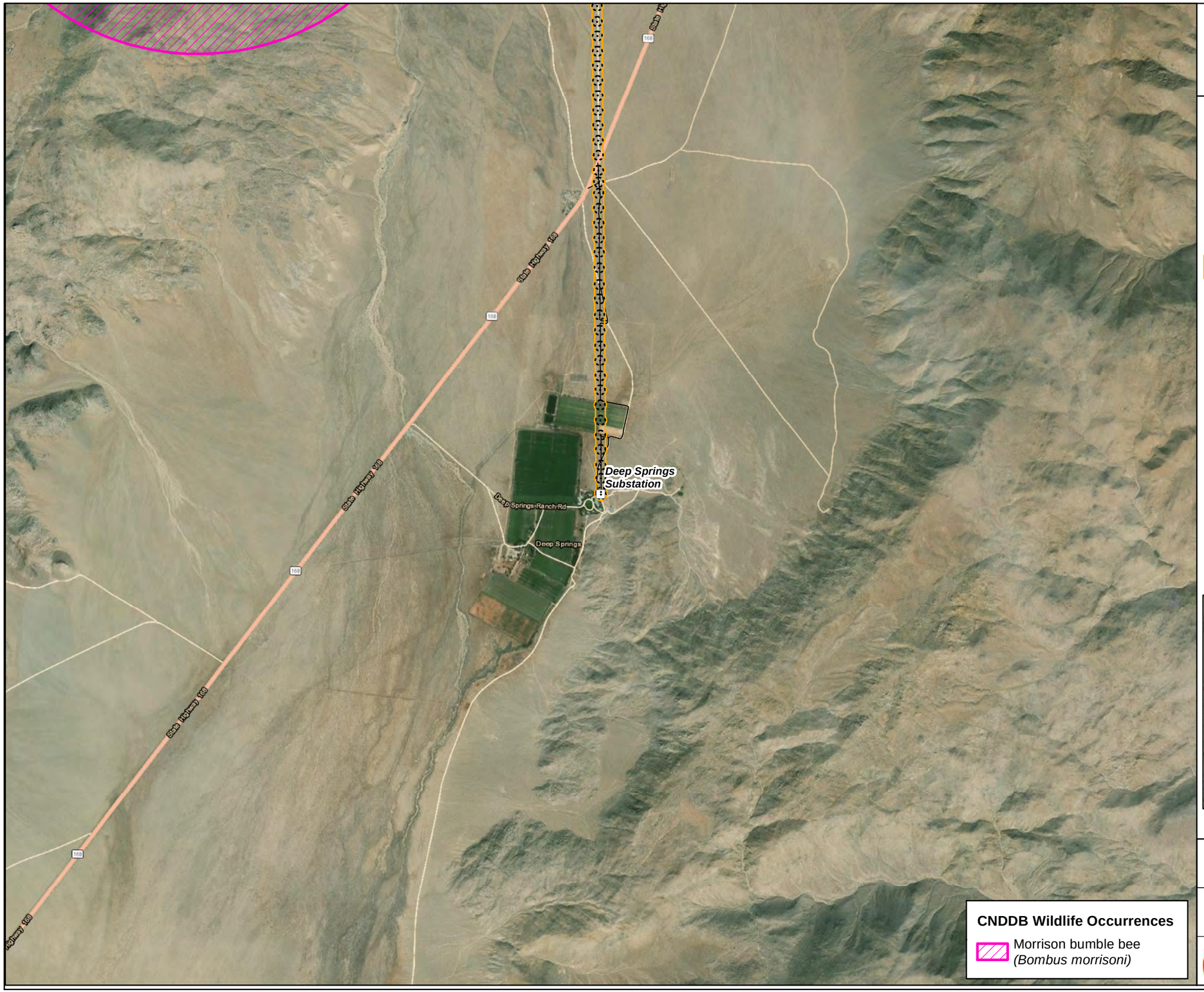

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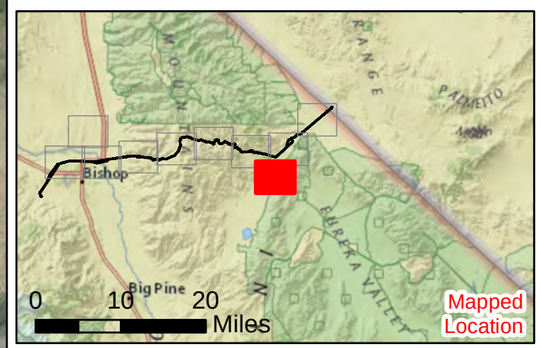

CNDDB Wildlife Occurrences

Morrison bumble bee
(Bombus morrisoni)

CONTROL-SILVER PEAK PROJECT

CNDDB WILDLIFE SPECIES

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **5.4-5**

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Coordinate System: NAD 1983 UTM Zone 11N

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Legend

- Substation
- CSP Alignment
- 5 mile radius

Critical Habitat

- Fish Slough milk-vetch

NOTES:
1) Critical Habitat data source:
US Fish and Wildlife Service Environmental Conservation Online System (ECOS)
https://ecos.fws.gov/ecp/.

0 5 10
Miles

CONTROL-SILVER PEAK PROJECT

CRITICAL HABITAT – FISH SLOUGH MILK-VETCH

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FIGURE: **5.4-6**

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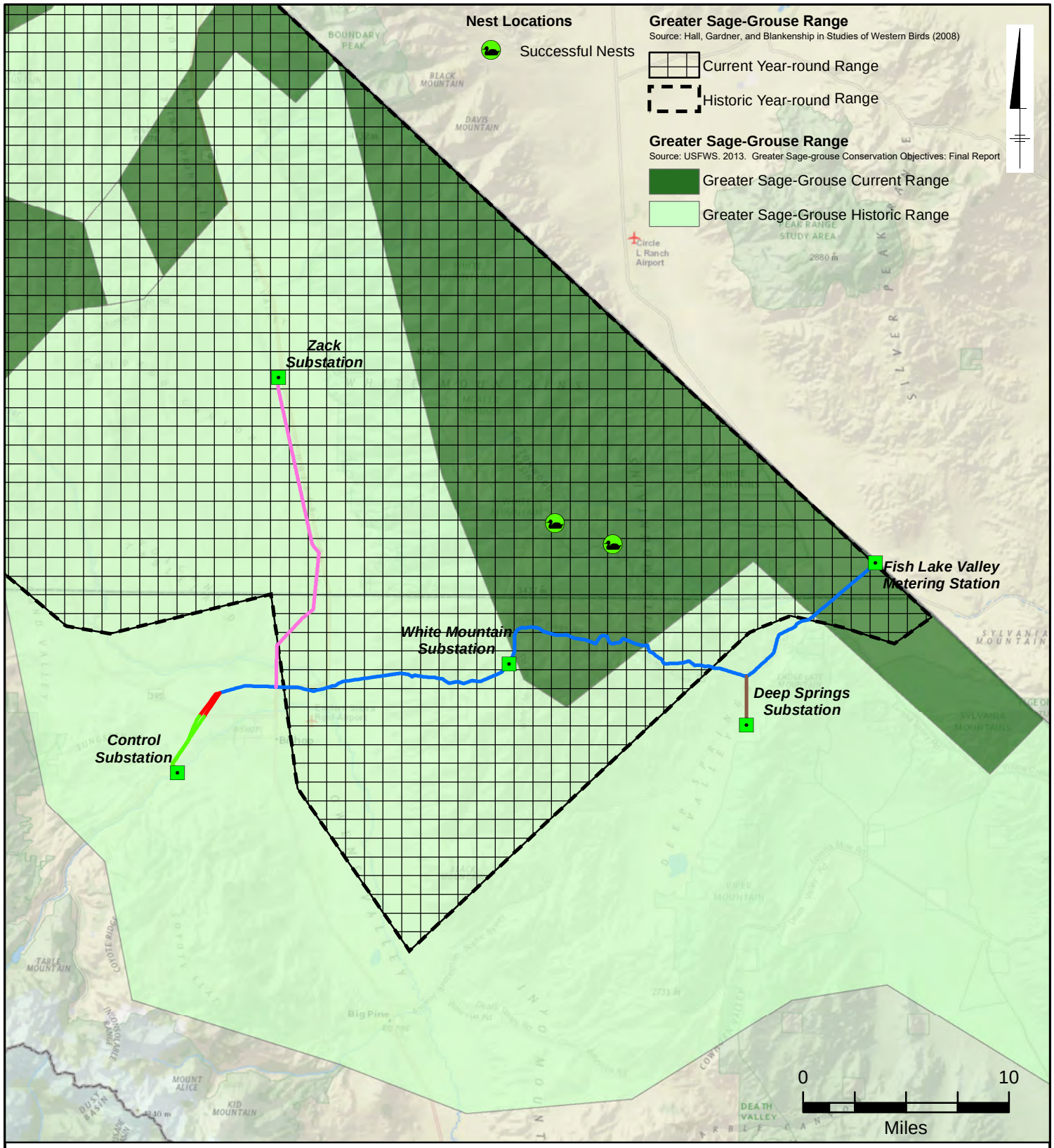

Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Counties

CONTROL-SILVER PEAK PROJECT

SAGE GROUSE: NEST LOCATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.4-7

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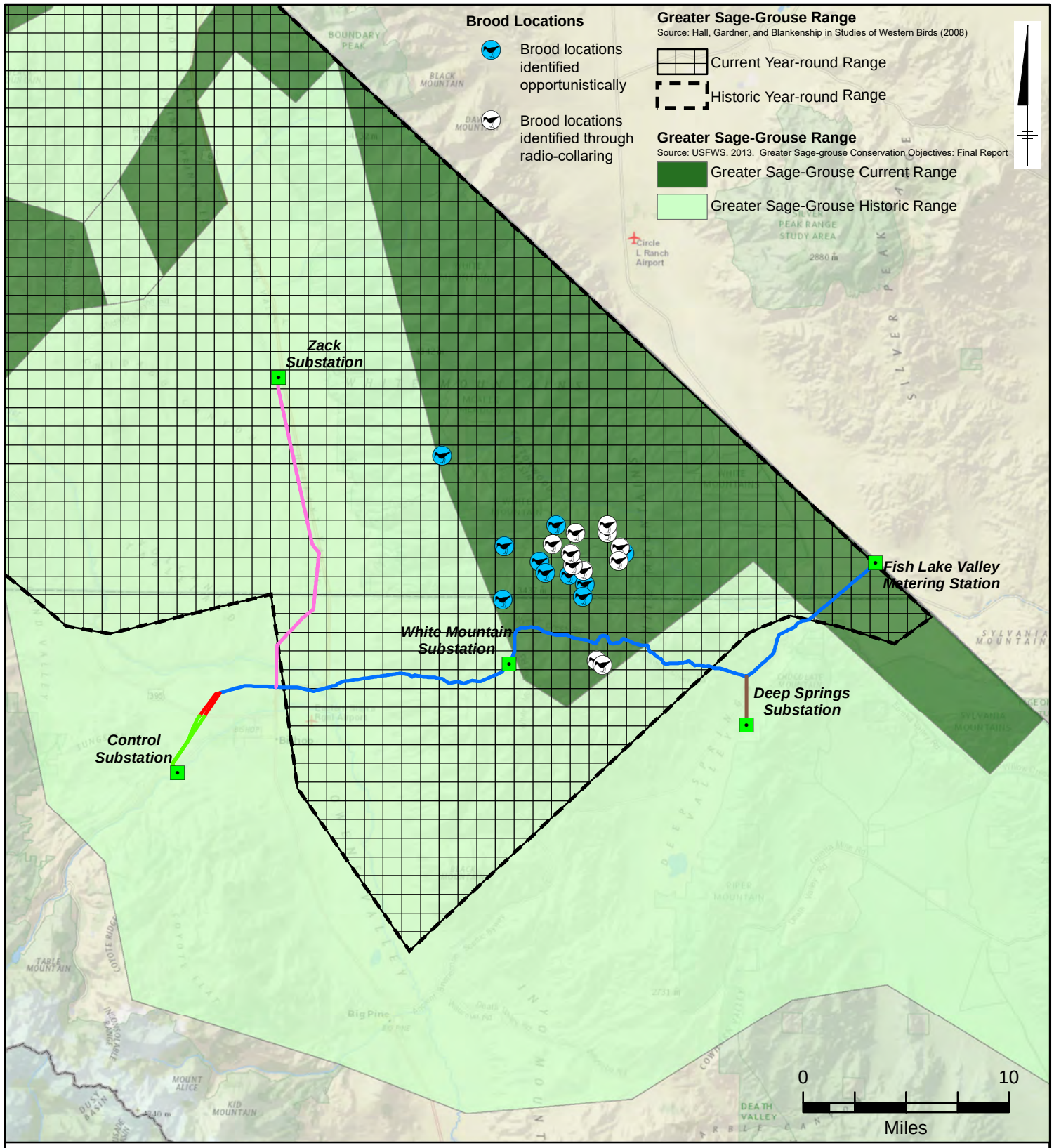

Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Counties

CONTROL-SILVER PEAK PROJECT

SAGE GROUSE: BROOD LOCATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.4-7

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5.5 Cultural Resources

This section identifies cultural resources in the CSP Project area, identifies applicable significance thresholds, assesses the CSP Project's impacts to these resources and their significance, and recommends measures to avoid or substantially reduce any effects found to be potentially significant. See Section 5.18, Tribal Cultural Resources, for a discussion on cultural resources potentially of importance to California Native American tribes.

Cultural resources are defined as any object or specific location of past human activity, occupation, or use that is identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into three categories: archaeological, building and structural, and traditional resources. Archaeological resources include both prehistoric and historic remains of human activity. Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails. Historic-era resources are typically those that are 50 years or older. Historic archaeological resources can consist of structural remains (e.g., concrete foundations), historic objects (e.g., bottles and cans), features (e.g., refuse deposits or scatters), and sites (e.g., resources that contain one or more of the aforementioned categories). Built environment resources range from historic buildings to canals, historic roads and trails, bridges, ditches, cemeteries, and electrical infrastructure, such as transmission lines, substations, and generating facilities. Traditional cultural resources are resources associated with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community. They are rooted in a traditional community's history and are important in maintaining the continuing cultural identity of the community.

Paleontology is the study of life from the geologic past that involves the analysis of plant and animal fossils, including those of microscopic size, and their relationships to existing environments and the chronology of the earth's history. A paleontological resource is a locality containing vertebrate, invertebrate, or plant fossils (e.g., fossil location, fossil-bearing formation, or a formation with the potential to bear fossils).

5.5.1 Environmental Setting

5.5.1.1 Cultural Background

The CSP Project corridor crosses through a variety of environmental settings through the western extent of the Great Basin geomorphic province. At its western end, the CSP Project begins at SCE's Control Substation, along Bishop Creek near the base of the Sierra Nevada escarpment. From Control Substation, the CSP Project continues for 42 miles in an east/northeast direction, crossing the northern end of Owens Valley and the White Mountains, and continuing across Fish Lake Valley until reaching the Fish Lake Valley Metering Station, near the California-Nevada border. Two smaller segments extend in a north/south direction off of this primary segment. Segment 4 (Zack Tap) extends north from Bishop along the far southeastern extent of the Volcanic Tablelands, and north along the western edge of Chalfant Valley, until reaching SCE's Zack Substation. Segment 5 (Deep Springs Tap) extends south through a portion of Deep Springs Valley, until reaching SCE's Deep Springs Substation. Given its linear extent, the CSP Project is located within a diverse range of terrain, elevation, and habitat.

5.5.1.1.1 Owens Valley

The western-most valley in the Great Basin, Owens Valley, is a deep, block faulted graben that was formed by the uplift of the Sierra Nevada range to the west, and the White-Inyo Mountains to the east. The valley is long and narrow, extending for roughly 80 miles between the Volcanic Tablelands in the

north and Owens Lake in the south and ranging between 5 and 20 miles in width. Elevation within the valley decreases gradually from north to south, at approximately 4,100 ft amsl at Bishop, to approximately 3,500 ft amsl at Owens Lake. Surface water in Owens Valley is primarily fed by the numerous streams flowing out of the surrounding mountain ranges, the principal waterway being Owens River. These streams helped feed a large wetland in the Bishop area, that existed prior to historic-era water diversion activity (Basgall and Delacorte 2012:2-3). Alluvial deposition, both as fan formations out of the mountains and floodplains associated with Owens River, form the primary depositional context of the CSP Project area within Owens Valley.

5.5.1.1.2 Chalfant Valley and the Volcanic Tablelands

Chalfant Valley extends northwards from Owens Valley until reaching the Hammil Valley, with elevation ranging from 4,100 ft amsl at the southern end to approximately 4,540 ft amsl at the northern extent. Along with Benton Valley, these landforms form the northern portion of the Bishop structural basin, to the west of the White Mountains (Hollet et al. 1991: B25). The CSP Project travels along the far western extent of Chalfant Valley, generally parallel to the eastern extent of the Volcanic Tablelands. The Volcanic Tablelands is a vast plateau, covered by the Bishop Tuff formation which erupted from the Long Valley caldera, and flowed to several miles outside present-day Bishop, ca. 730,000 years ago. The upper surface of the tuff is cut by a series of north-south trending normal faults, which have produced a series of shallow canyons across the landform (Norris and Webb 1990:101-102).

5.5.1.1.3 White Mountains

The White-Inyo Mountain Range represents the westernmost range of the Basin and Range geomorphic province and the entire range spans a length of approximately 110 miles. The geology of the White Mountains is built on sedimentary formations from the Pre-Cambrian and Cambrian (e.g., Wyman, Reed, Deep Springs, Campito, Poleta, and Harkless Formations). Uplift of the range has resulted in the faulting and folding of these sedimentary formations and subsequent plutonic activity has resulted in multiple granitic intrusions from the Jurassic and Cretaceous Periods. Tertiary Period volcanic activity has also resulted in the deposition of olivine basalt and tuff in portions of the northern White Mountains (McKee and Nelson 1967; Nelson 1966; Nelson et al. 1991:43-45).

5.5.1.1.4 Deep Springs Valley

Deep Springs Valley is a closed intermontane basin, surrounded entirely by the White-Inyo Mountains. The valley is relatively small, measuring approximately 15 miles in a north/south direction, and reaching a maximum width of 5 miles. The major geographic feature within Deep Springs Valley is Deep Springs Lake, an ephemeral playa located in the southeastern portion of the basin. While now dry, a large lake formerly filled at least the southern half of the valley (Jones 1965:A5). This former lake is likely to have experienced its last major expansion during the Holocene, though estimated dates of the expansion range between 10,000 years Before Present (B.P.) and 1,000 years B.P. (Delacorte 1990:19). As with other intermontane valleys in the Great Basin, the Deep Springs Valley floor is comprised of alluvium resulting from erosion of the surrounding ranges.

5.5.1.1.5 Fish Lake Valley

The far eastern portion of the CSP Project crosses the floor of Fish Lake Valley for approximately 3.5 miles until reaching the Nevada border, less than a mile from the base of the Silver Peak Mountain Range. Fish Lake Valley, which measures over 30 miles in total length, is an alluviated structural basin, primarily of internal drainage, and one of several tectonically depressed, block-faulted basins in the western Great Basin (Sawyer 1990:4). At the base of the White Mountains, the western boundary of the valley is marked

by the Fish Lake Valley Fault Zone, which is a northern continuation of the regionally significant Death Valley-Furnace Creek Fault Zone. The CSP Project crosses the southern portion of the valley, which consists of a playa/alluvial flat (Sawyer 1990:5), at elevations ranging between 5,040 and 5,090 ft amsl.

5.5.1.2 Vegetation Zones

The different vegetation communities identified within the CSP Project area are traditionally characterized by the elevation at which they are supported. Within the White Mountains and adjacent valleys, these consist of the Desert Scrub community (4,000-6,500 ft amsl), the Pinyon-Juniper Woodland community (6,500-9,500 ft amsl), and the Subalpine community (9,500-11,500 ft amsl; Spira 1991).

5.5.1.2.1 Desert Scrub Community (4,000-6,500 ft amsl)

The Desert Scrub vegetation community, which consists primarily of low, perennial shrubs, is encountered within all Project valleys, as well as along lower elevations within the White Mountains. Overall, the majority of the CSP Project area (approximately 63%) occurs at elevations that support vegetation associated with the Desert Scrub community. Typical shrubs within this community includes shadscale (*Atriplex confertifolia*), sagebrush (*Artemisia* spp.), creosote bush (*Larrea tridentata*), Nevada ephedra (*Ephedra nevadensis*), rabbitbrush (*Ericameria nauseosa* [*Chrysothamnus nauseosus*]), and spiny hopsage (*Grayia spinosa*). Typical herbs, both annual and perennial, include Indian ricegrass (*Achnatherum hymenoides*), needlegrass (*Stipa speciosa*), chia (*Salvia columbariae*), galleta (*Hilaria jamesii*), buckwheat (*Eriogonum* spp.), Virgin River brittlebush (*Encelia virginensis*), and evening-primrose (*Oenothera* spp.; Delacorte 1990; Spira 1991).

Contemporary mammals that reside within the Desert Scrub community include pronghorn antelope (*Antilocapra americana*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), kit fox (*Vulpes macrotis*), bobcat (*Lynx rufus*), badger (*Taxidea taxus*), weasel (*Mustela frenata*), skunk (*Mephitis mephitis*), cottontail rabbit (*Sylvilagus nuttallii*), black-tailed jackrabbit (*Lepus californicus*), ground squirrel (*Spermophilus* spp.), pocket gopher (*Thomomys* spp.), and numerous smaller mammals. A wide variety of reptiles, including at least eight species of lizard and nine species of snake are present within the valley floors associated with the Desert Scrub community (Macey and Papenfuss 1991).

5.5.1.2.2 Pinyon-Juniper Woodland Community (6,500-9,500 ft amsl)

Approximately 29% of the CSP Project area occurs at elevation supportive of the Pinyon-Juniper Woodland community, occurring along the western and eastern slopes of the White Mountains. Vegetation within this community is characterized by open woodlands of Utah juniper (*Juniperus osteosperma*) and pinyon pine (*Pinus monophylla*). Pinyon pines typically grow in shallow-soiled, rocky hillsides, while Junipers grow in both rocky and deeper alluvial soils. The trees are often found in mixed stands, though individual pinyon stands occur at higher elevations, and individual juniper stands can be found at lower elevations. The understory of this community consists predominantly of perennial woody shrubs, including Great Basin sagebrush (*Artemisia tridentata*), broom sagebrush (*Artemisia nova*), curly rabbitbrush (*Chrysothamnus viscidiflorus* ssp.), green ephedra (*Ephedra viridis*), and bitterbrush (*Purshia tridentata* and *Purshia glandulosa*). Perennial herbs, including wildrye (*Elymus triticoides*), bluegrass (*Poa* spp.), junegrass (*Koeleria macrantha*), and squirreltail (*Elymus elymoides* [*Sitanion hystrix*]) are also present (Delacorte 1990; Spira 1991).

Many of the smaller mammals associated with the Desert Scrub community are supported by the underbrush of the Pinyon-Juniper Woodland community. Large ungulates, including mule deer (*Odocoileus hemionus*) and sheep (*Ovis canadensis*) are found at this elevation, in addition to species such as mountain lion (*Felis concolor*) and porcupine (*Erethizon dorsatum*). A less diverse reptilian and

amphibian community is present than within the lower elevations, but at least six species of lizard and snake are supported at higher elevations in the White Mountains (Macey and Papenfuss 1991).

5.5.1.2.3 Subalpine Community (9,500-11,500 ft amsl)

A relatively small percentage (approximately 8%) of the CSP Project area occurs at this elevation, as the CSP Project route crosses a ridgeline of the White Mountains. The subalpine zone contains areas dominated by both sagebrush and open forest. Vegetation in this upper sagebrush community includes many of the shrubs found in the understory of the Pinyon-Juniper woodland, in addition to species such as dwarf sagebrush (*Artemisia arbuscula*), mountain-mahogany (*Cercocarpus ledifolius*), and wax currant (*Ribes cereum*). While sagebrush-dominated communities occur primarily on sandstone and granitic soils, stands of open Bristlecone Pine (*Pinus longaeva*) grow in areas with a dolomite substrate. Stands of Limber Pine (*Pinus flexilis*) can grow with Bristlecone or as separate stands, in either soil matrix (Delacorte 1990; Spira 1991).

The range of many of the mammalian species previously discussed extend to elevations associated with the upper extent of the CSP Project area. Notable lagomorphs present within the Subalpine community include white-tailed hares (*Lepus townsendii*) and pika (*Ochotona princeps*), and additional mammals include yellow-bellied marmot (*Marmota flaviventris*) and marten (*Martes americana*). Reptiles are much less common at subalpine elevations.

5.5.1.2.4 Riparian Community

Aside from the elevational-controlled vegetation communities, distinct habitat occurs within riparian settings within the CSP Project area, the most prominent of which occur adjacent to the Owens River, in the lowland Owens Valley, and within Wyman Canyon, on the eastern side of the White Mountains. Fremont cottonwood (*Populus fremontii*), willow (*Salix* spp.), water birch (*Betula occidentalis*), black oak (*Quercus kelloggii*), sedge (*Carex* spp.), rush (*Juncus* spp.), cattail (*Typha* spp.), and tule (*Schoenoplectus* [*Scirpus*] *acutus*) are found in valley riparian or wetland settings. Stands of wild rose (*Rosa woodsii*), willow, and cottonwood occur within Wyman Canyon, the latter of which sometimes form dense thickets. In addition to the wide variety of mammalian and reptilian fauna that utilize riparian settings in the CSP Project area, the permanent water sources would support a diverse range of waterfowl.

5.5.1.3 Prehistoric Background

5.5.1.3.1 Terminal Pleistocene/Early Holocene (Pre-7,500 B.P.)

Evidence for occupation in the terminal Pleistocene and early Holocene in the region is relatively rare, and is represented by a small number of sites containing fluted and non-fluted, concave-base points. Obsidian hydration measurements from at least one such site is consistent with an age over 9,000 years (Basgall and Delacorte 2012:2-7). This period is most commonly typified by the CSP Projectile points associated with the Western Stemmed Tradition, which includes both the Silver Lake and Lake Mohave morphologies in the Great Basin. Lithic assemblages associated with Early Holocene sites (abundant bifaces, unifacial tools, crescents, core tools) are consistent with the long-term curation and transport of material. Early Holocene populations are typically interpreted as being small groups, that had high levels of residential mobility and utilized a diverse range of resources. This strategy was practiced at least in part, due to the increasing unpredictability in resource populations and locations caused by the early Holocene climate shifts, including the drying of lake basins.

5.5.1.3.2 Middle Holocene (7,500-3,500 B.P.)

By the end of the early Holocene and into middle Holocene, projectile points included bifurcate, indented-base dart points and a variety of side- and corner-notched projectile points (Basgall and Delacorte 2012:2-8; Basgall and Giambastiani 1995; Gilreath and Hildebrandt 1997; Thomas 1981). The variety of projectile point types identified in the region is in contrast to initial chronologies (e.g., Bettinger and Taylor 1974), which identified middle Holocene assemblages primarily by the presence of Little Lake series projectile points. Settlement strategies in the middle Holocene are still characterized by a high degree of mobility, and are often focused around riparian areas. An increase in the use of ground stone implements has been interpreted as a response to the increased warming and drying trends associated with the Altithermal (Antevs 1948), which forced populations to increase their diet breadth and obtain lower value resources such as seeds (e.g., Grayson 1993; Warren 1980, 1984). Archaeologically, the middle Holocene is the most underrepresented period in the region. This is likely related to taphonomic processes and geomorphological factors such as the absence of middle Holocene landforms in the Owens Valley, which have been buried by younger alluvium, and therefore have buried sites from this time period (Basgall and Delacorte 2012:2-8).

5.5.1.3.3 Newberry Period (3,500-1,350 B.P.)

The Newberry period is marked by the presence of Elko and Humboldt Basal-notched projectile points, and the increased abundance of ground stone implements. The early Newberry (3,500-ca. 2,000 B.P.) is largely viewed as a continuation of the middle Holocene, characterized by smaller archaeological deposits, with little evidence for house structures, indicating a similar degree of mobility (Basgall and Delacorte 2012:2-9). Intensive biface manufacture at large obsidian quarries, such as Casa Diablo and Coso, also began during this time (Gilreath and Hildebrandt 1997). As the Newberry period progressed, groups appear to have utilized a greater range of resources and adopted more regular, wide-ranging foraging rounds. Archaeological sites from the late Newberry period have produced significant midden accumulations, diverse artifact assemblages (including variability in obsidian source material), and multiple house structures, which are interpreted as repeatedly occupied, residential base camps (Basgall and Delacorte 2012:2-9). The wide-ranging movements suggest broadly overlapping populations with a uniform adaption throughout the region and Delacorte (1991) suggests these adaptations were similar between Owens Valley, Deep Springs Valley, and Fish Lake Valley. In this view, settlement patterns were characterized by widely separated base camps that were seasonally occupied by groups of 20 to 30 individuals, with smaller, specialized, temporary camps used by smaller groups for logistical trips in the surrounding lowlands (Delacorte 1991:346).

5.5.1.3.4 Haiwee Period (1,350 - 650 B.P.)

The Haiwee period is marked by an increase in regional population size and by a significant intensification in land-use strategies. Data from numerous archaeological sites (e.g., Basgall and Delacorte 2003; Basgall and Giambastiani 1995; Bettinger 1989, 1991; Delacorte 1990, 1999) provide evidence for increases in diet breadth, the development and use of more labor-intensive technologies, and the use of environments that had been previously ignored or underutilized (Basgall and Delacorte 2012:2-9). Technologically, the Haiwee period is marked by the presence of Rose Spring and Eastgate series projectile points, indicating the appearance of bow and arrow technology. Expedient flake tools are more commonly found in Haiwee period sites than the formalized bifaces typical of the Newberry period. Ground stone tools are also more casual, and less frequently cached than the preceding period. Variations in residential mobility begin to appear between Owens Valley, Deep Springs Valley, and Fish Lake Valley during this period. Changes in regional land use strategy during the Haiwee period are characterized by a decrease in the use of specialized, logistical hunting camps, an increase in the intensive

utilization of pinyon, and the occupation of high-altitude alpine village sites in the White Mountains (Bettinger 1991; Delacorte 1991:346).

5.5.1.3.5 Marana Period (650 B.P.-Contact)

The Marana period is marked by the presence of both Desert Side-notched and Cottonwood series projectile points, as well as the appearance of Owens Valley Brown Ware pottery. Many of the trends established in the Haiwee period continue through the end of the late prehistoric, including the continued intensification in resource use and diet breadth. One example of this is the incorporation of fish and shellfish, which were either minimally utilized or ignored in prior periods. Larger quantities of marine shell beads began to be imported and locally-produced steatite beads also appear in the archaeological record. Marana period sites are found in abundance and are widely distributed throughout the various regional habitats. Settlement systems in the Marana period are characterized by significant trans-valley movements in an east/west direction. These rounds, which were not as apparent in earlier periods, were largely dictated by the location of pinyon camps that would often double as wintering locations (Basgall and Delacorte 2012:10-9). When seed or pine nut supplies were ample, large stores of material could be cached for significant periods of time. In years of poor output, groups would be forced to travel farther distances in order to obtain enough food for the winter.

5.5.1.4 Ethnographic Background

5.5.1.4.1 Owens Valley Paiute

The CSP Project area is located within the ethnographic territory of the Owens Valley Paiute, an area that spanned the length of Owens Valley, from Mammoth Lakes and Benton in the north, to Owens Lake in the south, and which extended from the Sierra Nevada in the west, across the White-Inyo Mountains, to Fish Lake Valley in the east. The Owens Valley Paiute are bordered by the Northern Paiute to the north, by Shoshonean groups to the east and southeast, the Miwok and Monache to the west, and the Tübatülabal to the southwest (Steward 1933:235-236). Despite the expanse of their territory, the Owens Valley Paiute retained a relatively large degree of cultural homogeneity. The Owens Valley Paiute, along with their northern neighbors, the Northern Paiute, speak dialects of Mono, which comprise a division of the Western Numic segment of the Numic branch of the Uto-Aztecan language family (Liljeblad and Fowler 1986:412). Different, though mutually intelligible, dialects were spoken throughout their territory, including at locations such as Owens Lake, Fish Springs, Big Pine, Deep Springs Valley, Bishop, and Round Valley (Steward 1933:236). The majority of population estimates for the Owens Valley Paiute number between 1,000 and 2,000 individuals at the time of Euroamerican contact.

Within the Owens Valley, the territories of individual bands were primarily associated with streams flowing out of the Sierra Nevada. Each band owned territory within the valley, which generally consisted of linear segments that extended in an east-west direction between the crests of the Sierra Nevada and the White-Inyo Mountains (Steward 1938:52). In this way, the territories were able to provide a range of food sources due to the varied elevations. Villages were occupied by the Owens Valley Paiute on a semi-permanent basis, with winters often spent in mountain camps where pine nut storage was ample and groups moving to villages in the valley during the spring and summer months. The fall season was marked by inter-group gatherings at certain villages for rabbit drives, festivals, and other communal activities (Steward 1933:238-239). Inter-group relations among the Owens Valley Paiute were peaceful, and generally limited to non-violent skirmishes over pine nut or other food territory. Groups that resided in Deep Springs Valley and Fish Lake Valley were generally similar to those that lived in the larger Owens Valley, with several differences given the isolated nature of the Valleys, including low population and high inter-group cooperation for resources (Steward 1938).

Given the diverse territory inhabited by the Owens Valley Paiute, which included riparian corridors and a range of elevations, they were able to utilize a wide variety of food resources. Steward's ethnography (1933) lists approximately 40 plant resources that were obtained and utilized within Owens Valley itself, in addition to several tuber and berry species. Pine nuts, which occurred primarily between 6,000 and 9,000 ft amsl in the White-Inyo Mountains, were by far the most important plant resource that was utilized, and helped shape settlement strategies throughout the region. Large parties were organized to gather pine nuts in the fall, often staying in the area throughout the winter months. Between 30 and 40 bushels could be gathered by individuals during the fall, resulting in an output that could last through the following summer in good years (Steward 1933:240-241).

Hunting and fishing were conducted both individually and communally. Large game consisted primarily of deer, bighorn sheep, and antelope, the latter two occurring primarily in the White-Inyo Mountains. Large game was hunted with bow and arrow, preferably a sinew-backed bow made of juniper (Steward 1933:259). Rabbits were also an important food source, and were often hunted in communal drives in the valleys. Fish were sought from the Owens River and from the streams flowing from the Sierra Nevada. A wide variety of small mammals, birds, shellfish, and lizards supplemented their diet.

Pottery was a notable technology utilized by the Owens Valley Paiute for cooking and boiling, as well as food storage (Liljeblad and Fowler 1986:421-422). Known as Owens Valley Brown Ware, it was produced from several local clay sources that did not require temper to be added, and has been found primarily in the Sierra Nevada piedmont and adjacent regions, including Owens Valley, Deep Springs Valley, and Fish Lake Valley. Basketry, which is less visible in the archaeological record, was also an important technology utilized by all Owens Valley Paiute women.

The Owens Valley Paiute utilized irrigation to increase the yield of several indigenous plants, such as tüpüsi (grassnut) and nahavita (spike rush). Steward (1933:247-250) described the system in place at pitana patü (Bishop), where tracts of land along Bishop Creek were irrigated with a series of dams and ditches. Irrigation efforts were communal and required a large amount of coordinated labor, which were led by an honorary head-irrigator position, sometimes held by the band head man. At pitana patü, all men would assist in dam building, while all women were likely to participate in harvesting. The timing and means of the development of irrigation technology in Owens Valley has been debated. Based on early historical accounts such as the Von Schmidt Survey, the practice appears to extend back to at least the early 1800s, and possibly earlier (Lawton et al. 1976:32).

Relations between the Owens Valley Paiute and neighboring groups were generally amicable in the pre-contact era, with intermarriage occurring with the Miwok, the Yokuts, and the Tübatülabal. Important trade networks were established between the Owens Valley and the Sierra Nevada. Goods traded from the Owens Valley included salt, pine nuts, obsidian, rabbitskin blankets, buckskins, tobacco, and baskets. In exchange, they received items such as shell money, acorns, manzanita, and baskets (Steward 1933:257). Travel from the Owens Valley often came out of Bishop, with a trail following Birch Creek to the southwest, before diverging to various locations in the Sierra Nevada (Steward 1933:329). Trade with Great Basin groups was more limited, with salt from Saline Valley being the primary trade item sought from these groups.

5.5.1.5 Historic Background

5.5.1.5.1 Early Exploration

The Spanish and Mexican periods had little impact on the Owens Valley and the surrounding Project area, and were generally limited to small Euroamerican trapping and prospecting excursions in the first half of the 19th century. The first well-documented trip into Owens Valley occurred in 1834, when Joseph

Walker led a trapping party northward through the valley. Walker also entered the valley from the north with a subsequent trapping party, and then led the Chiles emigrant party in 1843. The latter was the second wagon train to enter California from the east, and followed a route through the southern Owens Valley and over the Sierra Nevada, through the pass that would eventually be named for him (Hoover et al. 2002:117). John C. Fremont led several expeditions through the region, including one in 1845-1846.

California was incorporated into the United States as part of the 1848 Mexican land succession, after the treaty of Guadalupe Hidalgo. The first public survey of the area occurred in 1855 and 1856 by A.W. Von Schmidt, who surveyed the Owens Valley, between Mono Lake and Owens Lake. Von Schmidt's notes on the Owens Valley Paiute provided some of the first public description of the native population in the area, and the surveyor had generally peaceful interactions with the population around Bishop (Chalfant 1922:73-74).

5.5.1.5.2 Early Settlements

Initial settlement in the Owens Valley was spurred by the start of cattle grazing throughout the valley, as well as mining operations in the surrounding mountains. In general, ranching and livestock grazing was viewed as an economic opportunity to provide beef for the burgeoning mining towns, such as Aurora and Bodie. Stockman A. Van Fleet was responsible for constructing the first permanent residence in the valley in August of 1861, a sod and stone cabin that was built at the turn of the Owens River, northeast of Bishop (Chalfant 1922:88-89).

The town of Owensville, near present day Laws, was laid out due to its location near valuable mineral prospects in the White Mountains and included a mill for ore reduction, a saloon, wood-frame buildings set on stone, a post office, and lots that sold for one thousand dollars (Eggum 1940a:16; Wilkerson 2014:2). By 1863, Owensville became the largest settlement in the valley, but the town's existence was short-lived due to a mining bust, and was abandoned in the 1870s. Samuel A. Bishop is credited with beginning the second major ranch in the Bishop region, when he began a drive of approximately 500-600 cattle from Fort Tejon in July of 1861 and established a camp of several wood cabins, called San Francis Ranch, several miles southwest of present-day Bishop (Eggum 1940b:3-5). The settlement of Bishop Creek was laid out to the east of San Francis Ranch, and would soon prosper. Though its economy was dominated by small farmers, by 1870 Bishop Creek and its surrounding hamlets (e.g., Round Valley, Owensville, Poleta) had 624 residents, making it the largest population center in Owens Valley (Walton 1992:69). In 1903, Bishop Creek was formally incorporated as Bishop.

5.5.1.5.3 Ranching, Agriculture, And Irrigation

Euroamerican land use within Owens Valley was dominated by initial ranching and agricultural operations, which had a major impact on the Owens Valley Paiute as their means of subsistence was heavily disrupted. By the winter of 1861-1862, which was notably difficult, violence broke out after the Paiute began hunting cattle in order to supplement their diet, resulting in the killings of several Paiute individuals (Chalfant 1922:96-97). In response to the ongoing violence, Camp Independence was founded as a military outpost in July of 1862 and, after initiating a series of attacks, Moses A. McLaughlin began a more damaging campaign to destroy Paiute food storage. The campaign took a heavy toll, and on June 4, 1863, 400 Paiute members surrendered at Camp Independence. On July 11, 1863, over 900 individuals were marched from Camp Independence to the San Sebastien Reservation in the Fort Tejon area. When the Paiute were eventually able to travel back to the Owens Valley, their lands had been fully appropriated and many took up residence around ranches, mining camps, and the initial settlements of the area, often working as laborers (Liljeblad and Fowler 1986:430).

In addition to ranching, homesteaders squatting on land around the original Vanfleet and San Francis ranches began to focus on cultivation. By 1863, early farmers were producing butter, peas, turnips and other crops for sale in the nearby settlements (Eggum 1940a:16). By the time of the 1880 census, Owens Valley was producing corn, wheat, oats, barley, and hay, in addition to various livestock (Sauder 1994). Crop production in the region was dependent on the establishment of reliable irrigation methods and initial efforts relied on the acquisition of the original Paiute ditches. Opportunities to exploit the river were opened up by the passage of the Desert Land Act of 1877, which provided 640-acre tracts of land to claimants for $1.25 per acre, if the land were to be irrigated and reclaimed. In this way, claims were patented as cooperative irrigation works or ditch companies that were started by groups of neighbors, who would then provide both capital and labor in order to construct ditches between the late 1870s and the early 1890s (Walton 1992:84). The McNally Ditch and the Fish Slough Canal were the first two projects completed under such partnerships. In spite of these efforts, by the turn of the century, agricultural output was hampered by economic depression and associated low prices, in addition to the difficult nature of irrigation in the area. For these reasons, ranching would continue to serve as a more important economic driver for the region in the 20th century.

5.5.1.5.4 Mining

Mining played a large role in the economic development and settlement of the CSP Project area. In the late 1850s, prospectors began searching the eastern Sierra Nevada region, resulting in gold discoveries at Bodie, Aurora, and Monoville. These discoveries helped stimulate the influx of settlement and ranching in the Owens Valley and the small early settlement of Owensville played a prominent role in supporting these early mining efforts. Some of the most important mines of the White Mountains, including the Sacramento, Twenty Grand, Southern Belle, and Poleta mines, which produced all of the above minerals, sent their ore to the mill in Owensville for processing (Wilkerson 2014:5).

Mining also resulted in the earliest Euroamerican settlement within Deep Springs Valley, a small mining settlement called White Mountain City, which was founded in the early 1860s. Both White Mountain City and Roachville, which was located further to the north along Cottonwood Creek, were likely to have served as supply centers for prospectors exploring gold and silver mines in the Deep Springs area and for miners working in the White Mountains gold region in southeastern Mono County (Shumway et al. 1980:147-148). White Mountain City is believed to have been abandoned at some point during or after the 1870s. Remnants of the town still exist, as a series of approximately 20 stone foundations with adobe mortar, a corral, a stone corral, rock walls, two arrastras, and two smelting furnaces (Delacorte 1984).

The period between 1869 and 1877 saw the most abundant mining activity in region. As profits declined in the following years, so did the number of mines. By 1912, mining and prospecting were less active in the White Mountains with the exception of Cerro Gordo, which yielded the majority of mineral output for the region at this time (Knopf 1914:96). Smaller prospecting efforts for additional minerals did occur in the following decades. In 1918, 11 tungsten claims were filed on the north edge of Deep Springs Valley, in order to develop a series of parallel quartz veins (Shumway et al. 1980:148). Silver Canyon was also prospected for limestone in the early 20th century, which was hauled by truck to the narrow-gauge railroad and shipped to soda plants on Owens Lake for production of carbon dioxide gas used in carbonation (Logan 1947, in Perazzo 2019).

5.5.1.5.5 Transportation

The development of the Carson & Colorado Railroad opened up transportation between the Owens Valley and Nevada, and also stimulated development in the region between 1880 and 1920. Construction began in 1880, and by 1883, a 307-mile-long railroad was completed between Mound House, near Carson City,

and Keeler, on the east side of Owens Lake. Originally intended to support mining operations, the railroad was constructed down the eastern side of the valley away from the larger settlements located on the west side of the Owens River. Each permanent settlement had to build a station across the river in order to be served by the railroad (Busby et al. 1980:71). Bishop's station was built at the current town of Laws and the town was subsequently built around the station between 1883 and 1900. The Laws Railroad station, which is located within the CSP Project area, is the only remaining station on the line, which was completely dismantled by 1960. It is also one of the last remaining examples of a 'narrow gauge' railroad left in the country.

Prior to local railroad development, transportation through the Owens Valley and the surrounding mountains was by trail or stagecoach line. Often, these routes were developed from existing Native American trails. The most prominent, named the Owens River Road, El Camino Sierra, or the Bullion Road, in different locations, was the main north-south route that connected the Owens Valley and the northern Mojave with southern California, and, in 1927 it was incorporated into the State Route system. By 1931, the paved highway between Bishop and Los Angeles was completed. By the 1910s, two unpaved roads crossed the White Mountains in the vicinity of the CSP Project area, both of which started at Big Pine, though travel through the rugged terrain of the mountains still required pack mule trails as the only feasible means of transportation to the various mines and prospects (Knopf 1914:84).

5.5.1.5.6 Hydroelectric Development

This section is adapted directly from the historic evaluation of the Bishop Creek Hydroelectric System by Clerico and Koval (1986).

The turn of the 20th century saw a dramatic change in technological history, as the production of cheap and dependable hydroelectric power was perfected at this time. Drainages with sufficient flow for hydroelectric power began to be developed, notably along the eastern Sierra Nevada. The first hydroelectric power generation built along Bishop Creek was a small plant operated by the Bishop Light and Power Company that generated power for local use, located one-half mile west of the Standard Flouring Mills (present site of SCE Plant No. 6).

Through the efforts of Loren B. Curtis, an engineer, and Charles M. Hobbs, a financier, the Nevada Power, Mining and Milling Company was incorporated in 1904 and the first facility was put into operation in September, 1905, supplying hydroelectric power to the mining communities of Tonopah and Goldfield, Nevada. Executives of the company had purchased controlling interest in locally operated mining facilities in Tonopah and Goldfield, so that when production began, there was a market for their product. The original transmission line extended from Bishop Creek, east across the Owens Valley, the White Mountains, Fish Lake Valley, and the Silver Peak Range to the town of Silver Peak, in Clayton Valley. Here the line split, diverging northeast to Tonopah and due east to Goldfield. The line distance from Bishop Creek to Goldfield was 95 miles, and to Tonopah was 113 miles, a new record for long distance transmission. In 1907, the Nevada-California Power Company, successor to the Nevada, Power, Mining and Milling Company, was incorporated.

Between 1905 and 1913, four additional generating plants were placed on line along Bishop Creek, and additional generators were placed in existing plants. The CSP Project subtransmission line begins at Control Substation, which occupies the same site as Plant No. 5, and is where the power from various generating plants is collected for distribution. Plant No. 5 was built in 1907 as the second generating plant in the Bishop Creek system. As a result of additional power generation, the "Tower Line," connecting Bishop with San Bernardino was able to be completed in 1912, again creating a new record for long distance transmission. By 1923, the only suitable streams draining the east slope of the Sierra Nevada which were not being used

for electricity production were the Carson and Walker river systems. Since 1964, SCE has owned and operated the Bishop Creek plants as a result of acquisition through merger consolidation.

5.5.1.5.7 Chalfant Valley, Deep Springs Valley, and Fish Lake Valley

Segments of the CSP Project extend into Chalfant Valley, Deep Springs Valley, and Fish Lake Valley. Historic development within the vicinity of the CSP Project was generally limited to ranching and homesteading, and the development of small communities.

Within Chalfant Valley, the most prominent ranches were established along the eastern flank of the valley, in proximity to mines such as the Southern Belle and Sacramento, located along the western slopes of the White Mountains. After the demise of the mining economy, livestock and agriculture predominated, with cattle and sheep comprising the bulk of agricultural activity in the area. The minimal market for local crops and the isolated nature of the area ensured that population remained small and economic growth limited (Busby et al. 1980:72).

Within Deep Springs Valley, the initial homesteader on Deep Springs Ranch was Nathan Gilbert, who was awarded the patent claims for 80 acres in 1890, though his house and irrigation ditches are already visible in the original 1880 survey plat map (BLM 2019). The 1913 Lida 1:250,000 United States Geological Survey (USGS) topographic map (USGS 2019) depicts the ranch as "Stewart's Ranch," referring to Arthur L. Stewart, and the ranch was subsequently sold to Lucien L. Nunn, an entrepreneur known for establishing the Telluride Power Company. Nunn founded Deep Springs College at the ranch in 1917, which still operates over 100 years later. Among the alumni of Deep Springs College is Julian Steward, the Owens Valley Paiute ethnographer and a member of one of the college's first classes (Deep Springs College 2019).

Historic development within Fish Lake Valley is sparse, with the exception of Oasis Ranch, an early and influential ranch in southeastern Mono County. Oasis Ranch was founded in 1872, by Noah T. Piper, to provide food for the nearby miners. The ranch was named Oasis because of the landscape-altering cottonwood and black locust trees that were planted, and it would come to dominate the local economy as the mining towns of Tonopah and Goldfield became dependent on his ranch for food supply (Norwood et al. 1980:138-139).

5.5.1.6 Cultural Resource Reports

This section describes the cultural resources inventories prepared by Environmental Intelligence, LLC (EI) for archaeological resources (Wilson and Gilbert 2021) and by Urbana Resources and Planning, LLC (Urbana) for built environment resources (Urbana 2019) for the Project. It also describes impacts to cultural resources that could result from construction and operation of the Project. Project construction activities will comply with all applicable federal, state, and local regulatory requirements. Also presented are recommended mitigation measures, when applicable.

5.5.1.6.1 Native American Consultation

California PRC Section 5097.91 established the NAHC, the duties of which include taking inventory of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC is notified of a discovery of Native American human remains from a county coroner.

The NAHC was contacted on September 10, 2019, requesting a search of its SLF for the CSP Project area. A search of the SLF was completed for the Project on October 1, 2019, with positive results. On November 12, 2019, SCE sent letters of inquiry to the nine Native American individuals and

organizations that were identified by the NAHC as contacts who may have knowledge of cultural resources within or adjacent to the proposed area. As of April 2, 2020, no responses have been received. Documentation of Native American correspondence are in Appendix D of Wilson and Gilbert 2021. Formal consultation under Section 106 of the NHPA will be conducted by the BLM, Bishop Field Office, serving as the lead federal agency for the Project. Consultation under Assembly Bill (AB) 52 will be conducted by the CPUC, serving as the lead state agency.

5.5.1.7 Cultural Resources Summary

5.5.1.7.1 Archaeological Resources

EI conducted a Phase 1 cultural resources study for the Project (Wilson and Gilbert 2021). The study included a cultural resources records search, a Class III intensive pedestrian survey of the direct Area of Potential Effects (APE) for the Project, and a survey report. The direct APE for archeological resources for the Project measured 1,588.8 acres.

5.5.1.7.1.1 Methodology

5.5.1.7.1.1.1 Records Search

An initial records search was conducted in 2015 by AECOM as part of the initial planning effort for the Project. The records search was conducted at the Eastern Information Center (EIC), at the University of California, Riverside, and included a 1-mile buffer around the Project corridor. All information on resource and previous survey locations were hand-transferred from hard copy maps at the EIC, and subsequently digitized using ArcGIS (Bietz 2016). The results of the records search, including digitized resource and survey locations, and PDF files of all California Department of Parks and Recreation (DPR) 523 forms within the 1-mile records search extent were provided to EI in October, 2018. Several more recent surveys have been conducted along the Project corridor as part of separate SCE projects, which have occurred after completion of the records search. SCE also provided reports and DPR 523 forms related to these projects to EI, in October 2018.

While a heritage search has not been conducted as part of the current Project, a separate heritage search was conducted for INF land that encompassed the Project corridor as part of SCE's Hazard Trees Removal Program (HTRP). The heritage search was conducted by SWCA Environmental Consultants (SWCA) at the INF main office in August, 2016, and included a ¼-mile buffer around the Project corridor. Global Information System (GIS) data were also provided by INF as part of the heritage search. Heritage search data were provided to EI in 2016, as part of ongoing HTRP support activity.

In April 2021, the EIC provided an updated records search for the Project corridor and a 1-mile buffer. Any resources and survey locations added since the 2015 records search were digitized using ArcGIS.

5.5.1.7.1.1.2 Archival Research

Various additional archival sources were also consulted during the course of the Project. These included historic topographic maps, Government Land Office (GLO) plat maps, GLO land patents, and Inyo County Water Department Ritch maps. The purpose of this research was to identify historic structures, past land ownership (including the original homestead patents), and past land use in the area.

5.5.1.7.1.1.3 Field Survey

The intensive pedestrian survey of the APE, as defined at the time of fieldwork, was conducted over five 10-day rotations. The first three rotations occurred between November 27, 2018 and December 6, 2018, between December 11, 2018 and December 20, 2018, and between January 8, 2019 and January 17, 2019.

Due to snow cover in the White Mountains, the remaining two rotations occurred between April 23, 2019, and May 2, 2019, and between July 9, 2019, and July 18, 2019.

The APE was surveyed using transects spaced no greater than 15 meters apart. Transect spacing was reduced to between 3 and 5 meters when archaeological sites or isolates were observed in order to adequately define the character of the cultural material. While the majority of the APE was able to be surveyed with standard transects, portions of the APE were unable to be surveyed for multiple reasons, primarily steep terrain (approximately >40°) within the White Mountains (see Appendix C of Wilson and Gilbert 2021). Areas that exceeded slope threshold were only opportunistically examined for rock features or historic activity, such as mining features, but were not surveyed with 15-meter transects. Conversely, portions of the canyon floors for Silver Canyon and Wyman Canyon, which were originally outside of the APE, were included within the survey area due to the higher likelihood that they will be utilized during Project activity. When warranted, these areas were surveyed using standard transects, and an additional 7.4 acres were surveyed outside of the APE.

EI used EOS Arrow 100 GNSS sub-meter antennas and ArcGIS Collector software during the survey in order to keep track of APE limits and transect spacing, as well as to document archaeological sites and isolates. The archaeologists examined exposed ground surface for artifacts (e.g., flaked stone tools, tool-making debris, milling tools, ceramics, ecofacts [e.g., marine shell and bone]), soil discoloration that might indicate the presence of a cultural midden, features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations), and historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and other areas of exposed ground surface were visually inspected.

All new and previously recorded resources within the APE were documented, photographed, and recorded on DPR 523 forms. For the purpose of the survey, sites were defined as any concentration of four or more artifacts of the same class, or three or more artifacts with at least two different artifact classes, within a 25 square meter (m^2) area. Isolates were defined as three or fewer artifacts of the same class within the same area. Site boundaries were defined when over 30 meters of open space separated cultural material. All previously recorded sites within the APE were revisited, and updated as warranted.

5.5.1.7.1.2 Results

5.5.1.7.1.2.1 <u>Records Search</u>

Summary tables and mapped locations of the records search results are provided in Appendix A of the Phase 1 report (Wilson and Gilbert 2021). A total of 317 resources have been identified within the 1-mile records search buffer. Of these, 52 resources intersect with the APE. Eight of the resources consist of isolated artifacts. The remaining 44 sites include 30 historic-era resources, 6 prehistoric sites, and 8 multicomponent sites. Of the 30 historic-era resources, 18 consist of built environment resources, 17 of which are addressed by Urbana (2019), and the remaining 12 are historic archaeological sites.

A total of 117 previously conducted surveys were identified within the 1-mile records search buffer. Of these, 63 intersect with the APE. Previous surveys for SCE facilities consist primarily of smaller surveys focused on single poles along the alignment. Exceptions to this include more in-depth studies of components associated with the Bishop Creek Hydroelectric System and Zack Substation, as well as a monitoring project along much of Wyman Creek Road. Two notable studies have occurred within the APE, and have figured prominently in the interpretation of behavioral patterns in the Inyo-Mono region. These include the data recovery efforts at P-14-001384/H/CA-INY-1384/H (Basgall and Delacorte 2012) in the Owens Valley, as well as surveys conducted by Delacorte (1990), which intersect with portions of the APE on the eastern side of the White Mountains. The latter are the basis for Delacorte's dissertation studying adaptive variation in Deep Springs Valley, Fish Lake Valley, and the surrounding mountain

ranges. Despite the large number of surveys occurring in the vicinity of the Project area, many only cover small portions of the APE, and, as shown in Appendix A-1 of Wilson and Gilbert 2021, large swaths of the APE have not been previously surveyed. This is most notable in the Chalfant Valley, in Silver Canyon, in Deep Springs Valley, and in other portions of the White Mountains.

5.5.1.7.1.2.2 Field Survey

A total of 1,917.9 acres were subject to pedestrian survey for the Project. Of these, 1,830.1 acres (95%) were surveyed using standard transects. A total of 65.3 acres (3%) were unable to be surveyed within the White Mountains, primarily due to slope exclusion. This includes several portions of the western escarpment of the White Mountains, which overlook Silver Canyon, in addition to steep canyon walls within Wyman Canyon. Dense riparian thicket also excluded survey within a small portion of Wyman Canyon. Examples of unsurveyed areas are shown in Exhibits 3 through 5 and mapped in Appendix C of Wilson and Gilbert 2021. While unsurveyed, the nature of the terrain is such that archaeological resources are unlikely to be encountered in these areas. Several additional ancillary Project components, which extend outside of the originally defined APE, were added after completion of the Phase 1 surveys and therefore were not surveyed as part of that effort unless they intersected with resources that were inventoried beyond the previous direct APE. Once Project engineering has been finalized, supplemental cultural resource surveys will be required for these areas.

In addition, several discontinuous areas within the Owens and Chalfant Valleys were unable to be surveyed, primarily those that were located within areas of previous disturbance (21 acres; 1%) or heavy vegetation (1.5 acres; <1%). The former includes disturbed areas such as modern quarries or borrow pits, fenced staging yards, or corrals. The latter includes small areas of dense marsh or riparian vegetation near the Owens River.

A total of 108 new sites and 90 new isolates were recorded as part of the Project surveys. Newly recorded resources include 51 historic sites, 28 prehistoric sites, and 29 multicomponent sites. Newly recorded isolates include 56 prehistoric isolates and 34 historic isolates. Of the newly identified resources, 34 sites (13 prehistoric, 11 multicomponent, 10 historic) and 32 isolates (27 prehistoric, 5 historic) are located within the portion of the original APE which was subsequently removed from the Project scope of work. A total of 33 previously recorded resources had been documented within the APE, including 13 historic sites, 6 prehistoric sites, 6 multicomponent sites, and 8 isolates. Of the 13 historic sites, 11 were relocated within the APE, 9 of which were updated as part of the Project. Of the six prehistoric sites, four were relocated within the APE and updated as part of the Project. Of the six multicomponent sites, five were relocated within the APE and updated as part of the Project. Of the eight isolates, one was relocated within the APE and updated as part of the Project, while two were relocated and turned into sites based on the presence of additional observed material. Additionally, four previously recorded sites, including three prehistoric sites and one historic site, were updated as part of the Project, but are located within the portion of the original APE which was subsequently removed from the Project scope of work.

Two historic sites (14-007850; 14-012783/CA-INY-9683), one prehistoric site (14-003472/CA-INY-3472), and one multicomponent site (14-012782/CA-INY-9682) were determined to be located outside of the APE, and were not updated as part of the Project, while an earlier assessment of one prehistoric site (14-004500/CA-INY-4500) determined that it had been previously destroyed and built over. Survey observations also determined that two previously recorded resources, including one prehistoric resource (14-000259/CA-INY-259) and one historic resource (14-005683/CA-INY-5330H), are actually located within the APE, and were updated as part of the Project.

Table 5.5-1 summarize all newly recorded or updated resources by the landowner, and provides National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) eligibility and

management recommendations. In total, 29 sites (21 prehistoric, 6 historic, and 2 multicomponent) and the prehistoric components of 16 multicomponent sites are recommended as eligible, potentially eligible, have been found previously eligible, or are unevaluated. Recommendations for archaeological monitoring have also been made with respect to the current eligibility recommendations and Project design (see Wilson and Gilbert 2021 and Table 5.5-3). EI recommends that a Cultural Resources Management Plan (CRMP) be created and implemented during Project construction, which will incorporate any additional avoidance and/or mitigation measures based on future site evaluation results or updates to Project design (see CUL-1).

Table 5.5-1: Summary of Archaeological Resources within the Project Area

Resource	Landowner	Age[1]	Description	NRHP/CRHR Eligibility Recommendation[1,2]	Within Direct APE?
FS# 05045302505 (CSP-Site-02)	INF	PRE/ HIS	Lithic scatter (hunting station); historic refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-05	Private	PRE	Lithic scatter (11 flakes)	RNE	Yes
CSP-Site-06	Private	HIS/ PRE	Refuse scatter; lithic scatter (2 flakes)	HIS: RNE; PRE: n/a	Yes
CSP-Site-07	Private	PRE	Lithic scatter	RE (Criterion D/4)	Yes
CSP-Site-09	Private	HIS	Refuse scatter	RNE	Yes
CSP-Site-10	Private	PRE/ HIS	Lithic and ground stone scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-13	Private	PRE/ HIS	Lithic and ground stone scatter (1 mano, 6 flakes); refuse scatter (2 artifacts)	PRE: RNE HIS: n/a	Yes
CSP-Site-14	Private	HIS/ PRE	Refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	Yes
CSP-Site-15	Private; BLM-Bishop	HIS	Refuse scatter	RNE	Yes
FS# 05045302506 (CSP-Site-17)	INF	HIS	Adit	RNE	Yes
FS# 05045302507 (CSP-Site-19)	INF	HIS	Wooden drainage feature	RNE	Yes
FS# 05045302508 (CSP-Site-20)	INF	HIS	Refuse scatter, foundation and privy remnants	RNE	Yes
FS# 05045302509 (CSP-Site-21)	INF	HIS	Refuse scatter	RNE	Yes
FS# 05045302510 (CSP-Site-23)	INF	HIS	Adit	RNE	Yes
FS# 05045302511 (CSP-Site-27)	INF	HIS	Refuse scatter	RNE	Yes
FS# 05045302512 (CSP-Site-29)	INF	HIS	Refuse scatter	RNE	Yes
FS# 05045302513 (CSP-Site-30)	INF	HIS	Refuse scatter	RNE	Yes
CSP-Site-36	Private	PRE	Lithic, ground stone, and ceramic scatter	RE (Criterion D/4)	Yes
CSP-Site-38	Private	PRE	Lithic scatter	RE (Criterion D/4)	Yes
CSP-Site-39	Private	PRE	Lithic scatter	RE (Criterion D/4)	Yes
CSP-Site-40	Private	PRE	Lithic scatter	RE (Criterion D/4)	Yes
CSP-Site-42	Private	PRE	Lithic scatter (4 flakes)	RNE	No
CSP-Site-53	Private	PRE	Lithic scatter (9 flakes)	RNE	Yes
CSP-Site-55	Private	PRE/ HIS	Lithic, ground stone, and ceramic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-57	Private	PRE/ HIS	Lithic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-59	BLM-Bishop	HIS	Refuse scatter and rock feature	RNE	Yes
CSP-Site-60	Private	HIS/ PRE	Refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	Yes
CSP-Site-61	BLM-Bishop	HIS/ PRE	Refuse scatter, gravel quarry, and datums; lithic scatter (2 flakes)	HIS: RNE; PRE: n/a	Yes
CSP-Site-62	BLM-Bishop	PRE	Lithic scatter	RE (Criterion D/4)	Yes
CSP-Site-63	BLM-Bishop	HIS/ PRE	Refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	Yes
CSP-Site-72	BLM-Bishop	PRE/ HIS	Rock rings and lithic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	No
CSP-Site-73	BLM-Bishop	HIS	Refuse scatter	RNE	No
CSP-Site-74	BLM-Bishop	HIS	Refuse scatter	RNE	No
CSP-Site-75	BLM-Bishop	PRE	Lithic scatter	RE (Criterion D/4)	No

Table 5.5-1: Summary of Archaeological Resources within the Project Area

Resource	Landowner	Age[1]	Description	NRHP/CRHR Eligibility Recommendation[1,2]	Within Direct APE?
CSP-Site-76	BLM-Bishop	PRE	Lithic scatter	RE (Criterion D/4)	No
CSP-Site-77	BLM-Bishop	PRE	Lithic scatter	RE (Criterion D/4)	No
CSP-Site-101	Private	HIS/ PRE	Refuse scatter; lithic scatter (8 flakes)	HIS: RNE; PRE: RNE	Yes
CSP-Site-102	Private	PRE/ HIS	Lithic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-105	Private	HIS	Refuse scatter	RNE	Yes
CSP-Site-106	Private	HIS/ PRE	Refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	Yes
CSP-Site-107	Private	PRE/ HIS	Lithic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-108	Private	PRE/ HIS	Lithic scatter, ceramic scatter, and glass trade bead; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
CSP-Site-112	Private	HIS	Refuse scatter	RNE	Yes
CSP-Site-115	Private	PRE/ HIS	Lithic, ground stone, and ceramic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	No
CSP-Site-116	Private	HIS	Refuse scatter	RNE	No
CSP-Site-117	Private	PRE/ HIS	Lithic scatter and faunal; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	No
CSP-Site-118	Private	HIS	Refuse scatter	RNE	No
CSP-Site-121	Private	PRE	Lithic scatter (6 flakes)	RNE	No
CSP-Site-122	Private	PRE/ HIS	Lithic scatter (22 flakes); refuse scatter and gravel quarry	PRE: RNE; HIS: RNE	No
CSP-Site-123	Private	PRE	Lithic scatter (9 flakes)	RNE	No
CSP-Site-124	Private	HIS	Refuse scatter	RNE	No
CSP-Site-125	Private	HIS	Homestead and refuse scatter	RNE	No
CSP-Site-127	Private	HIS	Homestead and refuse scatter	RNE	No
CSP-Site-128	Private	HIS	Refuse scatter	RNE	No
CSP-Site-129	Private	HIS	Refuse scatter	RNE	No
CSP-Site-132	Private	HIS	Refuse scatter	RNE	Yes
CSP-Site-135	Private	HIS	Refuse scatter, rock features, and road alignment	RNE	Yes
CSP-Site-136	Private	HIS	Refuse scatter, foundations, and rock features	RNE	Yes
CSP-Site-137	Private	HIS	Refuse scatter	RNE	Yes
CSP-Site-138	Private	HIS/ PRE	Refuse scatter and remnant fence line; lithic scatter (1 biface, 3 flakes)	HIS: RNE; PRE: RNE	Yes
CSP-Site-139	Private	HIS	Refuse scatter and cairn	RNE	Yes
CSP-Site-140	BLM-Bishop	HIS/ PRE	Refuse scatter and remnant road alignments; lithic scatter (1 flake, 1 tested cobble)	HIS: RNE; PRE: n/a	Yes
CSP-Site-141	BLM-Bishop	HIS	Refuse scatter	RNE	Yes
CSP-Site-142	BLM-Bishop	HIS	Refuse scatter	RNE	Yes
CSP-Site-144	Private	PRE/ HIS	Lithic scatter (21 flakes); Refuse scatter	PRE: RNE; HIS: RNE	No
CSP-Site-146	BLM-Bishop	PRE	Lithic scatter	RE (Criterion D/4)	No
CSP-Site-147	BLM-Bishop	HIS	Refuse scatter	RNE	No
CSP-Site-148	BLM-Bishop	HIS/ PRE	Refuse scatter; lithic scatter	HIS: RNE; PRE: RNE	No
CSP-Site-149	BLM-Bishop	HIS	Refuse scatter	RNE	No
CSP-Site-150	BLM-Bishop	HIS/ PRE	Refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	No
CSP-Site-151	BLM-Bishop	PRE/ HIS	Lithic and ground stone scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	No
CSP-Site-152	BLM-Bishop	HIS/ PRE	Refuse scatter and railroad grade; lithic scatter (1 biface, 1 flake)	HIS: RNE; PRE: n/a	No
CSP-Site-153	BLM-Bishop	PRE/ HIS	Lithic scatter; refuse scatter and excavated pits	PRE: RE (Criterion D/4); HIS: RNE	No
CSP-Site-155	BLM-Ridgecrest	PRE/ HIS	Lithic, ground stone, and ceramic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: n/a	No
CSP-Site-158	BLM-Ridgecrest	PRE	Lithic scatter (12 flakes)	RNE	Yes
CSP-Site-160	Private	PRE	Lithic and ceramic scatter	RNE	No
CSP-Site-163	Private	PRE	Lithic scatter	RE (Criterion D/4)	No
CSP-Site-164	BLM-Ridgecrest	PRE	Lithic scatter (7 flakes)	RNE	No

Table 5.5-1: Summary of Archaeological Resources within the Project Area

Resource	Landowner	Age[1]	Description	NRHP/CRHR Eligibility Recommendation[1,2]	Within Direct APE?
CSP-Site-165	BLM-Ridgecrest	PRE	Lithic and ground stone scatter	RE (Criterion D/4)	No
CSP-Site-166	BLM-Ridgecrest	PRE	Lithic scatter	RE (Criterion D/4)	No
CSP-Site-170	BLM-Ridgecrest	PRE	Lithic scatter (1 modified flake, 5 flakes)	RNE	Yes
CSP-Site-173	BLM-Ridgecrest	HIS	Mining site	RE (Criterion A/1)	Yes
CSP-Site-174	BLM-Ridgecrest	HIS	Prospect pit	RNE	Yes
CSP-Site-175	BLM-Ridgecrest	HIS	Cairn	RNE	Yes
CSP-Site-176	BLM-Ridgecrest	HIS	Refuse scatter	RNE	Yes
CSP-Site-177	BLM-Ridgecrest	HIS	Cairn	RNE	Yes
CSP-Site-178	BLM-Ridgecrest	HIS	Cairn	RNE	No
CSP-Site-179	BLM-Ridgecrest	HIS	Two cairns	RNE	Yes
CSP-Site-180	BLM-Ridgecrest	HIS	Mining claim boundary markers	RNE	Yes
CSP-Site-183	BLM-Ridgecrest	PRE	Lithic and ground stone scatter	RE (Criterion D/4)	Yes
CSP-Site-184	BLM-Ridgecrest	HIS	Refuse scatter	RNE	Yes
CSP-Site-186	BLM-Ridgecrest	HIS	Refuse scatter	RNE	Yes
CSP-Site-187	Private	HIS	Refuse scatter	RNE	Yes
FS# 05045302545 (CSP-Site-305)	INF	HIS	Prospect pit, milled lumber feature, and refuse scatter	RNE	Yes
FS# 05045302546 (CSP-Site-310)	INF	HBE/HIS	Cabin and refuse scatter	HBE: unevaluated; HIS: RNE	Yes
CSP-Site-316	Private	PRE	Lithic scatter	RNE	Yes
FS# 05045302547 (CSP-Site-318)	INF	PRE/UNK	Hunting blind, milling slick, and cairn	RE (Criterion D/4)	Yes
CSP-Site-319	Private	PRE	Lithic scatter	RNE	No
FS# 05045302548 (CSP-Site-322)	INF	HIS	Mining features and refuse scatter	RE (Criteria A/1 and C/3)	Yes
FS# 05045302549 (CSP-Site-325)	INF	HIS/ PRE	Mining features and refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	Yes
FS# 05045302550 (CSP-Site-327)	INF	HIS	Refuse scatter	RNE	Yes
FS# 05045302551 (CSP-Site-328)	INF	HIS	Cairn and two cans	RNE	Yes
FS# 05045302552 (CSP-Site-329)	INF	HIS	Cairn and one can	RNE	Yes
FS# 05045302553 (CSP-Site-330)	INF	HIS	Rock feature (smelting furnace) and two cans	RNE	Yes
FS# 05045302554 (CSP-Site-331)	INF	HIS	Historic petroglyph	Unevaluated	Yes
FS# 05045302555 (CSP-Site-332)	INF	HIS	Refuse scatter	RNE	Yes
FS# 05045302556 (CSP-Site-335)	INF	PRE	Lithic scatter, ground stone scatter, and midden.	RE (Criterion D/4)	Yes
FS# 05045302557 (CSP-Site-337)	INF	PRE	Lithic scatter	RE (Criterion D/4)	Yes
14-000259 (CA-INY-259)/ 14-002771 (CA-INY-2771)	BLM-Ridgecrest	PRE/ HIS	Habitation site; White Mountain City	PRE (CA-INY-259): RE (Criterion D/4); HIS (CA-INY-2771):RE (Criteria A/1, C/3, D/4)	Yes
14-001384 (CA-INY-1384/H)	Private	PRE/ HIS	Habitation site; refuse scatter	Determined Eligible (Prehistoric)	Yes
14-003717 (CA-INY-3717/H); FS# 05045300512	INF	PRE/ HIS	Lithic, ground stone and ceramic scatter, petroglyph, midden; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
14-005662 (CA-INY-5309)	Private	PRE/ HIS	Lithic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	Yes
14-005665 (CA-INY-5312/H)	Private	HIS/ PRE	Refuse scatter; lithic and ground stone scatter	HIS: RNE; PRE: RNE	Yes
14-005666 (CA-INY-5313H)	Private	HIS	Refuse scatter	RNE	Yes
14-005683 (CA-INY-5330H)	BLM-Ridgecrest	HIS	Mining site	RNE	Yes
14-008366	Private	PRE/ HIS	Lithic scatter (6 flakes); refuse scatter	PRE: RNE; HIS: RNE	Yes
14-008368	Private	HIS/ PRE	Refuse scatter and milled lumber feature; lithic scatter (3 flakes)	HIS: RNE; PRE: n/a	Yes

Table 5.5-1: Summary of Archaeological Resources within the Project Area

Resource	Landowner	Age[1]	Description	NRHP/CRHR Eligibility Recommendation[1,2]	Within Direct APE?
14-008605 (CA-INY-6763)	Private	PRE/ HIS	Lithic scatter; refuse scatter	PRE: RE (Criterion D/4); HIS: RNE	No
14-009042 (CA-INY-7108H); FS# 05045302082	INF	HIS	Mining site	RE (Criterion A/1)	Yes
14-010900 (CA-INY-8330)	Private	HIS	Refuse scatter	RNE	Yes
14-012274 (CA-INY-9436); FS# 05045302222	INF	HIS/ PRE	Campsite and refuse scatter; Lithic scatter (2 projectile points)	HIS: RNE; PRE: RNE	Yes
14-012314 (CA-INY-9451); FS# 05045302284	INF	PRE	Lithic scatter, hearth, and midden	RE (Criterion D/4)	Yes
14-012315 (CA-INY-9452); FS# 05045302285	INF	PRE	Midden (soil staining)	RE (Criterion D/4)	Yes
14-012317; FS# 05045302286	INF	HIS	Historic petroglyph	Unevaluated	Yes
14-012781 (CA-INY-9681)	Private	HIS/ PRE	Refuse scatter; lithic scatter (1 flake)	HIS: RNE; PRE: n/a	No
14-012784 (CA-INY-9684)	Private	HIS	Refuse scatter	RNE	No
14-012785 (CA-INY-9685)	Private	HIS/ PRE	Refuse scatter; lithic scatter (5 flakes)	HIS: RNE; PRE: RNE	No
14-012794 (CA-INY-9694); FS# 05045302558	INF	HIS	Refuse scatter	RNE	Yes
14-013405 (CA-INY-10084H)	BLM-Bishop	HIS	Refuse scatter	RNE	Yes
14-013514 (CA-INY-10147H	BLM-Ridgecrest	HIS	Refuse scatter	Determined not eligible	Yes
26-004493 (CA-MNO-3970)	BLM-Ridgecrest	PRE	Lithic scatter	RE (Criterion D/4)	Yes
26-004495 (CA-MNO-3972)	BLM-Ridgecrest	HIS	Refuse scatter	RNE	Yes
26-004666 (CA-MNO-4127)	BLM-Bishop	PRE	Lithic scatter	RE (Criterion D/4)	No
26-008119 (CA-MNO-5893)	BLM-Bishop; Private	PRE	Lithic scatter	Determined not eligible	No
26-008374 (CA-MNO-6023)	BLM-Bishop	HIS	Refuse scatter	Determined not eligible	No

NOTES
1 PRE: Prehistoric; HIS: Historic; HBE: Historic Built Environment
2 RE: Recommended Eligible; RNE: Recommended Not Eligible

5.5.1.7.2 Built Environment Resources

Urbana conducted a Class III historic-era built environment survey for the Project (Urbana 2019). The study included a desk survey and a pedestrian survey for built environment improvements in the direct APE for the Project.

5.5.1.7.2.1 Methodology

5.5.1.7.2.1.1 Desk Survey

In advance of the field survey effort, Urbana prepared a desk survey to identify all built environment improvements in the vicinity of the Project. The desk survey included use of current aerial imagery (obtained from Google Earth Professional), review of historic aerial imagery, ca. 1974-1975 (obtained from the USGS Earth Explorer database), and Mono and Inyo County Assessors' Data. The year-built data were derived for all observed improvements using these cited sources. The list of observed

improvements was then sorted into "historic-era" (prior to 1975) and "contemporary-period" (post 1974). The locations of historic-era improvements were overlaid against the Project corridor to identify what improvements directly intersect with the direct APE. A ½-mile radius was established from the outside edge of the Project corridor to form the Indirect APE. Maps delineating the APE survey boundaries, with all built environment improvement locations depicted, are included as Appendix A in Urbana 2019.

5.5.1.7.2.1.2 Field Survey

Urbana conducted a field survey in November 2018. All buildings, structures, site features, and view corridors within and surrounding the APE were photographed. Notes were compiled on the existing conditions, architectural features, and observed modifications for use in DPR 523 series forms. Supplemental observation of buildings and structures were completed as part of post-processing. A photo survey package is included as Appendix B and survey summary tables are included in Appendix C of Urbana 2019.

5.5.1.7.2.2 Results

As part of desk and field survey activities, 111 built environment improvements were identified and observed within the APE. Of these, 88 are historic-era (at least 45 years of age) and 23 are contemporary-period (less than 45 years old; Table 5.5-2). One previously recorded property could not be located, and one additional previously recorded property was not updated due to age ineligibility. Of the 88 historic-era improvements, 73 directly intersect with the Project. All 88 historic-era improvements were evaluated for the NRHP/CRHR. Of these, 69 were recommended not eligible to the NRHP/CRHR and 19 were recommended eligible to the NRHP/CRHR (Table 5.5-2).

Table 5.5-2: Summary of Built Environment Improvements within the Project Area

Survey ID No.	Resource Name	Permanent Number	Other Listings	Ownership	Year Built (Approximate)	NRHP/CRHR Eligibility Recommendation	Within Direct APE
4	SCE Control-Silver Peak 'A' & 'C' (Zack Tap) 55 kV Transmission Line	None	None	Private	1968	RNE	Yes
5	Chidago Canyon Road	None	None	Private	pre-1917	A / 1	No
6	Access Road to SCE Control- Silver Peak 'A' & 'C' (Zack Tap) 55 kV Transmission Line	None	None	BLM	pre-1917	RNE	Yes
7	Petroglyph Road	None	None	BLM	1951-1962	RNE	No
15	Slim Princess Road	None	None	Private	pre-1917	A / 1	No
16	Chalfant Road	None	None	Private	1964-1972	RNE	No
17	Chalfant Loop Road (Road to Chalfant)	None	None	Private	pre-1913	RNE	No
18	Tungsten Road	None	None	Private	pre-1913	RNE	No
19	Pumice Mill Road	None	None	Private	pre-1913	RNE	No
20	Rudolph Road	None	None	Private	1947-1949	RNE	No
22	LADWP Upper McNally Canal (North McNally Canal); LADWP Lower McNally Canal (South McNally Canal)	P-14-006756	None	Private	1877-1878	A / 1	Yes
23	Jean Blanc Road	None	None	Private	pre-1913	RNE	No
24	Five Bridges Road	None	None	Private	1947-1949	RNE	Yes
27	Riverside Road	None	None	Private	pre-1913	RNE	Yes
29	Access Road to Control Plant 3 and 4 Transmission Line	None	None	Private	1905	RNE	Yes
30	SCE Control Plant 3 and 4 Transmission Line	None	None	Private	1908	RNE	Yes
31	1) SCE Bishop Creek Hydroelectric System Historic District - Control Substation Complex; 2) SCE Control Substation Office Building; 3) SCE Control Substation Operations Building; 4) Original Operations	1) P-14-005745; 2) None; 3) P-14-005745; 4) P-14-005745; 5) None; 6) None;	HAER No. CA-145	Private	1) 1908; 2) 1995; 3) 1919; 4) 1912; 5) 1931, 1970; 6) 1927;	A / 1	Yes

Table 5.5-2: Summary of Built Environment Improvements within the Project Area

Survey ID No.	Resource Name	Permanent Number	Other Listings	Ownership	Year Built (Approximate)	NRHP/CRHR Eligibility Recommendation	Within Direct APE
	Building; 5) 5020 Plant 5 Road; 6) 5010 Plant 5 Road; 7) SCE Garage 1; 8) SCE Garage 2; 9) SCE Garage 3; 10) Powerhouse 5/Plant No. 5	7) None; 8) None; 9) None; 10) P-14-005739			7) ca 1919; 8) ca 1990; 9) 1936; 10) 1907		
32	SCE Control-Morgan-Plant 2 55 kV Transmission Line	None	None	Private	1908-1927 / 1968	RNE	Yes
33	SCE Control- Silver Peak 'A' 55 kV Transmission Line (Nevada-California Power Company Bishop Creek to Tonopah 55 kV Aluminum Line)	None	None	Private	1905	A / 1	Yes
34	SCE Control- Silver Peak 'C' 55 kV Transmission Line Nevada-California Power Company Bishop Creek to Tonopah 55 kV Aluminum Line)	None	None	Private	1908	A / 1	Yes
35	SCE Control-Mt. Tom 55 kV Transmission Line	None	None	Private	1966	RNE	Yes
36	Eastern Sierras Transmission Corridor (SCE Casa Diablo-Control Sherwin 115kV TL)	None	None	Private	1913 / 1958 / 1987	RNE	Yes
37	SCE Casa Diablo-Control 115kV Transmission Line	None	None	Private	1913 / 1958	RNE	Yes
39	SCE Control-Plant 5-Plant 6 55 kV Transmission Line	None	None	Private	1913	RNE	Yes
40	Plant 5 Road	None	None	Private	1907	RNE	Yes
41	Plant 6 Road	None	None	Private	1913	RNE	Yes
42	Unnamed Road	None	None	Private	1968-1975	RNE	Yes
43	East Bishop Creek Road	None	None	BLM	pre-1913	A / 1	Yes
44	Bishop Creek Battleground Monument (Monument Series: California Registered Historical Landmark No. 811)	None	None	Private	1966	RNE	No
45	State Route 168 (Legislative Route 76)	None	None	BLM	1931	RNE	Yes
46	Ed Powers Road	P-14-012257	None	Private	pre-1913	RNE	Yes
47	LADWP Owens Gorge 230kV Transmission Line	P-14-012883	None	Private	1950-1952	RNE	Yes
48	Access Road to LADWP Owens Gorge 230kV Transmission Line (Power Line Road)	None	None	Private	pre-1913	RNE	Yes
50	Red Hill Road	None	None	Private	pre-1913	RNE	Yes
51	Water Retention Pond	None	None	Private	pre-1968	RNE	Yes
53	U.S. Highway 395 (North Sierra Highway)	P-36-007545/ CA-SBR-7545H	Caltrans Scenic Highway	Private	1934	A / 1	Yes
55	LADWP Owens River Canal Access Road (Ed Powers Rehab - Road F57)	P-14-007090/ CA-INY-6025H; P-14-007088/ CA-INY-6023H	None	Private	1886	A / 1	Yes
56	Irrigation Flood Gate	P-14-007381	None	Private	Not Extant	RNE	Yes
57	Brockman Lane	None	None	Private	pre-1913	A / 1	Yes
58	Bishop Creek Road	None	None	Private	pre-1913	RNE	Yes
59	LADWP Jenkins Irrigation Ditch	P-14-008106	None	Private	1870-1920	A / 1	Yes
60	LADWP Bishop Creek Canal	P-14-008107	None	Private	1889	A / 1	Yes
61	Pole Livestock Corral	P-14-008105	None	Private	1950	RNE	Yes
63	Unnamed Road	None	None	Private	1949-1954	RNE	Yes
64	U.S. Highway 6 (LRN 76: The Grand Army of the Republic Highway)	None	None	Private	1937	RNE	Yes
65	Unnamed Road	None	None	Private	1913-1949	RNE	Yes
66	Unnamed Road	None	None	Private	pre-1913	RNE	Yes
67	Unnamed Road	None	None	Private	pre-1947	RNE	Yes
68	Unnamed Road	None	None	Private	pre-1947	RNE	Yes

Table 5.5-2: Summary of Built Environment Improvements within the Project Area

Survey ID No.	Resource Name	Permanent Number	Other Listings	Ownership	Year Built (Approximate)	NRHP/CRHR Eligibility Recommendation	Within Direct APE
70	Laws Frontage Road	None	None	Private	1947-1949	RNE	Yes
71	1st Street	None	None	Private	pre-1913	RNE	Yes
72	Silver Canyon Road	None	None	Private	pre-1913	A / 1	Yes
74	Railroad Street	None	None	Private	pre-1913	RNE	Yes
75	Unnamed Road	None	None	Private	pre-1947	RNE	Yes
76	Joe Smith Road	None	None	Private	pre-1913	RNE	Yes
77	Gish Avenue	None	None	Private	pre-1913	RNE	Yes
78	Laws Narrow Gauge Railroad Historic District (Monument Series: E Clampus Vitus, Slim Princess Chapter and the Inyo County Board of Supervisors)	P-14-004804/ CA-INY-3514	None	Private	1883	A / 1	Yes
79	Jordan Avenue	None	None	Private	pre-1913	RNE	Yes
80	Access Road to South McNally Canal	None	None	Private	pre-1947	RNE	Yes
81	Churchill Mine Road	None	None	Private	pre-1913	RNE	Yes
82	Laws Poleta Road	None	None	Private	pre-1913	RNE	Yes
83	Unidentified Quarry	None	None	Private	pre-1947	RNE	Yes
84	Flynn Road	None	None	BLM	pre-1913	RNE	Yes
85	Silver Canyon Mine (U.S. Forest Service Site: #05045302082)	P-14-009042/ CA-INY-7108	None	INF	pre-1913	RNE	No
87	White Mountain Road	None	None	INF	1947-1954	RNE	Yes
88	Mileage Marker	P-14-012317/ CA-INY-002286	None	INF	1905-1907	RNE	Yes
89	Unnamed Road	None	None	INF	pre-1913	RNE	Yes
90	Roberts Ranch Historic Site	P-14-008566/ CA-INY-6725	None	INF	1904-1921	A / 1	Yes
91	Wyman Creek Road	P-14-009253/ CA-INY-007234	None	INF	pre-1913	A / 1	Yes
92	Unnamed Road	None	None	INF	pre-1913	RNE	Yes
93	Unnamed Road	None	None	INF	1947-1951	RNE	Yes
94	Unnamed Road	None	None	INF	1955-1975	RNE	Yes
95	Unnamed Road	None	None	INF	1955-1975	RNE	Yes
96	Access Road to the Deep Springs P.S. 562-563 55 kV Transmission Line	None	None	Private	1917-1930s	RNE	Yes
97	Deep Springs Maintenance Station (Parcel ID#016-070-02)	None	None	Private	pre-1947	RNE	No
98	SCE Deep Springs Substation Complex	None	None	Private	1917-1930s	RNE	No
99	SCE Deep Springs P.S. 562-563 55 kV Transmission Line	None	None	Private	pre-1947	RNE	Yes
100	Deep Springs Ranch Road	None	None	Private	1913-1927	A / 1	No
101	Deep Springs College	None	None	Private	1917	A / 1	No
102	Lincoln (Silver Dome, Fringe Benefit No. 1) Mine	P-14-005683/ CA-INY-5330H	None	Private	1915-1945	A / 1	Yes
103	Oasis Road	None	None	BLM	pre-1913	RNE	Yes
104	Eureka Valley Road	None	None	BLM	pre-1913	RNE	Yes
105	Canyon Road	None	None	BLM	pre-1913	RNE	Yes
106	Ranch Road	None	None	Private	1948-1952	RNE	Yes
107	State Route 266 (Legislative Route 63; Route 168)	None	None	BLM	1931	RNE	Yes
108	State Line Road	None	None	BLM	1952-1958	RNE	Yes
109	Power Line Road	None	None	Private	pre-1952	RNE	Yes
110	Unnamed Road	None	None	Private	pre-1952	RNE	Yes

5.5.1.8 Cultural Resource Survey Boundaries

Cultural resource survey boundaries are presented in Figure 5.5-1.

5.5.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.5.2.1 Regulatory Setting

5.5.2.1.1 Federal

5.5.2.1.1.1 National Historic Preservation Act

The National Historic Preservation Act (NHPA), enacted in 1966, established the NRHP, established the position of the State Historic Preservation Officer (SHPO) and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, and created the President's Advisory Council on Historic Preservation (ACHP).

Section 106 of the NHPA directs "the head of any Federal Agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP." Additionally, the ACHP must be afforded an opportunity to comment on such undertakings through a process outlined in 36 CFR Part 800.

The Section 106 process requires the responsible federal agency to determine the potential for effects to historic and archaeological resources (historic properties) within the APE and to consider mitigation measures capable of avoiding or minimizing adverse effects to historic properties.

5.5.2.1.1.2 National Register of Historic Places

The NRHP was established by the NHPA "to indicate what properties should be considered for protection from destruction or impairment" (36 CFR 60.2). As defined in 36 CFR 800 60.4, for a cultural resource to be considered a historic property under NRHP criteria (i.e., eligible for listing in the NRHP), it must be demonstrated that the resource possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets at least one of the following four criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of our history.

B. It is associated with the lives of persons who are significant in our past.

C. It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

D. It has yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Cemeteries, birthplaces, graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years old to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

In addition to meeting the above criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as "the ability of a property to convey its significance" (National Park Service

1997). To assess integrity, seven qualities or aspects are considered, and to retain integrity, a property must possess several, if not all of the qualities. National Register Bulletin 15 defines the seven qualities as:

- Location: the place where the historic property was constructed or the place where the historic event occurred;
- Design: the combination of elements that create the form, plan, space, structure, and style of a property;
- Setting: the physical environment of a historic property;
- Materials: the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- Workmanship: the physical evidence of the crafts of a particular cultural or people during any given period in history or prehistory;
- Feeling: a property's expression of the aesthetic or historic sense of a particular period of time; and
- Association: the direct link between an important historic event or person and a historic property.

5.5.2.1.1.3 NAGPRA

The Native American Graves Protection and Repatriation Act (NAGPRA), passed in 1990, provides a process for museums and federal agencies to return Native American cultural items (i.e., human remains, funerary objects, sacred objects, and objects of cultural patrimony) to lineal descendants, culturally affiliated Indian tribes (i.e., tribes recognized by the Secretary of the Interior), and Native Hawaiian organizations, if the legitimate cultural affiliation can be determined according to the law. In addition to defining procedures for the treatment of previously collected human remains and associated items, NAGPRA regulations outline procedures for negotiating plans of action or comprehensive agreements for treatment of human remains and associated items encountered in intentional excavations, or inadvertent discoveries on federal or tribal lands.

5.5.2.1.2 State

5.5.2.1.2.1 California Environmental Quality Act

As the Project requires a PTC from the CPUC, it is subject to the regulatory requirements of CEQA. The CEQA requires that a lead agency determine whether a project may have a significant effect on historical resources (Section 21084.1). If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of the resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or

3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

5.5.2.1.2.2 California Register of Historical Resources

The CRHR was established in 1992 as a guide to be used by state and local agencies to identify California's historical resources and to identify what properties are to be protected from adverse change. A resource may be listed on the CRHR if it meets at least one of the following four criteria, which are directly modeled on NRHP criteria.

1) It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2) It is associated with the lives of persons who are significant in our past.

3) It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

4) It has yielded, or may be likely to yield, information important in prehistory or history.

Resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reason for their significance. A resource that has lost its historic character may still be eligible to the CRHR under Criterion 4 if it has the potential to yield scientifically important information.

5.5.3 Impact Questions

The CEQA, its Guidelines, and other provisions of the PRC call for the protection and preservation of significant cultural resources (i.e., "historical resources" and "unique archaeological resources"). The CEQA Guidelines provide three ways in which a resource can be a "historical resource," and thus a cultural resource meriting analysis:

The resource is listed on the CRHR;

1. The resource is included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or identified as significant in an historical resources survey (meeting the criteria in PR Section 5025.1[g]); or

2. The lead agency determines the resource is "historically significant" by assessing CRHR listing guidelines that parallel the federal criteria (CEQA Guidelines Section 15065.5[a][1]–[3] [as amended]).

3. To qualify as a historical resource under 1) or 3), the resource must also retain the integrity of its physical identity that existed during its period of significance. Integrity is evaluated with regard to retention of location, design, setting, materials, workmanship, feeling, and association (14 CCR 4852[c]).

Finally, under both federal and California state law, Native American human remains and associated grave goods are granted special consideration. Direct and indirect impacts only to historic properties (NRHP) and historical resources (CRHR) are considered in the assessment. Management of cultural resources not eligible for listing in the NRHP or CRHR is not required (36 CFR 800 and Section 15065.5[c][4] of the CEQA Guidelines [as amended]).

5.5.3.1 Impact Questions

The significance criteria for assessing the impacts to cultural resources come from the CEQA Environmental Checklist and states that a project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15065.5;
- Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15065.5; and/or
- Disturb any human remains, including those interred outside of formal cemeteries

5.5.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.5.4 Impact Analysis

5.5.4.1 Impact Analysis

5.5.4.1.1 Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15065.5?

5.5.4.1.1.1 Construction

Significant and Unavoidable. In total, 64 cultural resources (21 prehistoric, 6 historic, 2 multicomponent, the prehistoric components of 16 multicomponent sites, and 19 historic-era built environment) are recommended as eligible, potentially eligible, have been found previously eligible, or are unevaluated (see Tables 5.5-1 and 5.5-2). Of these 64 resources, 45 (13 prehistoric, 6 historic, 2 multicomponent, the prehistoric components of 9 multicomponent sites, and 15 historic-era built environment) overlap with the Project (see Tables 5.5-1 and 5.5-2).

Of the 45 resources that overlap with the Project area, 16 resources (13 historic-era built environment and 3 historic) can be avoided by construction activities (Table 5.5-3). There will be no impacts to these 16 resources.

Table 5.5-3: Management Recommendations for Historical Resources in the Project Area

Resource	Landowner	Age	Description	Potential Impacts	Management Recommendation
14-000259 (CA-INY-259)/ 14-002771 (CA-INY-2771)	BLM-Ridgecrest	PRE/HIS	Habitation site; White Mountain City	Potentially Significant	PRE: Phase II Testing; HIS: Avoidance with Archaeological Monitor
14-001384 (CA-INY-1384/H)	Private	PRE/HIS	Habitation site; refuse scatter	Potentially Significant	PRE: Phase II Testing and / or Phase III data recovery within areas of proposed ground disturbance not subject to previous mitigation
14-003717 (CA-INY-3717/H); FS# 05045300512	INF	PRE/HIS	Lithic, ground stone and ceramic scatter, petroglyph, midden; refuse scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
14-005662 (CA-INY-5309)	Private	PRE/HIS	Lithic scatter; refuse scatter	Less than Significant	Avoidance with Archaeological Monitor
14-009042 (CA-INY-7108H); FS# 05045302082	INF	HIS	Mining site	Less than Significant	Avoidance with Archaeological Monitor
14-012314 (CA-INY-9451); FS# 05045302284	INF	PRE	Lithic scatter, hearth, and midden	Less than Significant	Avoidance with Archaeological Monitor
14-012315 (CA-INY-9452); FS# 05045302285	INF	PRE	Midden (soil staining)	Less than Significant	Avoidance with Archaeological Monitor
14-012317; FS# 05045302286	INF	HIS	Historic petroglyph	No Impact	Avoidance

Table 5.5-3: Management Recommendations for Historical Resources in the Project Area

Resource	Landowner	Age	Description	Potential Impacts	Management Recommendation
26-004493 (CA-MNO-3970)	BLM-Ridgecrest	PRE	Lithic scatter	Potentially Significant	Phase II Testing
CSP-Site-07	Private	PRE	Lithic scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
CSP-Site-10	Private	PRE/HIS	Lithic and ground stone scatter; refuse scatter	Potentially Significant	Phase II Testing
CSP-Site-102	Private	PRE/HIS	Lithic scatter; refuse scatter	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-107	Private	PRE/HIS	Lithic scatter; refuse scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
CSP-Site-108	Private	PRE/HIS	Lithic scatter, ceramic scatter, and glass trade bead; refuse scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
CSP-Site-173	BLM-Ridgecrest	HIS	Mining site	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-183	BLM-Ridgecrest	PRE	Lithic and ground stone scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
CSP-Site-36	Private	PRE	Lithic, ground stone, and ceramic scatter	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-38	Private	PRE	Lithic scatter	Potentially Significant	Phase II Testing
CSP-Site-39	Private	PRE	Lithic scatter	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-40	Private	PRE	Lithic scatter	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-55	Private	PRE/HIS	Lithic, ground stone, and ceramic scatter; refuse scatter	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-57	Private	PRE/HIS	Lithic scatter; refuse scatter	Less than Significant	Avoidance with Archaeological Monitor
CSP-Site-62	BLM-Bishop	PRE	Lithic scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
FS# 05045302505 (CSP-Site-02)	INF	PRE/HIS	Lithic scatter (hunting station); historic refuse scatter	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
FS# 05045302546 (CSP-Site-310)	INF	HBE/HIS	Cabin and refuse scatter	No Impact	Avoidance of Unevaluated feature
FS# 05045302547 (CSP-Site-318)	INF	PRE/UNK	Hunting blind, milling slick, and cairn	Less than Significant	Avoidance with Archaeological Monitor
FS# 05045302548 (CSP-Site-322)	INF	HIS	Mining features and refuse scatter	Less than Significant	Avoidance with Archaeological Monitor
FS# 05045302554 (CSP-Site-331)	INF	HIS	Historic petroglyph	No Impact	Avoidance
FS# 05045302556 (CSP-Site-335)	INF	PRE	Lithic scatter, ground stone scatter, and midden.	Potentially Significant	Avoidance/Project Redesign with Archaeological Monitor or Phase II Testing
FS# 05045302557 (CSP-Site-337)	INF	PRE	Lithic scatter	Less than Significant	Avoidance with Archaeological Monitor
Survey ID No. 102	Private	HBE	Lincoln (Silver Dome, Fringe Benefit No. 1) Mine	No Impact	Avoidance
Survey ID No. 22	Private	HBE	LADWP Upper McNally Canal (North McNally Canal); LADWP Lower McNally Canal (South McNally Canal)	No Impact	Avoidance

Table 5.5-3: Management Recommendations for Historical Resources in the Project Area

Resource	Landowner	Age	Description	Potential Impacts	Management Recommendation
Survey ID No. 31	Private	HBE	1) SCE Bishop Creek Hydroelectric System Historic District - Control Substation Complex; 2) SCE Control Substation Office Building; 3) SCE Control Substation Operations Building; 4) Original Operations Building; 5) 5020 Plant 5 Road; 6) 5010 Plant 5 Road; 7) SCE Garage 1; 8) SCE Garage 2; 9) SCE Garage 3; 10) Powerhouse 5/Plant No. 5	No Impact	Avoidance
Survey ID No. 33	Private; BLM; INF	HBE	SCE Control- Silver Peak 'A' 55 kV Transmission Line (Nevada-California Power Company Bishop Creek to Tonopah 55 kV Aluminum Line)	Significant and Unavoidable	HAER Level II
Survey ID No. 34	Private; BLM; INF	HBE	SCE Control- Silver Peak 'C' 55 kV Transmission Line Nevada-California Power Company Bishop Creek to Tonopah 55 kV Aluminum Line)	Significant and Unavoidable	HAER Level II
Survey ID No. 43	BLM-Bishop	HBE	East Bishop Creek Road	No Impact	Avoidance
Survey ID No. 53	Private	HBE	U.S. Highway 395 (North Sierra Highway)	No Impact	Avoidance
Survey ID No. 55	Private	HBE	LADWP Owens River Canal Access Road (Ed Powers Rehab - Road F57)	No Impact	Avoidance
Survey ID No. 57	Private	HBE	Brockman Lane	No Impact	Avoidance
Survey ID No. 59	Private	HBE	LADWP Jenkins Irrigation Ditch	No Impact	Avoidance
Survey ID No. 60	Private	HBE	LADWP Bishop Creek Canal	No Impact	Avoidance
Survey ID No. 72	Private	HBE	Silver Canyon Road	No Impact	Avoidance
Survey ID No. 78	Private	HBE	Laws Narrow Gauge Railroad Historic District (Monument Series: E Clampus Vitus, Slim Princess Chapter and the Inyo County Board of Supervisors)	No Impact	Avoidance
Survey ID No. 90	INF	HBE	Roberts Ranch Historic Site	No Impact	Avoidance
Survey ID No. 91	INF	HBE	Wyman Creek Road	No Impact	Avoidance

Impacts to an additional 14 resources (7 prehistoric, 3 historic, and the prehistoric components of 4 multicomponent sites) can be avoided with an archaeological monitor during construction (Table 5.5-3). Therefore, impacts to these 14 resources will be less than significant with implementation of CUL-1 through CUL-3.

For the remaining 15 resources (6 prehistoric, 2 multicomponent, the prehistoric components of 5 multicomponent sites, and 2 historic-era built environment), impacts are potentially significant. For eight of these resources (FS# 05045302505 [CSP-Site-02], CSP-Site-07, CSP-Site-62, CSP-Site-107, CSP-Site-108, CSP-Site-183, FS# 05045302556 [CSP-Site-335], and 14-003717 [CA-INY-3717/H]/FS# 05045300512) impacts may be reduced to less than significant with Project redesign and archeological monitoring (Table 5.5-3). Therefore, impacts to these eight resources have the potential to be less than significant with implementation of CUL-1, CUL-2, and CUL-4. If redesign and avoidance is not feasible, a Historic Properties Treatment Plan (HPTP) to outline the treatment for any cultural resources that cannot be avoided will be required, as detailed in CUL-6.

For five resources (CSP-Site-10, CSP-Site-38, 14-000259 [CA-INY-259]/P-14-002771 [CA-INY-2771], 14-001384 [CA-INY-1384/H], 26-004493 [CA-MNO-3970]) additional work (i.e., Phase II testing) is recommended to determine if Project construction has the potential to impact the archaeological deposits

of the site. If the Phase II testing determines that there are no archaeological deposits that may be impacted by Project construction, impacts to the five resources will be less than significant with the implementation of CUL-1, CUL-2, and CUL-5. If the Phase II testing determines the Project will impact archaeological deposits and avoidance is not possible, a HPTP to outline the treatment for any cultural resources that cannot be avoided will be required, as detailed in CUL-6.

For the remaining two resources (Survey ID No. 33 [Control- Silver Peak 'A' 55 kV Transmission Line] and Survey ID No. 34 [Control- Silver Peak 'C' 55 kV Transmission Line]), removal of the historic lines would result in the physical destruction and damage of the lines such that they would no longer physically convey their identified significance. Prior to the start of Project construction, it is recommended that the Control-Silver Peak 'A' and 'C' 55 kV lines be documented according to Historic American Engineering Record (HAER Level II to ensure that the lines are entirely documented relative to physical characteristics and history and significance prior to removal, as documented in CUL-7. However, the HAER documentation would not reduce impacts to less than significant and impacts would be significant and unavoidable.

Several additional ancillary Project components, which extend outside of the originally defined APE, were added after completion of the field surveys and therefore were not surveyed. Once Project engineering has been finalized, supplemental cultural resource surveys will be required for these areas, as outlined in CUL-8, to determine if there are any additional historical resources that may be impacted by the Project. Additionally, there is a potential for discovery of previously unknown prehistoric-age and historic-age cultural resources and unique archaeological resources during construction activities. Cultural resources sensitivity along the alignment ranges from moderate to high due to the presence of prehistoric archaeological sites throughout the Project area. Construction impacts could potentially include physical damage or alteration, change in visual elements of a resource, and destruction of a resource. Impacts to previously unknown cultural resources, including historic resources and unique archaeological resources would be significant if the resources are considered historic resources and if the impacts are substantial and adverse. CUL-1 outlines a CRMP that would contain the procedures to be followed in the event that a previously-unknown resource is discovered during construction activities and CUL-9 describes procedures to be followed on-site if a previously-unknown resource is discovered. Impacts to previously undiscovered cultural resources (including historical and unique archaeological resources) would be less than significant with implementation of CUL-1 and CUL-9.

5.5.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.5.4.1.2 Would the Project cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15065.5?

5.5.4.1.2.1 Construction

Less than Significant Impact with Mitigation. As discussed in Section 5.5.4.1.1.1, 30 archeological sites (13 prehistoric, 6 historic, 2 multicomponent, and the prehistoric components of 9 multicomponent sites) that are recommended as eligible, potentially eligible, have been found previously eligible, or are unevaluated overlap with the Project (see Tables 5.5-1).

Of the 30 resources that overlap with the Project area, 3 historic-era archeological resources can be avoided by construction activities (Table 5.5-3). Therefore, there would be no impacts to these three resources.

Impacts to an additional 14 archaeological resources (7 prehistoric, 3 historic, and the prehistoric components of 4 multicomponent sites) can be avoided with an archaeological monitor during construction (see Table 5.5-3). Therefore, impacts to these 14 archaeological resources will be less than significant with implementation of CUL-1 through CUL-3.

For the remaining 13 archaeological resources (6 prehistoric, 2 multicomponent, and the prehistoric components of 5 multicomponent sites), impacts are potentially significant. For eight of these resources (FS# 05045302505 [CSP-Site-02], CSP-Site-07, CSP-Site-62, CSP-Site-107, CSP-Site-108, CSP-Site-183, FS# 05045302556 [CSP-Site-335], and 14-003717 [CA-INY-3717/H]/FS# 05045300512) impacts may be reduced to less than significant with Project redesign and archeological monitoring (Table 5.5-3). Therefore, impacts to these eight resources have the potential to be less than significant with implementation of CUL-1, CUL-2, and CUL-4. If redesign and avoidance is not feasible, a HPTP to outline the treatment for any cultural resources that cannot be avoided will be required, as detailed in CUL-6.

For five resources (CSP-Site-10, CSP-Site-38, 14-000259 [CA-INY-259]/P-14-002771 [CA-INY-2771], 14-001384 [CA-INY-1384/H], 26-004493 [CA-MNO-3970]), additional work (i.e., Phase II testing) is recommended to determine if Project construction has the potential to impact the archaeological deposits of the site. If the Phase II testing determines that there are no archaeological deposits that may be impacted by Project construction, impacts to the five resources will be less than significant with the implementation of CUL-1, CUL-2, and CUL-5. If the Phase II testing determines the Project will impact archaeological deposits and avoidance is not possible, a HPTP to outline the treatment for any cultural resources that cannot be avoided will be required, as detailed in CUL-6.

5.5.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.5.4.1.3 Would the Project disturb any human remains, including those interred outside of formal cemeteries?

5.5.4.1.3.1 Construction

Significant and Unavoidable. One of the resources within the Project area, 14-001384/CA-INY-1384/H, had two intact burials identified during testing and data recovery during a previous project. One burial occurred within or in close proximity to the western edge of the Project area, at a depth of between 60 and 90 cm. Additional work (i.e., Phase II testing) is recommended to determine if Project construction has the potential to impact the archaeological deposits of the site. If the Phase II testing determines that there are no archaeological deposits that may be impacted by Project construction, impacts to 14-001384/CA-INY-1384/H will be less than significant with the implementation of CUL-1, CUL-2, and CUL-5. If the Phase II testing determines the Project will impact archaeological deposits and avoidance is not possible, a HPTP to outline the treatment for 14-001384/CA-INY-1384/H will be required, as detailed in CUL-6.

5.5.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.5.4.2 Human Remains

Impacts to human remains were discussed above.

5.5.4.3 Resource Avoidance

A total of 45 eligible, potentially eligible, or unevaluated resources (13 prehistoric, 6 historic, 2 multicomponent, the prehistoric components of 9 multicomponent sites, and 15 historic-era built environment) overlap with the Project (see Tables 5.5-1 and 5.5-2). Impacts to 30 of the resources will be less than significant or less than significant with implementation of CUL-1 through CUL-3.

Impacts to eight resources are potentially significant, but implementation of CUL-1, CUL-2, and CUL-4 has the potential to reduce impacts to less than significant.

Impacts to five resources are potentially significant, but implementation of CUL-1, CUL-2, and CUL-5 has the potential to reduce impacts to less than significant.

Impacts to two resources will be significant and unavoidable, even with the implementation of CUL-7.

Additionally, impacts to previously unknown cultural resources are potentially significant. However, implementation of CUL-1, CUL-2, CUL-8, and CUL-9 will reduce impacts to less than significant.

5.5.5 CPUC Draft Environmental Measures

SCE will, at the direction of the CPUC, implement the following Draft Environmental Measure during construction of the CSP Project:

Human Remains (Construction and Maintenance)

Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy with complete avoidance of such resources ensured by redesigning the project. If human remains are discovered during construction or maintenance activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner will contact the NAHC. The NAHC will then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects.

If the remains are on federal land, the remains shall be treated in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA). If the remains are not on federal land, the remains shall be treated in accordance with Health and Safety Code Section 7050.5, CEQA Section 15065.5(e), and Public Resources Code Section 5097.98.

Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties
- Mile Posts

Cultural Resources APE

- Previously Surveyed
- Surveyed for SCE Project
- Other
- Unknown

CONTROL-SILVER PEAK PROJECT

CULTURAL RESOURCES APE

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURE 5.5-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-5-1_Cultural_Resources_APE_CSP.mxd 03/19/2021 3:19:22 PM

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5.6 Energy

This section of the PEA describes the energy-consumption attributes of the CSP Project, as well as an assessment of impacts that have the potential to occur during construction and operation of the CSP Project.

5.6.1 Environmental Setting

As described in Chapter 3—Project Description, construction, and O&M, of the CSP Project would require the consumption of energy in the form of liquid fuels (gasoline and diesel). Section 5.6.4.3 addresses the estimated volumes of gasoline and diesel consumption associated with construction of the CSP Project.

5.6.1.1 Existing Energy Use

Station light and power equipment at the substations included under the CSP Project represent the only existing consumption of electricity associated with the CSP Project. Gasoline and diesel fuels consumed during O&M activities represent the only other existing energy use associated with the CSP Project. Line losses are ignored as these do not represent a use of energy, but rather a loss of energy.

5.6.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.6.2.1 Regulatory Setting

5.6.2.1.1 Federal

There are no Federal plans or regulations applicable to the CSP Project.

5.6.2.1.2 State

Senate Bill 100, signed into law in September 2018, amends the California Renewables Portfolio Standard Program. The Program requires the CPUC to establish a renewables portfolio standard requiring all retail sellers to procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 25 percent of retail sales by December 31, 2016, 33 percent by December 31, 2020, 40 percent by December 31, 2024, 50 percent by December 31, 2026, and 60 percent by December 31, 2030. The program additionally requires each local publicly owned electric utility to procure a minimum quantity of electricity products from eligible renewable energy resources to achieve the procurement requirements established by the program.

5.6.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.6.2.1.3.1 Inyo County, Renewable Energy General Plan Amendment

The Inyo County Renewable Energy General Plan Amendment consists of additions to the language in the General Plan. The updates to the General plan focus on identifying the appropriate means to develop renewable wind and solar energy resources, provided that social, economic, and environmental impacts are minimized; balancing costs to the County and lost economic development potential, and mitigation of economic effects; working to protect military readiness, and considering conversions of lands utilized for agriculture, mining, and recreation. There are no new policies or implementation measures pertinent to the CSP Project.

5.6.2.1.3.2 Mono County General Plan, Conservation/Open Space Element

The Mono County General Plan's Conservation/Open Space Element contains goals, policies, and implementation measures that address renewable energy development and energy efficiency measures in the County; none are relevant or applicable to the CSP Project. There are no goals, policies, or implementation measures related to energy efficiency that are applicable or relevant to the CSP Project.

5.6.3 Impact Questions

5.6.3.1 Impact Questions

The significance criteria for assessing the impacts to public services are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project would cause a potentially significant impact if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

5.6.3.2 Additional CEQA Impact Question

The CPUC has identified one additional CEQA impact question:

- Would the project add capacity for the purpose of serving a nonrenewable energy resource?

5.6.4 Impact Analysis

5.6.4.1 Impact Analysis

5.6.4.1.1 Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

5.6.4.1.1.1 Construction

Less than Significant Impact. The CSP Project's consumption of energy resources during construction is necessary to remediate discrepancies identified through SCE's TLRR effort along the 55 kV circuits included in the CSP Project, thus ensuring compliance with CPUC GO 95 and meeting the purpose of the CSP Project.

The rebuilt subtransmission lines would serve the same purpose in the regional transmission system as the existing lines and would not change the location or intensity of energy consumption during operations.

Construction of the project would require consumption of fuel to run construction vehicles, equipment, and helicopters. However, CSP Project construction activities would be short-term and temporary.

Further, implementation of APM NOI-1 (see Section 5.1), which minimizes unnecessary construction vehicle idling time, would further reduce energy consumption. Therefore, impacts would be less than significant.

5.6.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project. No energy additional to that which is presently consumed would be consumed and therefore no impacts would be realized under this criterion during O&M.

5.6.4.1.2 Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

5.6.4.1.2.1 Construction

No Impact. The CSP Project entails the reconstruction of existing subtransmission lines in or immediately adjacent to these subtransmission lines' existing alignments, and replacement of individual poles immediately adjacent to existing poles. The CSP Project is not designed to facilitate or encourage renewable energy project development, and because it would be constructed in or immediately adjacent to existing alignments, would not impede the development of renewable energy projects. As stated in Section 5.6.2 above, none of the local plans that address energy efficiency are applicable to the CSP Project. Therefore, the CSP Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.6.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project. Therefore, operation of the CSP Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.6.4.1.3 Would the project add capacity for the purpose of serving a nonrenewable energy resource?

5.6.4.1.3.1 Construction

No Impact. Serving a nonrenewable energy resource is not a purpose of the CSP Project; therefore, there would be no impact under this criterion.

5.6.4.1.3.2 Operations

No Impact. Serving a nonrenewable energy resource is not a purpose of the CSP Project; therefore, there would be no impact under this criterion.

5.6.4.2 Nonrenewable Energy

The CSP Project is not proposed to provide a new interconnection to, or to supply a new, renewable or non-renewable energy project.

The subtransmission lines included under the CSP Project are extant, and are part of SCE's interconnected transmission and subtransmission system. Because SCE operates an interconnected grid, all renewable and non-renewable energy projects connected to any one portion of that grid may be considered to be

interconnected to the subtransmission lines included under the CSP Project. Similarly, all such renewable and non-renewable energy supplied by other projects would be transmitted by the SCE system including in the CSP Project.

5.6.4.3 Fuels and Energy Use

5.6.4.3.1 Total Energy Requirements of the CSP Project by Fuel Type and End Use

Table 5.6-1 provides an estimation of the amount of fuels (gasoline, diesel, and helicopter fuel) that would be used during construction of the CSP Project.

As presented in Chapter 3—Project Description, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project. Therefore, operation of the CSP Project would not result in consumption of fuels above the volumes currently consumed.

Table 5.6-1: Fuel Consumption

Primary Equipment Description	Diesel (gallons)	Gasoline (gallons)	Jet A (gallons)
Worker Vehicles	67	28,149	-
Construction Vehicles	60,924	25,775	-
Construction Equipment	315,860	3,135	-
Helicopter	-	-	413,256
TOTALS	**376,851**	**57,059**	**413,256**

5.6.4.3.2 Energy Conservation Equipment and Design Features

There is no equipment, and there are no design features, that are included in the CSP Project the purpose of which is primarily or solely energy conservation. Due to the advancements in infrastructure materials the new conductors would operate with improved ampacity and less line losses as compared to the existing infrastructure. As such, the newly proposed infrastructure would not directly conserve energy but indirectly contribute to energy conservation in the form of reduced line losses.

5.6.4.3.3 Energy Supplies That Would Serve the Project

Construction of the CSP Project would not require any new energy supplies; energy necessary during the construction phase would be obtained from existing energy purveyors. Operation of the CSP Project would not result in any increased energy demand compared to the energy demand associated with the operation of the existing CSP Project infrastructure. Energy supplies for the project would include typical construction power provided by sources such as local distribution lines and/or portable generators for local power requirements. For energy supplies that are required to keep connected load energized during construction, SCE plans to incorporate system configurations that would leverage the inter-connection between SCE and NV Energy, as well as its existing network.

As related to existing renewable and non-renewable energy, the project is rebuilding existing infrastructure, therefore the transmission and distribution of renewable and non-renewable energy would remain the same. The project will not and is not intended to interconnect any new sources of renewable and non-renewable energy.

5.6.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for Energy.

5.7 Geology, Soils, and Paleontological Resources

This section of the PEA describes the geology and soils in the area of the CSP Project. This analysis describes the existing geology and soils in the vicinity of the CSP Project and assesses the potential impacts that have the potential to occur as a result of construction and operations of the CSP Project. The entirety of Segments 1, 2, and 5 are located in Inyo County; the eastern portion of Segment 3 and the locations where work would occur in Segment 4 are located in Mono County.

5.7.1 Environmental Setting

5.7.1.1 Regional and Local Geologic Setting

The CSP Project is located within the Basin and Range Geologic Province. This Province is characterized by mountain ranges, generally trending north-south or northwest-southeast, separated by roughly parallel basins that form flat valleys. The western end of the CSP Project is also located close to the eastern edge of the Sierra Nevada Geomorphic Province. The Sierra Nevada is a major north-south trending mountain range that rises steeply on the west side of the Owens Valley, and which forms the western boundary of the Basin and Range Geologic Province.

5.7.1.1.1 Physiography

The principal mountain and valley areas crossed by the Segments of the CSP Project are shown in Figure 5.7-1 and described below. The boundaries between these areas are not sharply defined, and so the descriptions are general.

5.7.1.1.1.1 Segments 1, 2 and 3

Segments 1, 2, and 3 run generally from west to east; the western end of Segment 1 is at the Control Substation and the eastern end of Segment 3 is at the Fish Lake Valley Metering Station near the California-Nevada border. The total length of these Segments is approximately 42 miles. The principal topographical features along these Segments are discussed below.

5.7.1.1.1.1.1 Owens Valley

The western terminus of the CSP Project is at the Control Substation, approximately 5 miles southwest of Bishop, California. The Control Substation is located near the western edge of the Owens Valley at an elevation of approximately 4,800 ft amsl. The Control Substation is located east of the base of the Sierra Nevada, which rise to the southwest. The Sierra Nevada represent the western boundary of the Owens Valley, and generally of the Basin and Range Geologic Province.

West of the City of Bishop, Segments 1 and 2 run generally northeast from Control Substation; at the western end of Segment 3 the CSP Project alignment turns eastward and passes to the north of the City of Bishop, gradually descending in elevation. The Zack Tap (Segment 4) branches northward from Segment 3 in this area, at an elevation of approximately 4,150 ft msl, while Segment 3 continues to the east.

Segment 3 continues to descend in elevation to a crossing of the Owens River northeast of Bishop at an elevation of approximately 4,080 ft msl. This crossing represents the lowest point of the CSP Project.

Segment 3 then continues eastward through the community of Laws. It rises to an elevation of approximately 4,500 ft msl at the eastern boundary of the Owens Valley, which is defined by the western edge of the White Mountains. The total length of Segments 1, 2, and 3 in the Owens Valley is approximately 13 miles.

5.7.1.1.1.1.2 White Mountains

Segment 3 enters the White Mountains via Silver Canyon. It follows Silver Canyon for approximately five miles, reaching an elevation of approximately 7,000 ft msl. The CSP Project alignment then climbs steeply for approximately 2 miles, reaching an elevation of 10,500 ft msl, which is the highest point of the CSP Project.

Segment 3 then descends for approximately 2 miles to the canyon of Wyman Creek. It descends through the Wyman Creek canyon for approximately 12 miles to the northern edge of Deep Springs Valley, at an elevation of approximately 5,550 ft msl. The Deep Springs Tap (Segment 5) branches southward in this area, while Segment 3 continues to the northeast.

Segment 3 skirts the northern edge of the Deep Springs Valley for approximately 1 mile, then re-enters the White Mountains, running generally to the northeast near State Route 168. It rises to an elevation of approximately 6,500 ft msl after two miles, then descends for approximately 2 miles to the floor of Fish Lake Valley at an elevation of approximately 5,350 ft msl. The total length of Segment 3 in the White Mountains is approximately 26 miles.

5.7.1.1.1.1.3 Fish Lake Valley

Segment 3 continues across the floor of Fish Lake Valley to the northeast for approximately 4 miles. The elevation drops to approximately 5,040 ft msl in the center of the valley. It then rises to approximately 5,140 ft msl at the eastern terminus of Segment 3 at the Fish Lake Valley Metering Station near the California-Nevada border. The total length of Segment 3 in Fish Lake Valley is approximately 4 miles.

5.7.1.1.1.2 Segment 4

Segment 4 (the Zack Tap) branches from Segment 3 at a point north of Bishop; it then runs for approximately 16 miles in a generally northward direction to Zack Substation. The principal topographical features along Segment 4 are discussed below.

5.7.1.1.1.2.1 Owens Valley

Segment 4 originates in the Owens Valley to the north of Bishop. It runs northward and crosses the Owens River at an elevation of approximately 4,140 ft msl. This is the lowest elevation along Segment 5. The length of Segment 4 in the Owens Valley is approximately 2 miles.

5.7.1.1.1.2.2 Volcanic Tablelands

Segment 4 runs to the northeast across an upland area north of Bishop known as the Volcanic Tablelands. Segment 4 reaches a maximum elevation of approximately 4,250 ft msl in this area; it then descends to an elevation of approximately 4,150 feet in the Chalfant Valley. The length of Segment 4 in the Volcanic Tablelands is approximately 2 miles.

5.7.1.1.1.2.3 Chalfant Valley

Segment 4 continues in a generally northward direction up the Chalfant Valley, which is an arm of the greater Owens Valley. It continues up the Chalfant Valley for approximately 12 miles, past the community of Chalfant, generally paralleling U.S. Highway 6. Segment 4 reaches a maximum elevation of approximately 4,550 ft msl at the Zack Substation, which represents the northern terminus of Segment 5.

5.7.1.1.1.3 Segment 5

Segment 5 (the Deep Springs Tap) runs southward from Segment 3 for approximately 2.4 miles. Segment 5 is located wholly within the Deep Springs Valley. Segment 5 branches from Segment 3 at the northern end of the Deep Springs Valley at an elevation of approximately 5,550 ft msl. It runs generally southward and terminates at Deep Springs Substation, which is located near Deep Springs College at an elevation of approximately 5,230 ft msl.

5.7.1.2 Seismic Hazards

5.7.1.2.1 Faults and Seismicity

The CSP Project is located in a seismically-active area with numerous Holocene (including "latest Quaternary") faults (Figure 5.7-2) that have been identified as potential seismic sources. Holocene faults are considered to have been active within approximately the past 11,000 to 15,000 years. Table 5.7-1 includes additional information about the Holocene faults within 10 miles of the CSP Project alignment, including fault type, fault and section length, slip rate, and maximum estimated moment magnitude (USGS 2021a,b).

The CSP Project is also near numerous potentially active faults, as identified by USGS (USGS 2021a). In addition, numerous pre-Quaternary faults have been mapped near the CSP Project in the White Mountains area (Figure 5.7-2), but these are not regarded as potential seismic sources by USGS.

5.7.1.2.1.1 Segment 1

The Owens Valley Fault Zone is generally located in the central part of the Owens Valley; Segment 1 of the CSP Project alignment crosses the Keough Hot Springs Section of this Zone. Most of the faults within this zone are classified as a right-lateral strike slip faults, with estimated slip rates of 1 to 5 millimeters per year (mm/yr).

5.7.1.2.1.2 Segment 2

Segment 2 of the CSP Project alignment crosses unnamed Faults in Volcanic Tablelands. They are classified as normal faults of Holocene age, with slip rates of 0.2 to 1 millimeters per year (mm/yr).

5.7.1.2.1.3 Segment 3

The White Mountains Fault Zone occurs at the base of the Inyo Mountains in the Owens Valley. The western portion of Segment 3 crosses the White Mountains Fault Zone (Central Section) at the western edge of the White Mountains. Most of the fault segments in this zone are classified as right-lateral strike-slip faults of Holocene age with slip rates of 0.2 to 1 mm/yr. The youngest fault segments are classified as Holocene age.

A historical earthquake, the July 21, 1986 Chalfant Valley earthquake, occurred along the White Mountains Fault Zone near the CSP Project. This earthquake had an estimated moment magnitude of 6.5, and a maximum Mercalli intensity of VI (Brewer 1989). Ground surface ruptures associated with the event have been mapped north of Segment 3 of the CSP Project alignment.

The eastern portion of Segment 3 crosses the Fish Lake Valley Fault Zone (Oasis Section). The CSP Project alignment crosses two segments of this fault near the eastern edge of the White Mountains. The younger segment (located to the northeast) has been classified as a right-lateral strike-slip fault of Holocene age with a slip rate of more than 5 mm/yr. The older segment (located to the southwest) has been classified as a normal fault of Late Quaternary age (less than 130,000 years BP) with a slip rate of 1 to 5 mm/yr.

Segment 3 also crosses Holocene faults in the Volcanic Tableland, the Fish Slough Fault Zone, and the Deep Springs Fault Zone.

5.7.1.2.1.4 Segment 4

Segment 4 of the CSP Project alignment crosses the Fish Slough Fault Zone. The Fish Slough Fault is classified as a normal fault of Holocene age with slip rates of 0.2 to 1 mm/yr.

5.7.1.2.1.5 Segment 5

Segment 5 of the CSP Project alignment crosses the Deep Springs Fault at the northeastern end of Deep Springs Valley. This fault has also been mapped at the Deep Springs Substation at the southern end of Segment 5. The Deep Springs Fault is classified as a normal fault of Holocene age with slip rates of 0.2 to 1 mm/yr.

5.7.1.2.2 Surface Fault Rupture

There is a risk of surface fault rupture associated with Holocene faults such as those found along the CSP Project alignment. The State of California has established "Alquist-Priolo Special Studies Zones" in areas where Holocene faults pose a risk of surface displacement (CGS 2017a). There may be a risk of surface fault rupture in other areas, outside of Alquist-Priolo Zones, where Holocene faults have not been identified or are incompletely studied.

The CSP Project alignment traverses numerous Alquist-Priolo Special Studies Zones associated with the local Holocene faults (Figure 5.7-3). Based on current mapping, the CSP Project alignment makes a total of 32 crossings of Holocene fault traces within these zones. It should be noted, however, that the position, length, and number of fault traces within Special Studies zones are often only mapped approximately.

5.7.1.2.3 Seismic Ground Shaking

The expected intermediate period (1.0 second) ground motions with a 2 percent exceedance probability in 50 years, based on Branum et al. (2016) and CGS (2017c), are shown in Figure 5.7-4. This represents a recurrence interval of approximately 2,500 years. The estimate was calculated considering historical earthquakes, slip rates on major faults and deformation throughout the region, and the potential for amplification of seismic waves by near-surface geologic materials.

In general, the estimated ground motions are highest where unconsolidated Quaternary alluvium coincides with Holocene faults. Ground motions greater than 0.65g (g = standard acceleration due to gravity, or 9.8 m/s^2) are often associated with heavy damage and violent perceived shaking (Wald et al. 1999). The highest estimated values along the CSP Project alignment are in the valley areas, including values up to 0.95g in Fish Lake Valley, 0.85g in Deep Springs Valley, and 0.75g in the Owens Valley. These areas are relatively close to Holocene faults.

The lowest estimated ground motion values along the CSP Project alignment, approximately 35 percent of standard gravity (or 0.35g), occur in the central White Mountains. This area is characterized by consolidated bedrock and is relatively distant from Holocene faults.

Table 5.7-1: Holocene Fault Properties

Closest Project Segment	Fault Name	Fault Type	Fault/ Section Length (km)	Slip Rate (mm/yr)	Maximum Moment Magnitude	Distance to CSP Project Alignment (miles)
1	Owens Valley fault zone (Keough Hot Springs section)	normal	136 (21)	1.0 to 5.0	7.2 to 7.3	0

Table 5.7-1: Holocene Fault Properties

Closest Project Segment	Fault Name	Fault Type	Fault/ Section Length (km)	Slip Rate (mm/yr)	Maximum Moment Magnitude	Distance to CSP Project Alignment (miles)
1	Unnamed fault on NW side Tungsten Hills	unspecified	16	unspecified	undetermined	5.1
1	Unnamed fault in California	unspecified	unspecified	unspecified	undetermined	6.5
1	Round Valley fault	normal	36	1.0 to 5.0	6.9 to 7.1	7.1
2, 3	Unnamed faults in Volcanic Tablelands	normal	40	0.2 to 1.0	undetermined	0
3	White Mountain fault zone (Central section)	right lateral	109 (38)	0.2 to 1.0	7.3 to 7.4	0
3	Fish Lake Valley fault zone (Oasis section)	right lateral	99 (36)	>5.0	7.1 to 7.2	0
3	Fish Lake Valley fault zone (Cucomongo section)	right lateral	99 (33)	1.0 to 5.0	7.3	7.8
3	McAfee Canyon fault	normal	11	0.2 to 1.0	undetermined	9.3
4	Fish Slough fault zone	normal	23	0.2 to 1.0	6.6 to 6.8	0
4	White Mountains fault zone (Montgomery section)	normal	109 (27)	0.2 to 1.0	7.3 to 7.4	7.9
3, 5	Deep Springs fault	normal	23	0.2 to 1.0	6.6 to 6.8	0

5.7.1.2.4 Liquefaction

Liquefaction occurs where strong ground motions produce a rise in pore-water pressures that in turn causes granular material to briefly lose strength and liquefy. This can lead to settlement, lateral spreading, and damage to structures, even in areas of flat topography. Ground motions in excess of 0.1g can potentially trigger liquefaction in areas of unconsolidated granular sediment and shallow groundwater (Southern California Earthquake Center [SCEC] 1999). The risk of liquefaction is highest in areas with high predicted ground motions, unconsolidated sediments, and shallow groundwater.

Portions of the CSP Project alignment are characterized by these three conditions, and potential liquefaction risks exist in these areas. No liquefaction hazard maps or reports of historical liquefaction for the CSP Project alignment have been identified.

The California Geological Survey (CGS) Seismic Hazard Zonation Program includes mapping of earthquake-induced liquefaction zones. However, this program focuses on the major metropolitan areas of California; it has not addressed the area along the CSP Project alignment.

The CSP Project alignment crosses three valley areas with unconsolidated sediments: Owens Valley (including Chalfant Valley), Deep Springs Valley, and Fish Lake Valley. The potential occurrence of shallow groundwater in these valley areas is summarized in the following sections.

5.7.1.2.4.1 Owens and Chalfant Valleys

Shallow groundwater is likely to occur in parts of the Owens and Chalfant valleys, particularly in the central portion of the Owens Valley near the Owens River. These areas underlie portions of Segment 1, Segment 2, Segment 3, and Segment 5. The California Department of Water Resources (CDWR) noted that “in extensive portions of the [Owens Valley] basin ground water levels are near or at the surface.” (DWR 1964). The Safety Element of the City of Bishop General Plan notes that “the ground water under

the [Owens] valley floor is shallow enough to suggest potential liquefaction problems." (City of Bishop 1993). However, no further evaluation or mapping are available.

5.7.1.2.4.2 Deep Springs Valley

Water table depths have been mapped at approximately 180 to 250 feet bgs in the northern part of the Valley near Segment 5. (Jones 1965) Given this depth to groundwater, the liquefaction risk is low.

5.7.1.2.4.3 Fish Lake Valley

Current groundwater conditions in the Fish Lake Valley are not well documented. However, relatively shallow groundwater may occur near the CSP Project alignment, particularly in the lower parts of the valley where vegetation associated with groundwater depths of 10 to 50 feet bgs has been mapped. (Rush and Katzer 1973) Depth to groundwater in the portions of the valley in Nevada are mapped at 1 to 50 feet bgs (Lopes et al. 2006).

In summary, parts of the Owens, Chalfant, and Fish Lake valleys appear to contain both unconsolidated sediment and shallow groundwater, and thus present a potential liquefaction risk. The liquefaction risk is lower in the northern Deep Springs Valley, given the greater depth to groundwater.

5.7.1.2.5 Slope Instability

No records of major historical landslides were found along the CSP Project alignment. However, areas of steep slopes and relatively high landslide risk are widespread in the mountains of Inyo County (ICCB 2016), including the White Mountains, which are crossed by the CSP Project alignment.

The eastern portion of Segment 3 and Segment 4 of the CSP Project alignment in Mono County are located in valley areas. The hazards of landslides, rockfalls, slope creep, or other slope-related concerns are low to absent in these areas as they are, in general, characterized by relatively flat topography.

The susceptibility to deep-seated landslides is shown in Figure 5.7-5. The estimated values indicate the relative likelihood of deep landsliding based on regional estimates of rock strength and steepness of slopes. The highest risk area is found along Segment 3 in Silver Canyon, near the western edge of the White Mountains.

Other slope-related concerns in the White Mountain area include rockfalls and slope creep. Numerous rockfalls in the canyons of the White Mountains were reported after the 1986 Chalfant Valley Earthquake (Brewer 1989). Slope creep has been documented as a geomorphic process in the Basin and Range Province (Peterson 1981).

The risks of landslides and other slope-related concerns are low to absent in Segments 1 and 2, the western and eastern portions of Segment 3, and the entirety of Segments 4 and 5 in the Owens, Deep Springs, and Fish Lake valleys given the relatively flat topography of these areas.

5.7.1.2.6 Soil Erosion

Susceptibility of soils to erosion by water along the CSP Project alignment are summarized in Table 5.7-3. Water erosion hazard ratings developed by the United States Department of Agriculture (USDA) utilize Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) data and assume that vegetative cover has been removed, but soil horizons remain intact. The erosion hazard rating is influenced by slope and soil erosion factor (SSS 2016). Erosion by water is a slight hazard for the majority of mapped soils crossed by the CSP Project alignment. Approximately 3 percent of the mapped soil units within the CSP Project alignment have a moderate erosion hazard; approximately 0.5 percent have a severe or very severe hazard. Soils with higher erosion hazards are generally associated with steeper terrain along the CSP Project alignment.

The wind erodibility group and wind erodibility index are measures of soil susceptibility to wind erosion after cultivation or disturbance (NRCS 2017d). Wind erodibility groups (WEGs) are made up of soils that have similar properties affecting their susceptibility to wind erosion. The soils assigned to Wind Erodibility Group 1 are the most susceptible to wind erosion, and those assigned to Group 8 are the least susceptible. Wind erosion is most prevalent in silty and fine sandy soils with disturbed vegetation. Dust storms associated with wind erosion are identified as a hazard in Inyo County (ICCB 2016). Soils with relatively high levels of wind erodibility (Wind Erodibility Groups 1 and 2) occur in many parts of the Owens Valley. Table 5.7-3 presents the relative Wind Erodibility Group presence of soils along the CSP Project alignment.

5.7.1.2.7 Collapsible Soils

Soil collapse occurs when water enters the void space between soil particles and weakens the bonds between particles. The weight of overlying soils or structures causes the soil particles to shift, filling the voids and resulting in a reduced overall soil volume. Collapse of the soil at depth is translated to downward motion of the surface, causing differential settlement. Soils susceptible to collapse typically contain a large amount of void space (porosity), low bulk density, low clay content (less than 30 percent and most commonly 10 to 15 percent), and have formed rapidly in arid or semiarid climates, especially on alluvial fans (Scheffe and Lacy 2004). Soil collapse has not been identified as a significant issue within Inyo or Mono counties (ICCB 2016, Mono County 2009).

5.7.1.2.8 Expansive Soils

An expansive soil is any soil that is prone to large volume changes (shrinking and swelling) directly related to changing moisture conditions. Linear extensibility is a measure of soil shrink-swell potential, or the potential of a soil to change in volume between the wet and dry states (NRCS 2017e). This factor was evaluated using a weighted average of the representative values for all layers in the NRCS SSURGO database.

Expansive soil issues are not prevalent in Inyo County (ICCB 2016). Most of the soils identified along the CSP Project alignment have low shrink-swell potentials (with linear extensibility percent [LEP] values of less than 3.0). Soils with moderate shrink-swell potential (LEP values of 3.0 to 5.0), are found locally in the Owens Valley and at the western edge of the White Mountains. No soils with high (LEP values of 6.0 to 8.9) or very high (LEP above 9.0) have been identified along the CSP Project alignment.

Soils across approximately 74 percent of the CSP Project alignment are classified as Low (<3), with another 21 percent in areas without SSURGO coverage and not classified (Table 5.7-3). The soils across the remaining 5 percent of the CSP Project alignment are classified as Moderate, with 4 being the highest value of linear extensibility percent across the CSP Project alignment; these soils are generally located near the Owens River, or in Silver Canyon on the western side of the White Mountains. SSURGO data are not available for those portions of Mono County where ground-disturbing activities would take place; however, review of publicly-available documentation has not indicated any expansive soil issues in that portion of Mono County traversed by the CSP Project alignment.

5.7.1.2.9 Subsidence

No records of land subsidence were found along the CSP Project alignment, and there are no historical or expected occurrences of subsidence in Inyo County (ICCB 2016). The overall estimated potential for future subsidence in the Owens Valley Groundwater Basin is rated as low; this area includes the entirety of Segments 1 and 2, the western portion of Segment 3, and the entirety of Segment 4; insufficient data are available to estimate the potential for future subsidence in Deep Springs Valley and Fish Lake Valley (DWR 2014).

No subsidence has been observed in Mono County in the vicinity of the CSP Project alignment. However, all major county groundwater basins have been identified by the Division of Mines and Geology as areas where subsidence could occur as a result of excessive groundwater pumping.

5.7.1.3 Geologic Units

Geologic units along the CSP Project alignment are summarized in Table 5.7-2, based on USGS generalized maps for California (Figure 5.7-6, USGS 2018).

Table 5.7-2: Geologic Units Along the CSP Project Alignment

Project Segment	Rock Type	Rock Type
1	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
1	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
2	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
2	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
3	Early Proterozoic to Pleistocene Sandstone, Conglomerate, Dolostone, and Mudstone	Sandstone
3	Early Proterozoic to Pleistocene Sandstone, Conglomerate, Dolostone, and Mudstone	Sandstone
3	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
3	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
3	Early Proterozoic to Pleistocene Sandstone, Conglomerate, Dolostone, and Mudstone	Sandstone
3	Early Proterozoic to Pleistocene Sandstone, Conglomerate, Dolostone, and Mudstone	Sandstone
3	Primarily Mesozoic Granodiorite and Quartz Monzonite	Granodiorite
3	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
3	Early Proterozoic to Pleistocene Sandstone, Conglomerate, Dolostone, and Mudstone	Sandstone
4	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium
4	Quaternary Rhyolite and Ash-Flow Tuffs	Rhyolite
5	Primarily Mesozoic Granodiorite and Quartz Monzonite	Granodiorite
5	Pliocene to Holocene Alluvium and Terrace Deposits	Alluvium

5.7.1.3.1 Segments 1 and 2

The geology along Segments 1 and 2 is described below.

5.7.1.3.1.1 Owens Valley

The surficial deposits in the Owens Valley are mapped as Pliocene to Holocene alluvium and terrace deposits.

5.7.1.3.2 Segment 3

The geology along Segment 3 is described below.

5.7.1.3.2.1 Owens Valley

The surficial deposits in the Owens Valley are mapped as Pliocene to Holocene alluvium and terrace deposits.

5.7.1.3.2.2 White Mountains

The western parts of the White Mountains are dominated by a variety of Early Proterozoic to Pleistocene sedimentary rocks; these consist predominantly of sandstone, but also include conglomerate, dolostone, and mudstone. The eastern parts of the White Mountains consist primarily of Mesozoic granitic rocks including granodiorite and quartz monzonite.

5.7.1.3.2.3 Fish Lake Valley

The surficial deposits in the California portion of the Fish Lake Valley are mapped as Pliocene to Holocene alluvium and terrace deposits. The eastern end of the CSP Project is in the Nevada portion of the valley, which is mapped with similar alluvial and colluvial deposits.

5.7.1.3.3 Segment 4

The geology along Segment 4 is described below.

5.7.1.3.3.1 Chalfant Valley

The surficial deposits in the Chalfant Valley are mapped as Pliocene to Holocene alluvium and terrace deposits.

5.7.1.3.3.2 Volcanic Tablelands

The Volcanic Tablelands are mapped as Quaternary rhyolite and ash-flow tuffs.

5.7.1.3.4 Segment 5

The geology along Segment 5 is described below.

5.7.1.3.4.1 Deep Springs Valley

The surficial deposits in the Deep Springs Valley are mapped as Pliocene to Holocene alluvium and terrace deposits.

5.7.1.4 Soils

The soil types occurring along the CSP Project alignment, as mapped by the SSURGO database (NRCS 2017a), are listed in Table 5.7-3: Mapped Soil Units and Soil Properties; their distribution along the CSP Project alignment is shown in Figure 5.7-7. Table 5.7-3 also documents selected soil properties, including hydrologic group, wind erodibility, and linear extensibility.

The soils found in the valley areas of the CSP Project alignment are commonly deep to very deep and are associated with alluvial deposits derived from granitic or mixed rock sources, including alluvial fans, floodplains, and river terraces. The soils found in the White Mountains are commonly shallower and are derived from the underlying bedrock.

The hydrologic group classification is a measure of infiltration rate and runoff potential (NRCS 1986, 2017c). Group A soils have the highest infiltration rates and lowest runoff potentials; they are typically coarse-grained and deep. Conversely, Group D soils have the lowest infiltration rates and highest runoff potential; they are typically fine-grained and shallow, or in areas with high water tables. Groups B and C are intermediate. Soils from all four hydrologic groups can be found locally in both mountain and valley areas along the CSP Project alignment.

The wind erodibility group and wind erodibility index are measures of soil susceptibility to wind erosion after cultivation or disturbance (NRCS 2017d). Soils with relatively high levels of wind erodibility (Wind Erodibility Groups 1 and 2) occur in many parts of the Owens and Chalfant valleys. Inyo County is exposed to high wind events (ICCB 2016).

Linear extensibility is a measure of soil shrink-swell potential, or the potential of a soil to change in volume between the wet and dry states (NRCS 2017e). This factor was evaluated using a weighted average of the representative values for all layers in the NRCS State Soil Geographic (STATSGO) database. Most of the

soils along the CSP Project alignment have low shrink-swell potentials (with linear extensibility percent [LEP] values of less than 3.0). Soils with moderate shrink-swell potential (LEP values of 3.0 to 5.0), are found locally in the Owens Valley and at the western edge of the White Mountains. No soils with high (LEP values of 6.0 to 8.9) or very high (LEP above 9.0) have been mapped along the CSP Project alignment. Expansive soil issues are not prevalent in Mono County or Inyo County (ICCB 2016).

Table 5.7-3: Mapped Soil Units and Soil Properties

Soil Description			Soil Occurrence on CSP Alignment			Soil Properties			
Soil Map Unit	Soil Map Unit Key	Map Unit Name	CSP Segments with Soil	Length with Soils (miles)	Alignment Percentage with Soil	Hydrologic Group	Wind Erodibility Group	Wind Erodibility Index	Linear Extensibility Percent*
107	471523	Basket-Bondranch families-Rock outcrop, metasedimentary association, 60 to 80 percent slopes	3	3.3	3.1	C	6	48	2.4
117	471533	Bregar-Slinger families-Rock outcrop, metasedimentary complex, 30 to 60 percent slopes	3	2.6	2.4	A	6	48	1.5
126	471542	Hartig-Packham families association, 30 to 60 percent slopes	3	6.6	6.2	C	6	48	1.5
126	484924	Leo-Itme-Izo association	3	1.5	1.4	A	6	48	1.5
147	471563	Packham-Spaa families-Rock outcrop, granitic association, 30 to 60 percent slopes	3	9.3	8.9	D	6	48	1.5
151	488044	Cambidic Haplodurids-Typic Haplodurids association, cool, 5 to 50 percent slopes	3,4	1.8	1.7	D	6	48	1.5
154	471570	Rock outcrop-Rubbleland complex	3	7.3	7.0	--	8	0	--
164	471580	Spanel-Trocken families complex, 30 to 60 percent slopes	3	2.1	2.0	D	6	48	3.2
166	471582	Supervisor-Bartine families association, 30 to 70 percent slopes	3	2.0	1.9	B	5	56	1.5
169	471585	Supervisor family-Rock outcrop, metasedimentary complex, 5 to 30 percent slopes	3	2.5	2.4	B	6	48	1.5
170	471586	Supervisor family-Rock outcrop, metasedimentary complex, 30to 60 percent slopes	3	2.1	2.0	B	6	48	1.5
190	471606	Yuko family-Rock outcrop, granitic association, 30 to 60 percent slopes	3	2.1	2.0	D	6	48	1.5
199	488092	Goodale-Cartago complex, 2 to 5 percent slopes	3	1.5	1.4	A	3	86	1.5
200	488094	Goodale-Cartago complex, 5 to 15 percent slopes	1,3	2.9	2.8	A	3	86	1.5
221	488136	Inyo sand, 0 to 9 percent slopes	3	0.7	0.6	A	1	220	1.5
224	488145	Inyo-Poleta complex, 0 to 2 percent slopes	3	2.8	2.6	A	1	220	1.5
231	488158	Lithic Torriorthents-Lithic Haplargids-Rock outcrop complex, 30 to 75 percent slopes	3	0.2	0.2	D	2	134	2.1
247	488179	Lucerne gravelly loamy sand, 2 to 5 percent slopes	1,2,3	2.4	2.3	A	2	134	1.5

Table 5.7-3: Mapped Soil Units and Soil Properties

Soil Description			Soil Occurrence on CSP Alignment			Soil Properties			
Soil Map Unit	Soil Map Unit Key	Map Unit Name	CSP Segments with Soil	Length with Soils (miles)	Alignment Percentage with Soil	Hydrologic Group	Wind Erodibility Group	Wind Erodibility Index	Linear Extensibility Percent*
263	488205	Millpond-Lucerne complex, 0 to 2 percent slopes	2,3	0.7	0.7	D	2	134	1.5
264	488206	Millpond-Lucerne complex, 2 to 9 percent slopes	2,3	5.9	5.7	D	2	134	1.5
267	488211	Morey family-Winnedumah-Rindge family complex, 0 to 2 percent slopes	3	0.3	0.3	C	5	56	4
274	488220	Numu loam, 0 to 2 percent slopes	3	0.7	0.7	C	5	56	2.3
289	488242	Pokonahbe-Numu complex, 0 to 2 percent slopes	3	1.7	1.6	C	5	56	2.1
295	488251	Poleta-Tinemaha complex, 0 to 5 percent slopes	3	0.3	0.3	B	1	220	1.5
306	488263	Sabies-Yaney complex, 0 to 2 percent slopes	3,4	3.1	3.0	C	6	48	2.3
308	488265	Seaman-Yellowrock complex, 2 to 5 percent slopes	3	2.3	2.2	A	2	134	1.5
327	488289	Torrifluvents, 0 to 2 percent slopes	3	2.1	2.0	C	6	48	3.1
328	488290	Torrifluvents-Fluvaquentic Endoaquolls complex, 0 to 2 percent slopes	3	0.8	0.8	C	6	48	3
363	485016	Downeyville-Silverbow-Rock outcrop association	3	0.1	0.1	D	6	48	1.4
375	488337	Yermo very gravelly sandy loam, 2 to 5 percent slopes	3	5.1	3.9	A	6	48	1.5
375bo	2390820	Yermo very gravelly sandy loam, 2 to 5 percent slopes	3	0.4	0.4	A	6	48	1.5
730	485140	Koyen-Stumble-Penoyer association	3	0.3	0.3	A	3	86	1.5
NOT COM	2766142	No Digital Data Available	3, 5	22.5	21.4	-	-	-	-

* = Weighted average of representative values for all layers in SSURGO database

5.7.1.5 Paleontological Report

A paleontological technical report is provided as Appendix K. This technical report presents information on documented fossil collection localities within the CSP Project area and a ½-mile buffer; a paleontological resource sensitivity analysis based on published geological mapping and the resource sensitivity of each rock type; and supporting maps.

5.7.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.7.2.1 Regulatory Setting, Geology and Soils

5.7.2.1.1 Federal

5.7.2.1.1.1 National Earthquake Hazards Reduction Act of 1977

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) created the National Earthquake Hazards Reduction Program (NEHRP), establishing a long-term earthquake risk reduction program to better understand, predict, and mitigate risks associated with seismic events. Four federal agencies are responsible for coordinating activities under NEHRP: USGS; National Science Foundation (NSF); Federal Emergency Management Agency (FEMA); and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives (NEHRP 2009) are as follows:

1. Developing effective measures to reduce earthquake hazards;

2. Promoting the adoption of earthquake hazard reduction activities by federal, state, and local governments, national building standards and model building code organizations, engineers, architects, building owners, and others who play a role in planning and constructing buildings, bridges, structures, and critical infrastructure or "lifelines";

3. Improving the basic understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research involving engineering, natural sciences, and social, economic, and decision sciences; and

5. Developing and maintaining the USGS seismic monitoring system (Advanced National Seismic System); the NSF-funded project aimed at improving materials, designs, and construction techniques (George E. Brown Jr. Network for Earthquake Engineering Simulation); and the global earthquake monitoring network (Global Seismic Network).

Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

5.7.2.1.1.2 Clean Water Act

Enacted in 1972, the Federal Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary federal law applicable to water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the USEPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes States to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the NPDES, and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, programs and regulatory authority under the CWA have been delegated by USEPA to the SWRCB and its nine RWQCBs. Under Section 402 of the CWA as delegated to the State of California, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit. The SWRCB and RWQCBs have developed numeric and narrative water quality criteria to protect beneficial uses of State waters and waterways.

5.7.2.1.2 State

5.7.2.1.2.1 Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo (AP) Earthquake Fault Zoning Act was enacted by the State of California in 1972 to mitigate the hazard of surface faulting to structures planned for human occupancy and other critical structures. The State has established regulatory zones, known as Earthquake Fault Zones and often referred to as AP zones, around the surface traces of active faults and has issued Earthquake Fault Zone Maps to be used by government agencies in planning and reviewing new construction. In addition to residential projects, structures planned for human occupancy that are associated with industrial and commercial projects are of concern.

5.7.2.1.2.2 California Public Utilities Commission General Order 95

GO 95 Rules for Overhead Line Construction provides general standards for the design and construction of overhead electric transmission lines.

5.7.2.1.2.3 California Public Utilities Commission General Order 128

GO 128 (Rules for Construction of Underground Electric Supply and Communication Systems) provides general standards for the construction of underground electric systems.

5.7.2.1.2.4 Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California PRC Chapter 7.8, Section 2690-2699.6) directs the California Department of Conservation (DOC) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of this program is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. Seismic Hazard Zone Maps that identify Zones of Required Investigation have been generated as a result of the program. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. As discussed previously, the CSP Project is in an area that has not yet been mapped as part of the Seismic Hazards Mapping Act.

5.7.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.7.2.1.3.1 Inyo County General Plan, Safety Element

The Safety Element of the Inyo County General Plan (Inyo County 2013) contains a number of goals, policies, and implementation measures designed to maintain a safe environment and to protect public safety and property. The Safety Element addresses avalanches and geologic and seismic hazards among other topics. The goals, policies, and implementation measures contained in the General Plan are directed toward traditional residential, commercial, and institutional projects, and are not applicable to the CSP Project.

5.7.2.1.3.2 Inyo County and City of Bishop Multi-Jurisdictional Hazard Mitigation Plan

The Inyo County and City of Bishop Multi-Jurisdictional Hazard Mitigation Plan (ICCB 2016) establishes a strategy for Inyo County and the City of Bishop, California, to reduce hazard impacts. The Plan focuses on hazard mitigation in reducing the impacts of disasters by identifying effective and feasible actions to reduce the risks posed by potential hazards. The Plan develops mitigation actions to strengthen community resilience, which helps ensure coordinated and consistent hazard mitigation activities across Inyo County and Bishop. The County and the City have developed this Plan to be consistent with current standards and regulations, ensuring that the understanding of hazards facing the communities reflects best available science and current conditions. The Plan is also consistent with Federal Emergency Management Agency (FEMA) requirements.

5.7.2.1.3.3 Mono County General Plan, Safety Element

The Safety Element of the Mono County General Plan contains a host of goals, objectives, policies, and actions designed to maintain a safe environment and to protect public safety and property; these are directed toward traditional residential, commercial, and institutional development projects, and are not applicable to the CSP Project.

5.7.2.2 Regulatory Setting, Paleontological Resources

Federal, state, and local regulations were reviewed for applicability to the CSP Project.

5.7.2.2.1 Federal

A federal undertaking is a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency (36 CFR 800.16[y]). Actions and undertakings may take place either on or off federally controlled property and include new and continuing projects, activities, or programs and any of their elements not previously considered under NEPA, the FLPMA, and CFR 43, among others. In addition to the federal regulations described in the following subsections, federal authorizations would also be required because portions of the CSP Project area is under the jurisdiction of the USFS and the BLM Bishop and Ridgecrest field offices.

5.7.2.2.1.1 National Environmental Policy Act

The NEPA requires the federal government to carry out its plans and programs in such a way as to "preserve important historic, cultural, and natural aspects of our national heritage" (42 USC Section 4331[b][4]). The intent of the statute is to require that agencies obtain sufficient information regarding historic and cultural properties (including consulting, for example, appropriate members of the public; local, state, and other federal government agencies; and Native American tribes, organizations, and individuals) to make a determination of the historical and cultural significance of affected historic or cultural properties (including paleontological resources) and to take into account whether irreversible adverse impacts to such resources can or should be avoided, minimized, or mitigated.

5.7.2.2.1.2 Federal Land Policy and Management Act

This law (Public Law [PL] 94-579; 90 Statute 2743, USC 1701–1782) requires that public lands be managed in a manner that will protect the quality of their scientific values. Specifically, FLPMA was established as a public land policy to "provide for the management, protection, development, and

enhancement of the public lands." FLPMA requires federal agencies to manage public lands so that environmental, historic, archeological, and scientific resources are preserved and protected, where appropriate. Though FLPMA does not refer specifically to fossils, the law does protect scientific resources such as significant fossils, including vertebrate remains. FLPMA regulates the "use and development of public lands and resources through easements, licenses, and permits." The law requires the public lands to be inventoried so that the data can be used to make informed land-use decisions, and requires permits for the use, occupancy and development of the certain public lands, including the collection of significant fossils for scientific purposes (43 USC 1701 Section 102, 302 [U.S. Department of the Interior et al. 2001]).

5.7.2.2.1.3 Code of Federal Regulations, Title 43

Under Title 43, CFR Section 8365.1–5, the collection of scientific and paleontological resources, including vertebrate fossils, on federal land is prohibited. The collection of a "reasonable amount" of common invertebrate or plant fossils for noncommercial purposes is permissible (43 CFR 8365.1–5 [U.S. Government Printing Office 2014]).

5.7.2.2.1.4 Omnibus Public Lands Act

The Omnibus Public Lands Act (OPLA) directs the Secretaries of Interior and Agriculture to manage and protect paleontological resources on federal land using "scientific principles and expertise." OPLA incorporates most of the recommendations of the report of the Secretary of the Interior titled "Assessment of Fossil Management on Federal and Indian Lands" (2000) to formulate a consistent paleontological resources management framework. In passing the OPLA, Congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. Title VI, Subtitle D on Paleontological Resources Preservation (OPLA-PRP) codifies existing policies of federal agencies and provides the following:

- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands;
- Uniform minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants);
- Uniform definitions for "paleontological resources" and "casual collecting"; and
- Uniform requirements for curation of federal fossils in approved repositories.

Federal legislative protections for scientifically significant fossils applies to projects that take place on federal lands (with certain exceptions such as the Department of Defense), involve federal funding, require a federal permit, or involve crossing state lines. Since a portion of the CSP Project area occurs on federal agency-managed lands, federal protections for paleontological resources for those areas apply under NEPA, FLPMA, and OPLA-PRP. All paleontological work on federal agency lands must be approved and coordinated by the federal agency. All fossils collected from federal agency lands must be housed in a federally approved paleontological repository. The paleontological repository would be determined following lead agency coordination and the issuance of applicable permits for the CSP Project.

5.7.2.2.1.5 Bureau of Land Management Procedures and Policies for Managing Paleontological Resources

The PFYC system was developed by the BLM (2016) and provides an estimate of the potential that significant paleontological resources will be discovered within a particular mapped geological unit (Table 5.7-4). The system is used to determine potential impacts to paleontological resources for federal actions involving surface disturbance, land use planning, or land tenure adjustment. Implementation of the PFYC

system does not require changes to existing land use plans, project plans, or other completed efforts. However, integration into plans presently being developed is recommended. The IM 2016-124 revision is an update to the guidance that was introduced in IM 2008-009 (2007). The BLM Manual and Handbook H-8270-1 (1998) provides policies and direction for the BLM's Paleontological Resource Management Program as well as detailed procedures and standards for implementing policies. According to Section 6 of the BLM Manual and Handbook H-8270-1 (1998), it shall be BLM's policy to:

- Actively work with other federal, state, and Local Government Agencies, professional organizations, private land owners, educational institutions, and other interested parties to enhance and further the BLM's and the public's needs and objectives for paleontological resources.
- Consider paleontological resource management a distinct BLM program, to be given full and equal consideration in all its land use planning and decision making actions.
- Maintain a staff of professional paleontologists to provide BLM decision makers with the most current and scientifically sound paleontological resource data and advice.
- Mitigate adverse impacts to paleontological resources as necessary.
- Facilitate appropriate public and scientific use of and interest in paleontological resources.
- Utilize the additional skills and resources of the Bureau's recreation and minerals programs to develop and implement interpretation strategies and products to enhance public understanding, appreciation, and enjoyment of paleontological resources.
- Vigorously pursue the protection of paleontological resources from theft, destruction, and other illegal or unauthorized uses.
- Authorize land tenure adjustments, when appropriate, as means to protect paleontological localities.

Table 5.7-4: Potential Fossil Yield Classification (BLM 2016)

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary (PFYC System)
1 = Very Low Potential	- Geologic units are not likely to contain recognizable paleontological resources. - Units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units. - Units are Precambrian in age. - Management concern is usually negligible, and impact mitigation is unnecessary except in rare or isolated circumstances.
2 = Low Potential	- Geologic units are not likely to contain paleontological resources. - Field surveys have verified that significant paleontological resources are not present or are very rare. - Units are generally younger than 10,000 years before present. - Recent eolian deposits. - Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely. - Management concern is generally low, and impact mitigation is usually unnecessary except in occasional or isolated circumstances.
3 = Moderate Potential	- Sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence. - Marine in origin with sporadic known occurrences of paleontological resources. - Paleontological resources may occur intermittently, but these occurrences are widely scattered. - The potential for authorized land use to impact a significant paleontological resource is known to be low-to-moderate. - Management concerns are moderate. Management options could include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Opportunities may exist for hobby

Table 5.7-4: Potential Fossil Yield Classification (BLM 2016)

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary (PFYC System)
	collecting. Surface-disturbing activities may require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action and whether the action could affect the paleontological resources.
4 = High Potential	- Geologic units that are known to contain a high occurrence of paleontological resources. - Significant paleontological resources have been documented but may vary in occurrence and predictability. - Surface-disturbing activities may adversely affect paleontological resources. - Rare or uncommon fossils, including nonvertebrate (such as soft body preservation) or unusual plant fossils, may be present. - Illegal collecting activities may impact some areas. - Management concern is moderate to high depending on the proposed action. A field survey by a qualified paleontologist is often needed to assess local conditions. On-site monitoring or spot-checking may be necessary during land disturbing activities. Avoidance of known paleontological resources may be necessary.
5 = Very High Potential	- Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources. - Significant paleontological resources have been documented and occur consistently. - Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities. - Unit is frequently the focus of illegal collecting activities. - Management concern is high to very high. A field survey by a qualified paleontologist is almost always needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.
U = Unknown Potential	- Geologic units that cannot receive an informed PFYC assignment. - Geological units may exhibit features or preservational conditions that suggest significant paleontological resources could be present, but little information about the actual paleontological resources of the unit or area is unknown. - Geologic units represented on a map are based on lithologic character or basis of origin, but have not been studied in detail. - Scientific literature does not exist or does not reveal the nature of paleontological resources. - Reports of paleontological resources are anecdotal or have not been verified. - Area or geologic unit is poorly or under-studied. - BLM staff has not yet been able to assess the nature of the geologic unit. - Until a provisional assignment is made, geologic units with unknown potential have medium to high management concerns. Field surveys are normally necessary, especially prior to authorizing a ground-disturbing activity.

5.7.2.2.2 State

5.7.2.2.2.1 California Public Utilities Commission General Order 131-D

Pursuant to GO 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities in the State of California. Under CEQA, the CPUC is the lead agency with respect to such CSP Project elements within the State of California. SCE is required to comply with GO 131-D and is seeking a PTC from the CPUC for the CSP Project and therefore compliance with CEQA and other state environmental statutes involving cultural (including paleontological) resources. The CPUC is tasked with compliance of all provisions in CEQA and the CEQA Guidelines that concern cultural (including paleontological) resources as explained below.

5.7.2.2.2.2 California Environmental Quality Act

This law encourages the protection of all aspects of the environment by requiring state and local agencies to prepare multidisciplinary analyses of the environmental impacts of a proposed project, and to make decisions based on the findings of those analyses. CEQA also takes into account the laws and procedures of local California jurisdictions. CEQA includes in its definition of historical resources, "any object [or] site…that has yielded or may be likely to yield information important in prehistory" (14 CCR 15065.5[3]), which is typically interpreted as including fossil materials and other paleontological resources. More specifically, destruction of a "unique paleontological resource or site or unique geologic feature constitutes a significant impact under CEQA" (State CEQA Guidelines Appendix G). CEQA does not provide an explicit definition of a "unique paleontological resource," but a definition is implied by comparable language within the act relating to archaeological resources: "The procedures, types of activities, persons, and public agencies required to comply with CEQA are defined in: Guidelines for the Implementation of CEQA, as amended March 29, 1999" (Title 14, Chapter 3, CCR 15000 et seq.; Association of Environmental Professionals 2012). Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the CSP Project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include avoidance, monitoring, or data recovery excavation.

5.7.2.2.2.3 Public Resources Code Section 5097.5

This law affirms that no person shall willingly or knowingly excavate, remove, or otherwise destroy a vertebrate paleontological site or paleontological feature without the express permission of the overseeing public land agency. It further states under PRC 30244 that any development that would adversely affect paleontological resources shall require reasonable mitigation. These regulations apply to projects located on land owned by or under the jurisdiction of the state or any city, county, district, or other public agency (PRC Section 5097.5; California OHP 2005).

5.7.2.2.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

General plans and municipal codes were reviewed for relevant local policies pertaining to paleontological resources in the vicinity of the CSP Project. General plans reviewed included those of Inyo and Mono counties. Relevant goals, policies, and objectives are discussed in the following subsections.

5.7.2.2.3.1 Inyo County

Inyo County's General Plan (2001) has no mention of paleontological resources.

5.7.2.2.3.2 Mono County

Paleontological resources are briefly mentioned in the Cultural Resources section of the Conservation and Open Space element in the Mono County General Plan (Mono County 2009). Action 22.C.1.a includes disrupting or adversely affecting a paleontological site, except as a part of a scientific study, as an

example of a potentially significant impact to cultural resources. This action requires that future development projects with the potential to significantly impact cultural resources provide an analysis of the potential impacts prior to project approval. Action 22.C.1.a further requires that the analysis be funded by the CSP Project applicant; be prepared by a qualified person under the direction of Mono County; assess the cultural resources in the general project vicinity; describe impacts of the proposed development on these resources; and recommend project alternative or measures to avoid or mitigation impacts, which will be included as a condition of approval for the CSP Project.

5.7.3 Impact Questions

5.7.3.1 Impact Questions

The significance criteria for assessing the impacts to geology, soils, and paleontological resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42.); strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the CSP Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

5.7.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.7.4 Impact Analysis

5.7.4.1 Impact Analysis

5.7.4.1.1 Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides?

5.7.4.1.1.1 Construction

Less than Significant Impact. The CSP Project would have the potential to be directly impacted by surface rupture in the Alquist-Priolo Special Studies Zones crossed by the CSP Project alignment.

Portions of the CSP Project would be constructed within these zones, and as a result could experience strong seismic ground shaking. Even though the CSP Project is located in an area susceptible to earthquake forces, the subtransmission infrastructure involved would not be used for human occupancy and would be designed consistent with GO 95, Rules for Overhead Line Construction, to withstand wind, temperature, and wire tension loads. Accounting for these factors would result in a design that would be adequate to withstand expected seismic loading, and therefore impacts due to strong seismic ground shaking would be less than significant.

Liquefaction hazards are considered low to high along the CSP Project alignment. The risk of liquefaction is low in mountainous areas characterized by shallow or surficial bedrock, such as the White Mountains in the central part of Segment 3. The risk of liquefaction is high in valley areas characterized by unconsolidated sediments, shallow groundwater, and high potential ground motions, such as areas near the Owens River in the western part of Segment 3 and the southern part of Segment 5.

Local differences in liquefaction potential could cause differential settlement between pole locations, which could result in increased loads on conductor wires. Liquefaction-induced settlement could also cause stabilizing guy-wires to lose tension, which could result in pole instability. However, because the CSP Project alignment is located in sparsely populated or uninhabited areas, any liquefaction-induced damage to poles or wires would be unlikely to pose a risk of injury or loss of life. The most serious anticipated adverse effect would be a temporary loss of functionality, pending pole or wire repair or replacement. Therefore, reconstruction of the existing subtransmission lines in these areas would not expose people or non-SCE structures to potential substantial adverse effects, including the risk of loss, injury, or death, and thus impacts due to liquefaction would be less than significant.

The potential for either natural seismicity- or anthropogenic seismicity-induced landslides is a recognized hazard in the central portion of Segment 3 within the White Mountains due to steep slopes; avoidance of this area is infeasible within the existing alignment. Where feasible, SCE designed and sited poles to minimize the potential effects from landslides; however, wood pole-equivalents (and, to a lesser extent TSPs due to their foundations) installed in these areas would be exposed to the risk of loss from a landslide or rockfall. These areas are uninhabited and non-project structures are generally not present. Non-Project vehicle traffic on publicly-accessible roadways in areas subject to natural seismicity- or anthropogenic seismicity-induced landslides would be halted during activities that could result in landslides or rockfalls. In the event that damage to public roadways is realized from a Project-induced landslide or rockfall, the roadway would be repaired to the satisfaction of its owner. Therefore, reconstruction of the existing subtransmission lines in these areas would not expose people or non-SCE structures to potential substantial adverse effects, including the risk of loss, injury, or death, and thus impacts due to landslides would be less than significant.

5.7.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.7.4.1.2 Would the Project result in substantial soil erosion or the loss of topsoil?

5.7.4.1.2.1 Construction

Less than Significant Impact. Loss of topsoil and erosion could result from construction activities, including the operation of heavy machinery on unimproved roadways, grading activities, excavation, drilling, or wind or water erosion of stockpiled fill/excavated materials. Preparation of the staging areas and construction laydown

areas may result in the loss of topsoil; however, the application of road base or crushed rock would serve to reduce erosivity. Use of existing access roads would also result in the loss of topsoil; however, compaction and stabilization associated with that use would serve to minimize erosion on roadways.

Erosion due to water runoff and wind would be minimized by the implementation of BMPs that would be described in the SWPPPs prepared for the CSP Project. During construction, water trucks and other measures would be used to minimize the quantity of fugitive dust created by construction. Implementation of the SWPPPs and site-specific BMPs would ensure that no substantial soil erosion or loss of topsoil results from construction of the CSP Project, and thus impacts would be less than significant.

5.7.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.7.4.1.3 Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the CSP Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

5.7.4.1.3.1 Construction

Less than Significant Impact. The CSP Project would not cause any geologic unit or soil to become unstable.

Portions of Segment 3 are subject to precipitation- or seismically-induced slope instability and landslides. Construction activities may result in small, localized, on- and off-site rockfalls from the disturbance of existing surficial rock during drilling, blasting, or other excavation and pole installation activities; such rockfalls would occur in areas that would be closed to the public during construction, are uninhabited, and where non-project structures are generally not present. Non-Project vehicle traffic on publicly-accessible roadways in areas subject to off-site landslides would be halted during activities that could result in landslides. In the event that damage to public roadways is realized from a Project-induced landslide, the roadway would be repaired to the satisfaction of its owner.

Portions of Segments 1, 2, 3 and 4—including the areas in the Owens and Chalfant valleys near Bishop, and areas in Fish Lake Valley—may be subject to liquefaction and associated lateral spreading due to the presence of unconsolidated sediment and shallow groundwater. Construction of the CSP Project would not in and of itself result in the liquefaction of soils or lateral spreading.

No records of land subsidence were found along the CSP Project alignment, and there are no historical or expected occurrences of subsidence.

Expansive soil issues are not prevalent in Inyo County (ICCB 2016). Most of the soils along the CSP Project alignment have low shrink-swell potentials; soils with moderate shrink-swell potential are found locally in the Owens Valley and at the western edge of the White Mountains. No soils with high or very high shrink-swell potentials have been mapped along the CSP Project alignment.

As presented above, impacts associated with the risk of landslides, lateral spreading, subsidence, liquefaction, and collapse would be less than significant.

5.7.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M

activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.7.4.1.4 Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

5.7.4.1.4.1 Construction

Less than Significant Impact. Soils across approximately 95 percent of the CSP Project alignment are classified as having a low shrink-swell (expansive) potential, with the soils beneath the remaining 5 percent of the CSP Project alignment having a moderate shrink-swell (expansive) potential. Components of the CSP Project are not located immediately proximate to residences or third-party improvements in areas with moderate shrink-swell (expansive) potential. Therefore, there is no substantial direct or indirect risk to life or property, and a less than significant impact would be realized under this criterion.

5.7.4.1.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.7.4.1.5 Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

5.7.4.1.5.1 Construction

No Impact. No septic tanks or alternative waste water disposal systems are included in the CSP Project; therefore, no impacts are anticipated during construction of the CSP Project.

5.7.4.1.5.2 Operations

No Impact. No septic tanks or alternative waste water disposal systems are included in the CSP Project; therefore, no impacts are anticipated during construction of the CSP Project.

5.7.4.1.6 Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

5.7.4.1.6.1 Construction

Less than Significant Impact with Mitigation. Excavations in Precambrian Wyman Formation, Precambrian or Cambrian Reed Dolomite, Cambrian hornfels, Mesozoic and Cenozoic igneous rocks, or Pleistocene Bishop Tuff (PFYCs 1 and 2) are unlikely to uncover significant fossil remains.

Excavations entirely within previously disturbed sediments or younger Quaternary (Holocene) alluvial deposits (PFYC 2) are unlikely to uncover significant fossil remains; furthermore, any recovered resources from these surficial sediments will lack stratigraphic context. However, younger deposits may shallowly overlie older in situ sedimentary deposits.

Excavations in the CSP Project area that impact the Precambrian Deep Spring Formation; Precambrian to Cambrian Campito Formation; Cambrian Poleta, Harkless, Saline Valley, Mule Spring Limestone, and Emigrant formations; unnamed Pliocene to Pleistocene sedimentary deposits; or older Quaternary (Pleistocene) alluvial deposits (PFYCs U, 3, and 4), either at the surface or at depth beneath previously

disturbed sediments or younger Quaternary (Holocene) alluvial deposits, may result in adverse direct impacts on scientifically important paleontological resources.

Direct adverse impacts on paleontological resources resulting from construction of the CSP Project would be less than significant with implementation of APMs PAL-1, PAL-2, and PAL-3. These measures include preparation of a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), construction monitoring, and procedures to implement if paleontological resources are encountered during construction. The CSP Project would not result in indirect impacts on paleontological resources during construction since it would not increase public access.

5.7.4.1.6.2 Operations

Less than Significant Impact. Normal operation of substation, transmission, subtransmission, distribution, and telecommunications lines would be controlled remotely through SCE control systems, and manually in the field as required. Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles, tree trimming, brush and weed control, and access road maintenance. Most regular O&M activities of overhead facilities are performed from existing access roads with no surface disturbance. Repairs to facilities, such as repairing or replacing poles and structures, could occur in undisturbed, but previously surveyed areas. Therefore, operation impacts to unique paleontological resources would be less than significant.

5.7.4.2 Geotechnical Requirements

Based on the findings of the geotechnical analysis, SCE would design CSP Project components to minimize the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Measures that may be used to minimize impacts could include, but are not limited to: construction of pile foundations, installation of support around pole bases, installation of flexible bus connections, and incorporation of slack in cables.

5.7.4.3 Paleontological Resources

No paleontological resources were observed or collected during a pedestrian survey. Several formations were observed that are conducive to fossil preservation: Deep Spring Formation, middle member (dm); Campito Formation, undivided, Andrews Mountain, and Montenegro Members (Cc, Cca, Ccm); Poleta Formation undivided and lower member (Cp, Cpl); Harkless Formation (Ch), unnamed tuffaceous sandstone and conglomerate (Ts); and older Quaternary deposits including terrace gravels and older alluvial fan deposits (Qg1, Qg2, Qg3, Qof).

Excavations in the CSP Project area that impact the Precambrian Deep Spring Formation; Precambrian to Cambrian Campito Formation; Cambrian Poleta, Harkless, Saline Valley, Mule Spring Limestone, and Emigrant formations; unnamed Pliocene to Pleistocene sedimentary deposits; or older Quaternary (Pleistocene) alluvial deposits (PFYCs U, 3, and 4), either at the surface or at depth beneath previously disturbed sediments or younger Quaternary (Holocene) alluvial deposits, may result in adverse direct impacts on scientifically important paleontological resources.

5.7.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for Geology, Soils, and Paleontological resources.

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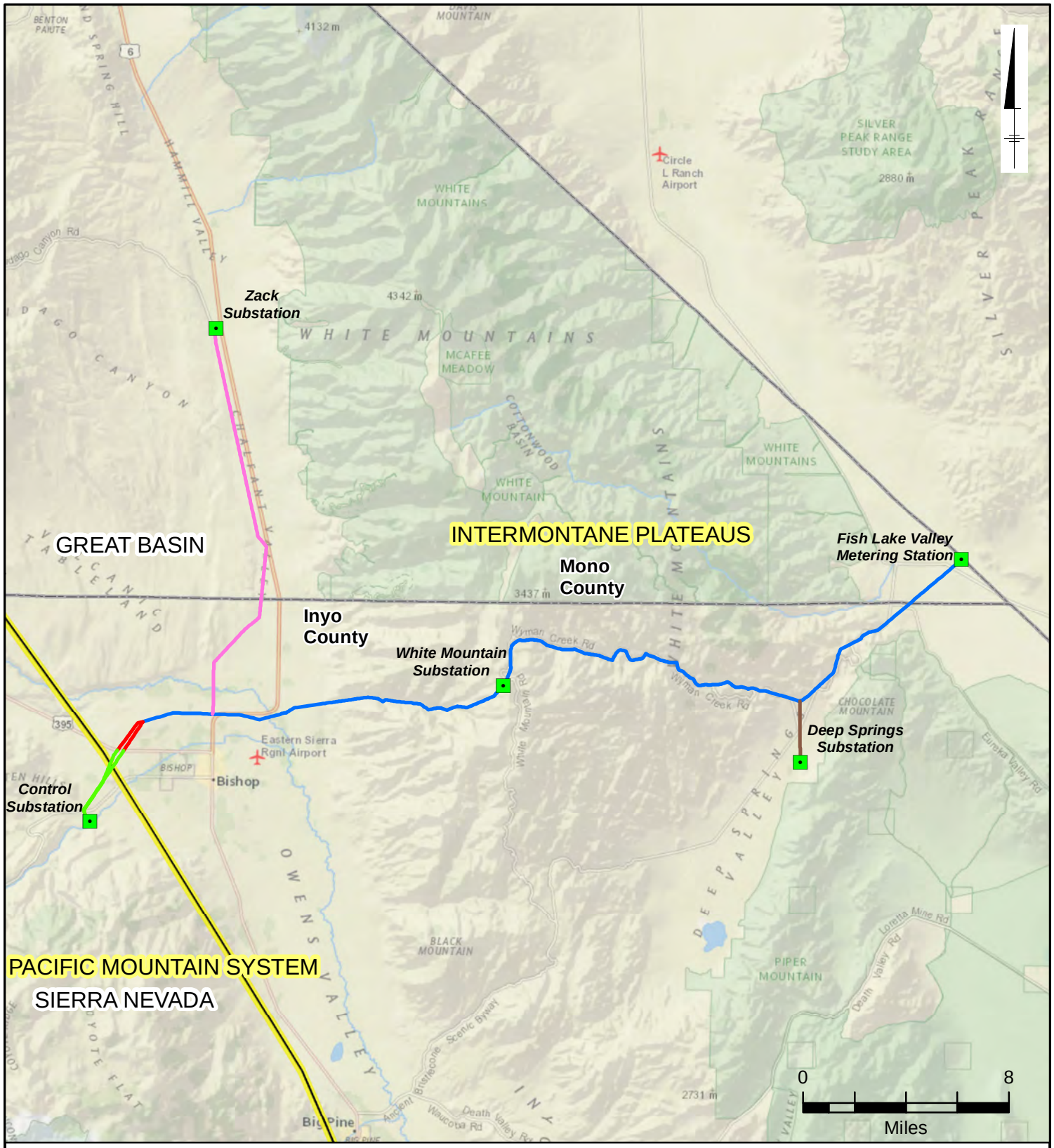

Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- USGS Physiographic Divisions
- USGS Physiographic Regions
- Counties

CONTROL-SILVER PEAK PROJECT

PRINCIPAL PHYSIOGRAPHIC AREAS

ARCADIS

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FIGURE 5.7-1

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LEGEND

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3
- SEGMENT 4 (ZACK TAP)
- SEGMENT 5 (DEEP SPRINGS TAP)
- 10 MILE PROJECT BUFFER

FAULT
- HISTORICAL FAULT
- HOLOCENE FAULT
- LATE QUATERNARY FAULT
- QUATERNARY FAULT
- PRE-QUATERNARY FAULT

HOLOCENE FAULT ZONES
- OWENS VALLEY FAULT ZONE
- UNNAMED FAULTS IN VOLCANIC TABLELANDS
- FISH SLOUGH FAULT
- WHITE MOUNTAINS FAULT ZONE
- DEP SPRINGS FAULT
- FISH LAKE VALLEY FAULT

Source: CGS 2017b

Note: Boxed numbers indicate references in CGS (2010).

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IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

CONTROL-SILVER PEAK PROJECT

FAULT MAP

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FIGURE 5.7-2

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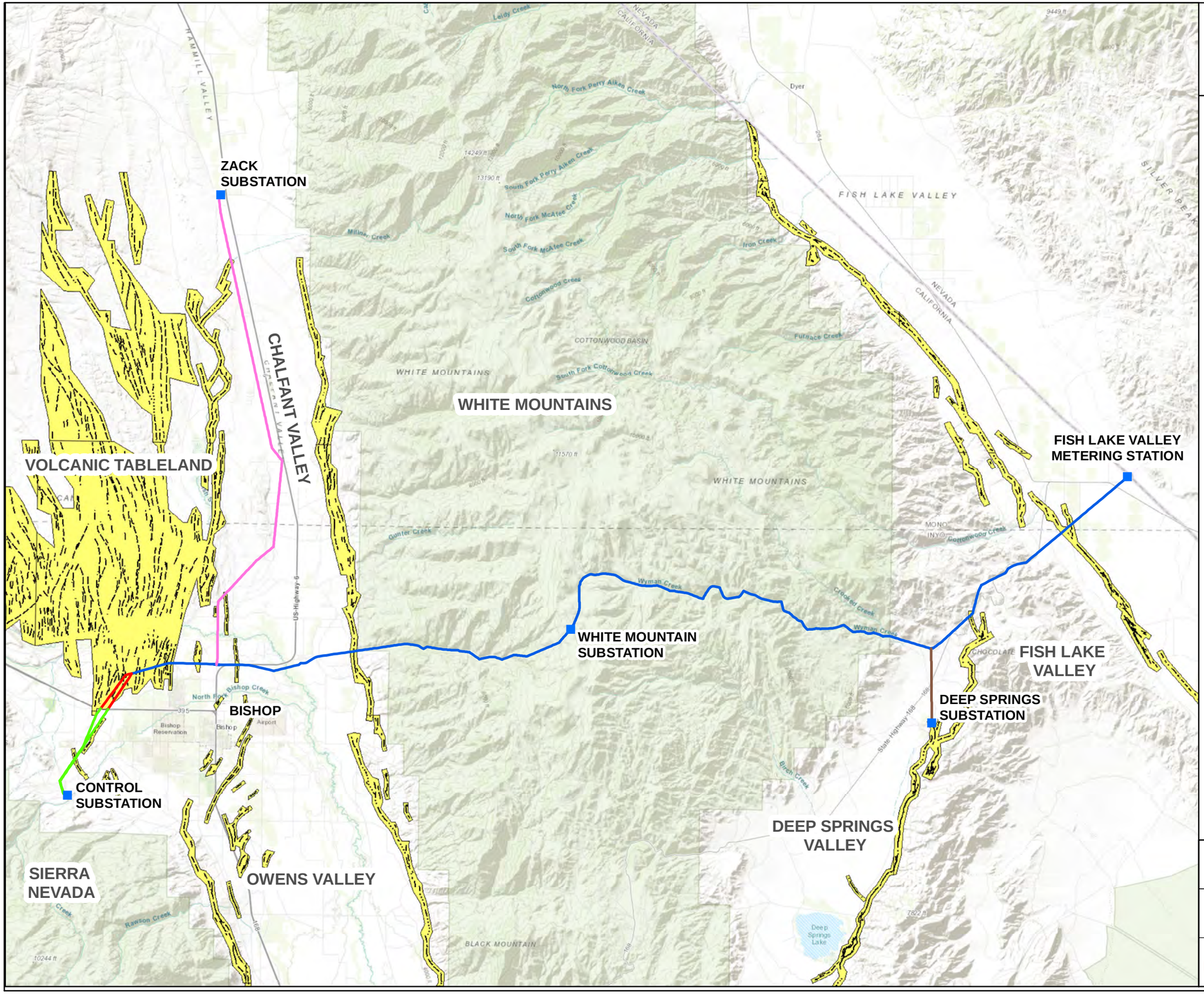
Coordinate System: NAD 1983 UTM Zone 11N



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LEGEND

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3
- SEGMENT 4 (ZACK TAP)
- SEGMENT 5 (DEEP SPRINGS TAP)
- HOLOCENE FAULT TRACES
- ALQUIST-PRIOLO ZONES

Source: CGS, 2017a

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Miles

IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

CONTROL-SILVER PEAK PROJECT

ALQUIST-PRIOLO SPECIAL STUDIES ZONES MAP

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FIGURE **5.7-3**

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Coordinate System: NAD 1983 UTM Zone 11N

ZACK SUBSTATION

CHALFANT VALLEY

VOLCANIC TABLELAND

WHITE MOUNTAINS

FISH LAKE VALLEY METERING STATION

WHITE MOUNTAIN SUBSTATION

FISH LAKE VALLEY

DEEP SPRINGS SUBSTATION

BISHOP

CONTROL SUBSTATION

DEEP SPRINGS VALLEY

SIERRA NEVADA

OWENS VALLEY

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LEGEND

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3
- SEGMENT 4 (ZACK TAP)
- SEGMENT 5 (DEEP SPRINGS TAP)

EARTHQUAKE SHAKING POTENTIAL, EXPRESSED AS PERCENT OF GRAVITY (G)

190 - 200%	100 - 110%
180 - 190%	90 - 100%
170 - 180%	80 - 90%
160 - 170%	70 - 80%
150 - 160%	60 - 70%
140 - 150%	50 - 40%
130 - 140%	40 - 30%
120 - 130%	30 - 20%
110 - 120%	

NOTES:
1. SHAKING POTENTIAL VALUES REFLECT EXPECTED INTERMEDIATE PERIOD (1.0 SECOND) GROUND MOTIONS WITH 2% EXCEEDANCE PROBABILITY IN 50 YEARS.
2. RED = HIGHER SHAKING POTENTIAL, GREEN = LOWER SHAKING POTENTIAL.
3. BASED ON BRANUM ET AL. (2016) AND CGS (2016).

0 2.5 5
Miles

IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

CONTROL-SILVER PEAK PROJECT

EARTHQUAKE SHAKING POTENTIAL MAP

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FIGURE 5.7-4

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Coordinate System: NAD 1983 UTM Zone 11N

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ZACK SUBSTATION

CHALFANT VALLEY

WHITE MOUNTAINS

VOLCANIC TABLELAND

FISH LAKE VALLEY METERING STATION

WHITE MOUNTAIN SUBSTATION

FISH LAKE VALLEY

DEEP SPRINGS SUBSTATION

BISHOP

CONTROL SUBSTATION

DEEP SPRINGS VALLEY

SIERRA NEVADA

OWENS VALLEY

LEGEND

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3
- SEGMENT 4 (ZACK TAP)
- SEGMENT 5 (DEEP SPRINGS TAP)
- GREATER LANDSLIDE SUSCEPTIBILITY
- LOWER LANDSLIDE SUSCEPTIBILITY

NOTES:
1. LANDSLIDE SUSCEPTIBILITY REFLECTS ROCK STRENGTH AND SLOPE CLASS.
2. BASED ON WILLS ET AL. (2011) AND CGS (2018C)

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Miles

IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

CONTROL-SILVER PEAK PROJECT

LANDSLIDE SUSCEPTIBILITY MAP

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FIGURE **5.7-5**

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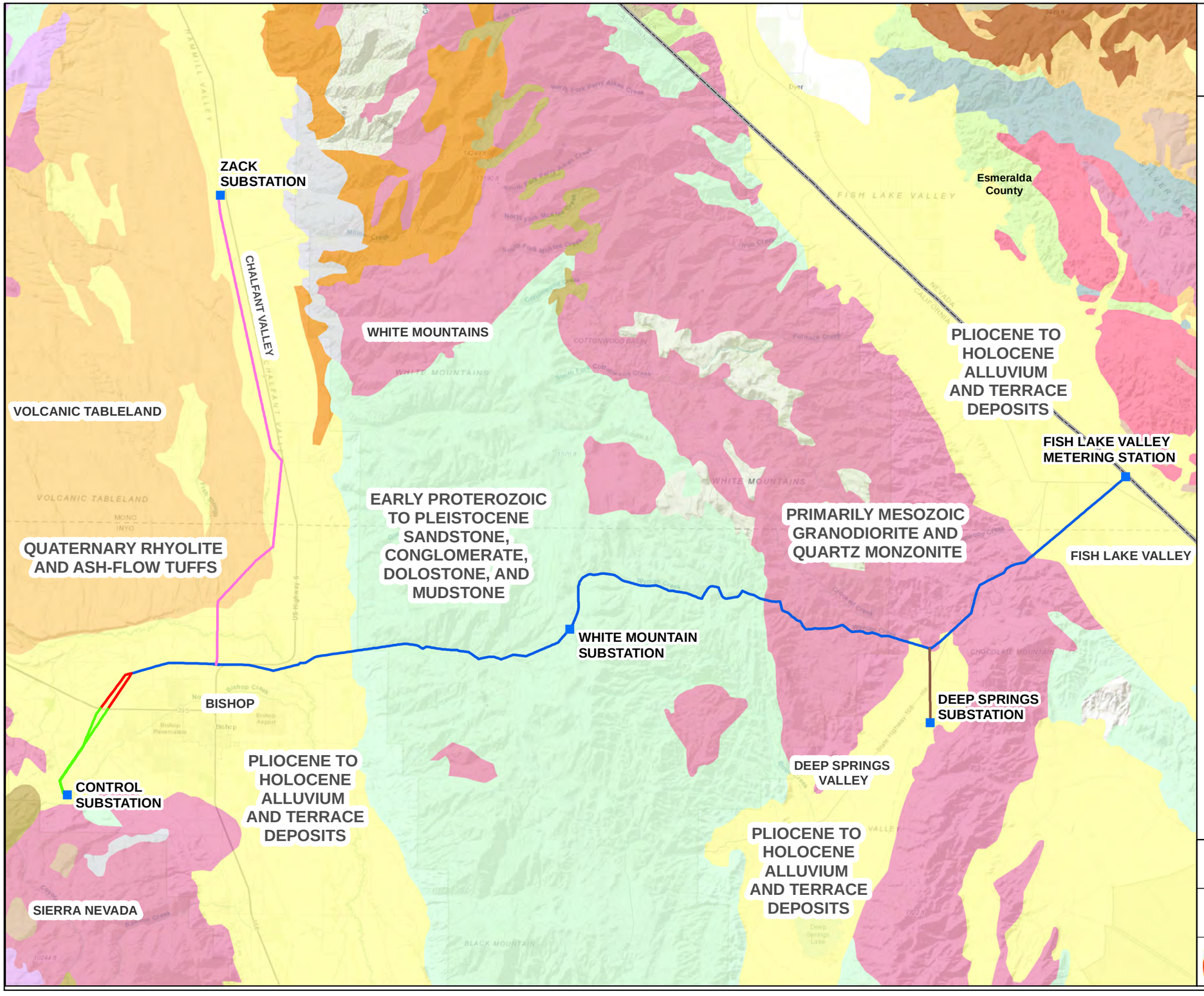
Coordinate System: NAD 1983 UTM Zone 11N



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LEGEND

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3
- SEGMENT 4 (ZACK TAP)
- SEGMENT 5 (DEEP SPRINGS TAP)

LITHOGRAPHY

- PLIOCENE TO HOLOCENE ALLUVIUM AND TERRACE DEPOSITS
- QUATERNARY RHYOLITE AND ASH-FLOW TUFFS
- PRIMARILY MESOZOIC GRANODIORITE AND QUARTZ MONZONITE
- EARLY PROTEROZOIC TO PLEISTOCENE SANDSTONE, CONGLOMERATE, DOLOSTONE, AND MUDSTONE

Source: USGS 2017a, 2017b

0 2.5 5
Miles

IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

CONTROL-SILVER PEAK PROJECT

GENERALIZED GEOLOGIC MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE **5.7-6**

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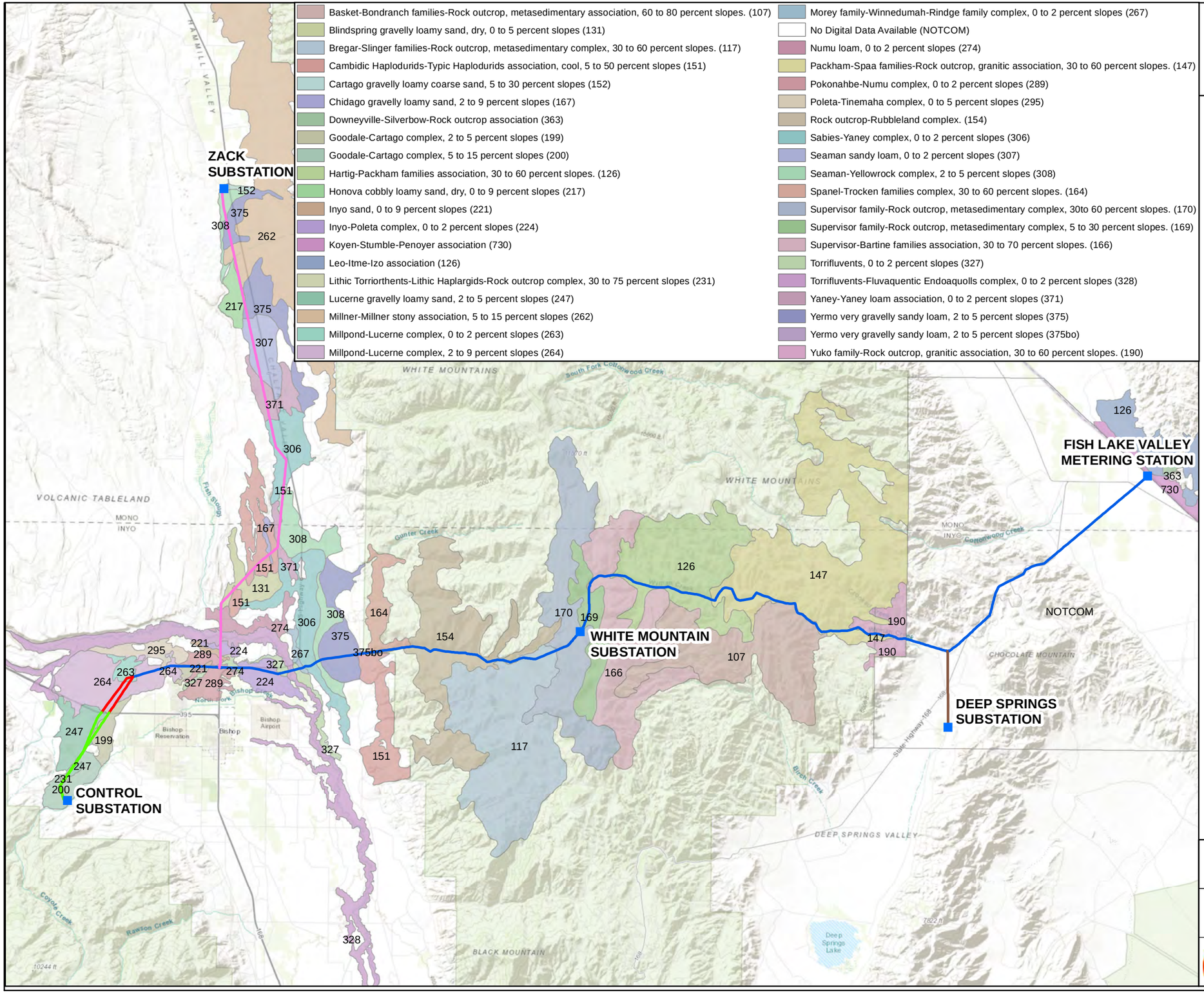
Coordinate System: NAD 1983 UTM Zone 11N



- Basket-Bondranch families-Rock outcrop, metasedimentary association, 60 to 80 percent slopes. (107)
- Blindspring gravelly loamy sand, dry, 0 to 5 percent slopes (131)
- Bregar-Slinger families-Rock outcrop, metasedimentary complex, 30 to 60 percent slopes. (117)
- Cambidic Haplodurids-Typic Haplodurids association, cool, 5 to 50 percent slopes (151)
- Cartago gravelly loamy coarse sand, 5 to 30 percent slopes (152)
- Chidago gravelly loamy sand, 2 to 9 percent slopes (167)
- Downeyville-Silverbow-Rock outcrop association (363)
- Goodale-Cartago complex, 2 to 5 percent slopes (199)
- Goodale-Cartago complex, 5 to 15 percent slopes (200)
- Hartig-Packham families association, 30 to 60 percent slopes. (126)
- Honova cobbly loamy sand, dry, 0 to 9 percent slopes (217)
- Inyo sand, 0 to 9 percent slopes (221)
- Inyo-Poleta complex, 0 to 2 percent slopes (224)
- Koyen-Stumble-Penoyer association (730)
- Leo-Itme-Izo association (126)
- Lithic Torriorthents-Lithic Haplargids-Rock outcrop complex, 30 to 75 percent slopes (231)
- Lucerne gravelly loamy sand, 2 to 5 percent slopes (247)
- Millner-Millner stony association, 5 to 15 percent slopes (262)
- Millpond-Lucerne complex, 0 to 2 percent slopes (263)
- Millpond-Lucerne complex, 2 to 9 percent slopes (264)
- Morey family-Winnedumah-Rindge family complex, 0 to 2 percent slopes (267)
- No Digital Data Available (NOTCOM)
- Numu loam, 0 to 2 percent slopes (274)
- Packham-Spaa families-Rock outcrop, granitic association, 30 to 60 percent slopes. (147)
- Pokonahbe-Numu complex, 0 to 2 percent slopes (289)
- Poleta-Tinemaha complex, 0 to 5 percent slopes (295)
- Rock outcrop-Rubbleland complex. (154)
- Sabies-Yaney complex, 0 to 2 percent slopes (306)
- Seaman sandy loam, 0 to 2 percent slopes (307)
- Seaman-Yellowrock complex, 2 to 5 percent slopes (308)
- Spanel-Trocken families complex, 30 to 60 percent slopes. (164)
- Supervisor family-Rock outcrop, metasedimentary complex, 30to 60 percent slopes. (170)
- Supervisor family-Rock outcrop, metasedimentary complex, 5 to 30 percent slopes. (169)
- Supervisor-Bartine families association, 30 to 70 percent slopes. (166)
- Torrifluvents, 0 to 2 percent slopes (327)
- Torrifluvents-Fluvaquentic Endoaquolls complex, 0 to 2 percent slopes (328)
- Yaney-Yaney loam association, 0 to 2 percent slopes (371)
- Yermo very gravelly sandy loam, 2 to 5 percent slopes (375)
- Yermo very gravelly sandy loam, 2 to 5 percent slopes (375bo)
- Yuko family-Rock outcrop, granitic association, 30 to 60 percent slopes. (190)

SOUTHERN CALIFORNIA EDISON
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N

LEGEND

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3
- SEGMENT 4 (ZACK TAP)
- SEGMENT 5 (DEEP SPRINGS TAP)

0 3.5 7
Miles

IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

CONTROL-SILVER PEAK PROJECT

SOIL UNITS MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5.7-7

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Coordinate System: NAD 1983 UTM Zone 11N

5.8 Greenhouse Gas Emissions

This section describes the GHG regulations that are applicable to electrical transmission projects and evaluates the potential impacts from construction and operation of the CSP Project.

5.8.1 Environmental Setting

5.8.1.1 GHG Setting

GHGs refer to gases that trap heat in the atmosphere, causing a greenhouse effect. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). Atmospheric concentrations of the two most important directly emitted, long-lived GHGs, CO_2 and CH_4, are currently well above the range of atmospheric concentrations that occurred over the last 650,000 years (Pew Center 2008). According to the Intergovernmental Panel on Climate Change (IPCC), increased atmospheric levels of CO_2 are correlated with rising temperatures; concentrations of CO_2 have increased by 31 percent above pre-industrial levels since the year 1750. Climate models show that temperatures will probably increase by 1.4 degrees Celsius (°C) to 5.8°C by the year 2100 (IPCC 2007).

Global warming potential (GWP) estimates how much a given mass of a GHG contributes to climate change. The term enables comparison of the warming effects of different gases. GWP uses a relative scale that compares the warming effect of the gas in question with that of the same mass of CO_2. The CO_2 equivalent (CO_2e) is a measure used to compare the effect of emissions of various GHGs based on their GWP, when projected over a specified time period (generally 100 years). CO_2e is commonly expressed as million metric tons (MMT) of CO_2 equivalents ($MMTCO_2e$). The CO_2e for a gas is obtained by multiplying the mass of the gas (in tons) by its GWP.

5.8.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.8.2.1 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.8.2.1.1 Federal

5.8.2.1.1.1 Federal Mandatory Reporting of Greenhouse Gases (Section 40 Code of Federal Regulations Part 98)

The Federal CAA requires the USEPA to define national standards to protect U.S. public health and welfare. The Federal CAA does not currently regulate GHG emissions from construction activities specifically; however, GHGs are pollutants that can be regulated in the future under the Federal CAA. There are currently no federal regulations that set ambient air quality standards for GHGs.

5.8.2.1.2 State

5.8.2.1.2.1 Executive Order B-30-15

Executive Order B-30-15 establishes an interim greenhouse gas reduction target of 40 percent below 1990 levels and directs state agencies to take additional actions to prepare for the impacts of climate change. These actions are captured in the state's adaptation strategy, Safeguarding California, which is to be updated every 3 years.

5.8.2.1.2.2 Executive Order B-55-18

Executive Order B-30-15 establishes a new statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The goal is in addition to the existing statewide targets of reducing greenhouse gas emissions.

5.8.2.1.2.3 Global Warming Solutions Act of 2006 (Assembly Bill 32)

The California Global Warming Solutions Act of 2006 (Assembly Bill 32) charges the CARB with the responsibility of monitoring and regulating sources of GHG emissions in order to reduce those emissions. The CARB established a scoping plan in December 2008 for achieving reductions in GHG emissions and has established and implemented regulations for reducing those emissions by the year 2020.

5.8.2.1.2.4 California Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 (Senate Bill 32) expands upon AB 32 to reduce GHG emissions. The Bill requires CARB to reduce greenhouse gas emissions to 40% below the 1990 levels by 2030. This bill gives CARB the authority to adopt regulations in order to achieve the maximum technology feasible to be the most cost-efficient way to reduce greenhouse gas emissions.

5.8.2.1.2.5 Climate Change Scoping Plan

The CARB's Climate Change Scoping Plan was developed in response to Executive Order B-30-15 and SB 32; the Plan establishes a path that will get California to its 2030 target.

5.8.2.1.2.6 California Mandatory Greenhouse Gas Reporting Regulation (17 California Code of Regulations §§ 95100 – 95133)

Pursuant to AB 32, CARB adopted the Mandatory Greenhouse Gas Reporting Regulation. The facilities required to annually report their GHG emissions include electricity-generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 metric tons per year of CO_2 from stationary source combustion. In particular, retail providers of electricity are required to report fugitive emissions of SF_6 related to transmission and distribution systems, substations, and circuit breakers located in California that the retail provider or marketer is responsible for maintaining in proper working order. SCE complies with these requirements.

5.8.2.1.2.7 Senate Bill 100

Senate Bill 100, signed into law in September 2018, amends the California Renewables Portfolio Standard (RPS) Program. The RPS Program requires the CPUC to establish a renewables portfolio standard requiring all retail sellers of electricity to procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 25 percent of retail sales by December 31, 2016, 33 percent by December 31, 2020, 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. SB 100 also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales by 2045. The RPS Program additionally requires each local publicly owned electric utility to procure a minimum quantity of electricity products from eligible renewable energy resources to achieve the procurement requirements established by the program.

5.8.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from

regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.8.2.1.3.1 Great Basin Unified Air Pollution Control District

The GBUAPCD has not formally adopted recommendations or official guidance to evaluate the significance of GHG emissions for projects. However, an adjacent air district, the Eastern Kern Air Pollution Control District (EKAPCD) has adopted an addendum to their EKAPCD CEQA Guidelines, *Addressing GHG Emission Impacts for Stationary Source Projects When Serving as the Lead CEQA Agency*. The recommended threshold for GHG emissions is 25,000 metric tons per year of CO_2e and is used for this evaluation.

5.8.3 Impact Questions

5.8.3.1 Impact Questions

The significance criteria for assessing the impacts from GHG emissions are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions

5.8.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.8.4 Impact Analysis

5.8.4.1 Impact Analysis

5.8.4.1.1 Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

5.8.4.1.1.1 Construction and Operations

Less than Significant Impact. Greenhouse gas emissions would be generated from operation of heavy equipment, support vehicles and helicopters. The most common GHGs associated with fuel combustion are CO_2, CH_4, and N_2O. Annual GHG emissions were estimated for construction activities using the CalEEMod model for both on-road and off-road sources. Helicopter emissions were estimated based on the Swiss Federal Office of Civil Aviation (FOCA) Guidance on the Determination of Helicopter Emissions (FOCA 2015).

Construction activities would result in emissions of GHG over the construction period. Construction activities would result in exhaust emissions from vehicular traffic, as well as from construction equipment and machinery. Over the construction period, approximately 8,788 $MTCO_2e$ would be emitted. Greenhouse gas construction emissions from future activities amortized over 30 years is approximately 293 $MTCO_2e$. As explained in Section 5.3, operational emissions would not differ in scope or scale from

activities currently conducted. Thus, the estimated annual emission of GHGs from the operation of the infrastructure replaced under the CSP Project is unchanged from the current O&M-related emissions. Combined, the 293 $MTCO_2e$ emissions associated with construction and operations would be well below the 25,000 $MTCO_2e$ threshold of significance established by the EKAPCD. Therefore, the CSP Project would not generate, either directly or indirectly, GHG emissions that would have a significant impact on the environment, and impacts would be less than significant.

5.8.4.1.2 Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

5.8.4.1.2.1 Construction

No Impact. Construction of the CSP Project would be consistent with applicable policies, plans, and regulations for reducing GHG emissions. The CSP Project would incorporate best management practices and other standard SCE practices, such as reducing the idling time of construction vehicles, that are consistent with the requirements and intentions of the federal and state plans, policies, and regulations. Construction activities would not be expected to consume a substantial amount of energy that would result in a conflict with policies that serve to reduce GHG emissions through a reduction in energy consumption. As presented above, GHG construction emissions from activities amortized over 30 years would be approximately 293 $MTCO_2e$. GHG emissions would fall well below the numerical threshold of significance established by the EKAPCD and used as a proxy for the area of the CSP Project. Therefore, no impact would occur under this criterion.

5.8.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.8.4.2 GHG Emissions

Results of GHG emissions modeling is presented in Appendix B.

5.8.5 CPUC Draft Environmental Measures.

SCE will, as directed by the CPUC, implement during construction of the CSP Project the following measures:

- If suitable park-and-ride facilities are available in the project vicinity, construction workers shall be encouraged to carpool to the job site.
- The Applicant shall develop a carpool program to the job site.
- On road and off-road vehicle tire pressures shall be maintained to manufacturer specifications.
- Tires shall be checked and re-inflated at regular intervals.
- Demolition debris shall be recycled for reuse to the extent feasible.
- The contractor shall use line power instead of diesel generators at all construction sites where line power is available.
- The contractor shall maintain construction equipment per manufacturing specifications.

5.9 Hazards, Hazardous Materials, and Public Safety

This section describes the hazards and hazardous materials in the area of the CSP Project, as well as the potential impacts from construction and operation of the CSP Project.

5.9.1 Environmental Setting

As described in Section 5.11.1, the existing land use along the CSP Project alignment is primarily open space, with scattered residential and agricultural uses. Light industrial uses are found in the western portion of Segment 3 near Laws. Past land uses along the CSP Project alignment included primarily open space, with mining, mineral prospecting and processing, and agriculture dispersed along the alignment.

5.9.1.1 Hazardous Materials Report

State and federal databases were reviewed to identify hazardous materials and hazardous waste facilities including federal Superfund sites, State Response sites, Voluntary Cleanup sites, School Cleanup sites, Permitted Operating sites, Corrective Action sites, and Tiered Permit sites within or adjacent to the CSP Project alignment.

No records were found that indicate Superfund sites are present within or immediately adjacent to the CSP Project alignment. Records pertaining to facilities reporting to the USEPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database were not found within 0.5 mile of the CSP Project alignment. No records were found in the USEPA's Toxics Release Inventory (TRI) database within 0.5 miles of the CSP Project. No records were found in USEPA's Hazardous Waste Generator database within 0.5 miles of the CSP Project.

Table 5.9-1 lists the hazardous material and waste sites within 0.5 miles of the CSP Project; records for these sites are presented in Appendix F. The reviewed records indicate hazardous materials are not present within or immediately adjacent to the CSP Project alignment.

Table 5.9-1: Hazardous Materials and Waste Sites

Project Segment	Database	Facility Name	Location	Type	Distance (miles/direction)
1	Envirostor	Johannsen Reduction Plant	37.359444, -118.461667	Formerly Used Defense Site	0.5 / E
3	Geotracker	Former Laws Bulk Plant (Inyo Crude)	37.403611, -118.346328	Closed Leaking UST Case	0.2 / N
4	Geotracker	Bishop Mill	37.454496, -118.363886	Land Disposal Site	0.4 / W

5.9.1.2 Airport Land Use Plan

The Inyo County Airport Land Use Commission adopted a Policy Plan and Airport Comprehensive Land Use Plan (CLUP) in December 1991, which guides the orderly development of each public use airport in the County.

Based on the Inyo County Policy Plan and Airport CLUP, approximately 6.1 line-miles of the CSP Project would fall within the footprint of the Airport Hazard Overlay District (Inyo County Code 2014).

5.9.1.3 Fire Hazard

Within California, fire hazard severity zones are designated by CAL FIRE. CAL FIRE uses a five-tiered ranking system to assess the threat to people based on fuel hazard, wildland fire potential, and housing

density. The tiers, from lowest to highest threat, are termed little or no threat, moderate threat, high threat, very high threat, and extreme threat. Fire hazard severity zones are administered by the federal, State, or local government that is financially responsible for preventing and suppressing wildfires in a given area, and are categorized into the following three groups:

- Federal Responsibility Areas: The federal government is financially responsible for wildfire suppression. The majority of Segments 1 and 3 are located in Federal Responsibility Areas.
- State Responsibility Areas: The State is financially responsible for wildfire suppression. The majority of Segment 1, all of Segment 2, the western portion of Segment 3, and the locations in Segment 4 where work would occur are located in State Responsibility Areas.
- Local Responsibility Areas: Cities or counties are financially responsible for wildfire suppression. Small portions of the eastern portion of Segment 3, and the locations in Segment 5 where work would occur, are located in Local Responsibility Areas.

The existing subtransmission lines and substations associated with the CSP Project are located within all three responsibility areas as shown in Figure 5.20-4.

The majority of the CSP Project alignment, including the central and eastern portions of Segment 3 and all areas where work would be performed in Segments 4 and 5, is located within the CAL FIRE moderate fire hazard severity zone. The majority of the remainder of the alignment, including the majority of Segment 1, the entirety of Segment 2, and the western portion of Segment 3, is located within the CAL FIRE high fire hazard severity zone. Small sections of the eastern portion of Segment 3 are located in undesignated areas. Tabular information on the miles of CSP Project alignment located within these zones is presented in Table 5.9-2 below, and shown graphically on Figure 5.20-1, Fire Hazard Severity Zones.

CPUC Fire-Threat Map data are presented in Figure 5.20-3; as seen in Figure 5.20-3, the entirety of Segment 1 is located in a CPUC-designated Fire Threat Area Tier 2 - Elevated. No other portion of the CSP Project is located in a CPUC-designated Fire Threat Area.

Table 5.9-2: Segment Miles of CSP Project Alignment within Designated Fire Hazard Severity Zones

Project Segment	Fire Hazard Severity Zone	Distance	SRA*	LRA*	FRA*	CPUC FTA*
1	High	2.55	2.53	0	0.02	3.3 (Tier 2)
1	Moderate	0.75	0	0	0.75	
2	High	1.5	1.5	0	0	0
3	High	6.6	6.6	0	0	0
3	Moderate	30.6	30.2	0.35	0	
3	Unzoned	0.8	0	0.73	0.03	
4	High	1.4	1.4	0	0	0
4	Moderate	15.8	7.6	0.5	6.7	
5	Moderate	2.4	0	1.2	1.2	0

*Acronyms:
FRA: Federal Responsibility Area
FTA: Fire-Threat Area
LRA: Local Responsibility Area
SRA: State Responsibility Area

5.9.1.4 Metallic Objects

The CSP Project alignment does not cross, or is otherwise located nearer than 25 feet to, any crude oil or natural gas pipelines (Cal OES 2020; CEC 2020).

In locations where work would occur under the CSP Project, the CSP Project alignment crosses, or is otherwise located nearer than 25 feet to, non-Project metallic objects as presented in Table 5.9-3 below; these locations are shown in Figure 5.9-1.

Table 5.9-3: Non-Project Metallic Objects

Project Segment	Object Type	Distance (*x* or *y* plane)	Location
1	Electrical conductor	>25 feet	37.335, -118.485 (Control Substation)
1	Electrical conductor	0	37.343, -118.486
1	Electrical conductor	0	37.359, -118.473
1	Electrical conductor	0	37.359, -118.473
1	Electrical conductor	0	37.360, -118.473
3	Electrical conductor	0	37.397, -118.398
3	Electrical conductor	>25 feet	37.401, -118.345
3	Electrical conductor	0	37.401, -118.339
3	Electrical conductor	0	37.415, -118.192 (White Mountain Substation)

5.9.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.9.2.1 Regulatory Setting

5.9.2.1.1 Federal

5.9.2.1.1.1 Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) of 1980 (42 U.S.C. §9601 et seq.)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provides a federal Superfund to clean up uncontrolled or abandoned hazardous-waste sites, as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, USEPA has the power to seek out those parties responsible for any release and ensure their cooperation in the cleanup.

5.9.2.1.1.2 The Superfund Amendments and Reauthorization Act of 1986 Title III (40 CFR § 68.110 et seq.)

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA and established a nationwide emergency planning and response program, and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials. The act requires states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. Additionally, SARA identifies requirements for planning, reporting, and notification concerning hazardous materials.

5.9.2.1.1.3 Clean Water Act (33 U.S.C. Section 1251 et seq.)

The CWA is the principal federal statute protecting navigable waters and adjoining shorelines from pollution. The law was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Since its enactment, the CWA has formed the foundation for regulations detailing specific requirements for pollution prevention and response measures. The USEPA implements provisions of the CWA through a variety of regulations, including the National

Contingency Plan and the Oil Pollution and Prevention Regulations. Implementation of the CWA is the responsibility of each state.

5.9.2.1.1.4 Clean Air Act

The CAA provides measures aimed at preventing the accidental release of hazardous materials into the atmosphere. Regulations implementing the CAA and governing hazardous materials emissions are provided in Title 40, Part 68 of the CFR. Implementation of these regulations is intended to prevent the accidental release of hazardous materials into the environment.

5.9.2.1.1.5 Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.)

The Resource Conservation and Recovery Act (RCRA) regulates hazardous waste from the time that waste is generated, through to its management, storage, transport, and treatment, until its final disposal. The USEPA has authorized the Department of Toxic Substances Control (DTSC) in California and the NDEP to administer their respective RCRA programs.

5.9.2.1.1.6 U.S. Department of Transportation

The USDOT has the regulatory responsibility for the safe transportation of hazardous materials under the Hazardous Materials Transportation Act (HMTA), as amended and codified in 49 U.S.C. 5101 et seq.

5.9.2.1.1.7 Code of Federal Regulation Title 14

All airports and navigable airspace not administered by the DoD are under the jurisdiction of the FAA. Title 14, Part 77 of the CFR establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height—or those extending at a ratio greater than 100 to 1 (horizontal to vertical) from a public or military airport runway more than 3,200 feet long, out to a horizontal distance of 20,000 feet—are considered potential obstructions and require FAA notification. In addition, construction projects extending at a ratio greater than 50 to 1 (horizontal to vertical) from a public or military airport runway measuring 3,200 feet or less, out to a horizontal distance of 10,000 feet, are considered potential obstructions and require FAA notification. Title 14, Part 133 of the CFR also requires an operating plan to be developed in coordination with and approved by the local FAA Flight Standards District Office that has jurisdiction over when helicopter use would be required.

5.9.2.1.1.8 Occupational Safety and Health Administration (29 CFR 1900-1910)

Established under the OSHA Act of 1970, OSHA regulates workplace safety and health. The agency's mission is to prevent work-related injuries, illnesses, and deaths.

5.9.2.1.1.9 Hazard Management and Resource Restoration Program

The Hazard Management and Resource Restoration (HMRR) program is administered by the BLM. Its mission is to protect lives, resources, and property, and to improve the health of landscapes and watersheds by: (1) minimizing the environmental contamination on public lands, (2) reducing and eliminating risk associated with physical and environmental hazards, (3) restoring resources impacted by oil discharges and hazardous release, and (4) administering CERCLA assessments.

5.9.2.1.1.10 Instruction Memorandum Number CA-2020-005

BLM Instruction Memorandum Number CA-2020-005, *Routine Operations and Maintenance to Reduce Fire Risk on Utility Rights-of-Way*, establishes policy regarding routine O&M activities on electric utilities' rights-of-way (ROW) to reduce the risk of wildfire during Calendar Year 2020. The Memorandum notes that "[e]lectric transmission and distribution facility ROW holders have the authority

to conduct routine O&M activities within their ROW," that ROW holders must "do everything reasonable to prevent and suppress wildfires within or near the ROW area" and must "comply with project-specific terms, conditions, and stipulations, including any requirements to control or prevent damage to property, and public health and safety." The Memorandum states that BLM Field Offices "should encourage ROW holders to conduct routine O&M activities for their facilities on public land."

5.9.2.1.2 State

5.9.2.1.2.1 California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) is the California state agency responsible for developing, implementing, and enforcing the state's environmental protection laws that ensure clean air, clean water, clean soil, safe pesticides, and waste recycling and reduction. The Cal/EPA oversees the DTSC and SWRCB. The Cal/EPA has implementation authority for the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) per CCR Title 27, Division 1, Subdivision 4, Chapter 1.

5.9.2.1.2.2 California Emergency Management Agency

The California Emergency Management Agency (Cal/EMA) was formed January 1, 2009, as the result of a merger between the Governor's Office of Emergency Services (OES) and the Office of Homeland Security (OHS). The Hazardous Materials Unit of the Cal/EMA is responsible for hazmat emergency planning and response, spill release and notification, and hazmat enforcement of the Unified Program.

5.9.2.1.2.3 Department of Toxic Substances Control

Under Government Code Section 65962.5(a), the DTSC is required to compile and update as appropriate, but at least annually, and submit to the Secretary for Environmental Protection a list of all of the following: 1) All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code. 2) All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.

5.9.2.1.2.4 Division of California Occupational Safety and Health, Department of Industrial Relations

The Division of California Occupational Safety and Health protects workers and the public from safety hazards (CCR Title 8.)

5.9.2.1.2.5 California State Hazard Mitigation Plan

The 2018 California State Hazard Mitigation Plan (SHMP) represents the state's primary hazard mitigation guidance document. The 2018 SHMP continues to build upon the state's commitment to reduce or eliminate potential risks and impacts of natural and human-caused disasters to help communities with their mitigation and disaster resiliency efforts. The 2018 plan includes: an updated statewide risk assessment, disaster history, and statistics; recent mitigation progress, success stories, and best practices; updated state hazard mitigation goals, objectives, and strategies; and updated climate mitigation progress and adaptation strategies. FEMA approved California's 2018 SHMP on September 28, 2018.

5.9.2.1.2.6 California Public Utilities Commission General Order 95

GO 95 contains requirements and specifications for overhead electrical line construction. These requirements are intended to ensure safety to workers engaged in the construction, O&M, and use of electrical facilities. The regulations are also intended to ensure the general reliability of the State's utility

infrastructure and services. Rule 35 of GO 95 establishes minimum clearances between line conductors and nearby vegetation for fire prevention purposes. These minimum clearances must be maintained through tree trimming prior to construction and throughout O&M of utility facilities.

5.9.2.1.2.7 California Public Utilities Commission General Order 166

The purpose of the standards contained in GO 166 is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters in order to minimize damage and inconvenience to the public which may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. The standards require, among others, that each jurisdictional electric utility prepare an emergency response plan and update the plan annually; conduct annual emergency training and exercises using the utilities emergency response plan; and coordinate emergency plans with state and local public safety agencies.

5.9.2.1.2.8 California Public Utilities Commission Fire Safety Rulemaking Background

In October 2007, devastating wildfires driven by strong Santa Ana winds burned hundreds of square miles in Southern California. Several of the worst wildfires were reportedly ignited by overhead utility power lines and aerial communication facilities in close proximity to power lines. In response to these wildfires, the CPUC initiated Rulemaking (R.) 08-11-005 to consider and adopt regulations to protect the public from potential fire hazards associated with overhead powerline facilities and nearby aerial communication facilities.

Beginning in 2009, the CPUC issued several decisions in R.08-11-005 that together adopted dozens of new fire-safety regulations. Most of the adopted fire-safety regulations consisted of new or revised rules in GO 95. Several of the adopted fire-safety regulations apply only to areas, referred to as "high fire-threat areas," where there is an elevated risk for power line fires igniting and spreading rapidly. These high fire-threat areas are designated by several maps that were adopted on an interim basis. Each of the interim maps covers a different part of the State and uses its own methodology for identifying high fire-threat areas, presenting consistency and potential enforcement issues. To address these issues, the CPUC also commenced the development of a single statewide fire-threat map to designate areas where (1) there is an elevated risk for destructive power line fires, and (2) where stricter fire-safety regulations should apply.

In May 2015, the CPUC closed R.08-11-005 and initiated successor rulemaking R.15-05-006 to complete the outstanding tasks in R.08-11-005. The general scope of R.15-05-006 was to address the following matters carried over from the scope of R.08-11-005: (1) develop and adopt a statewide fire-threat map that delineates the boundaries of a new High Fire-Threat District (HFTD) where the previously adopted regulations will apply, (2) determine the need for additional fire-safety regulations in the HFTD, and (3) revise GO 95 to include a definition and maps of the HFTD, as well as any new fire-safety regulations. The scope and schedule for R.15-05-006 was divided into two parallel tracks. One track focused on the development and adoption of a statewide fire-threat map. The second track focused on the identification, evaluation, and adoption of fire-safety regulations in the HFTD.

On December 21, 2017, the CPUC issued Decision (D.) 17-12-024 adopting regulations to enhance fire-safety in the HFTD, effectively completing the second track of R.15-05-006 described above. On January 19, 2018 the CPUC adopted, via Safety and Enforcement Division's (SED) disposition of a Tier 1 Advice Letter, the final CPUC Fire-Threat Map. The adopted CPUC Fire-Threat Map, together with the map of Tier 1 High Hazard Zones (HHZs) on the USFS-CAL FIRE joint map of tree mortality HHZs, comprise the HFTD Map where stricter fire-safety regulations apply.

5.9.2.1.2.9 Public Resources Code §§ 4201-4204

Public Resources Code Sections 4201-4202 require:

- The classification of lands within state responsibility areas in accordance with the severity of fire hazard present for the purpose of identifying measures to be taken to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.
- The classification of lands within state responsibility areas into fire hazard severity zones. Each zone shall embrace relatively homogeneous lands and shall be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread.
- The designation of fire hazard severity zones and assignation to each zone a rating reflecting the degree of severity of fire hazard that is expected to prevail in the zone.
- The periodic review of zones designated and rated pursuant to this article and, as necessary, the revision of zones or their ratings or repeal the designation of zones.

5.9.2.1.2.10 Public Resources Code §§ 4292-4293

Public Resources Code Section 4292 require a 10-foot clearance of any tree branches or ground vegetation from around the base of power poles carrying more than 110 kV. The firebreak clearances required by PRC Section 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each deadend or corner pole. Section 4293 presents guidelines for line clearance including a minimum of 10 feet of vegetation clearance from any conductor operating at 110 kV or higher.

5.9.2.1.2.11 Health and Safety Code § 13009

Health and Safety Code Section 13009 permits CAL FIRE to file civil actions to recover fire suppression costs from a party who causes a fire (1) negligently, or (2) in violation of a law or an order to correct a fire hazard. CAL FIRE established a Civil Cost Recovery (CCR) Program to satisfy the statute's intent to assign financial responsibility to culpable parties and to prevent fires through deterrence.

5.9.2.1.2.12 Red Flag Fire Warning and Weather Watches

Like PRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red flag warnings and fire weather watches and the CAL FIRE has provided safety recommendations for preventing fires, including clearing and removing vegetation, and ensuring the proper use of equipment.

5.9.2.1.3 Local

The CPUC has state jurisdiction over the siting and design of the CSP Project. GOs 95, 128, and 165 issued by the CPUC govern construction, operation, and maintenance requirements for electrical facilities. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not

applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.9.2.1.3.1 Certified Unified Program Agency

The CUPA is the agency certified by the DTSC to conduct the Unified Program. The program consists of hazardous waste generator and on-site treatment programs, aboveground and underground storage tank programs, Hazardous Materials Management, Business Plans, and Inventory Statements, and the Risk Management and Prevention Program.

5.9.2.1.3.2 Inyo County Environmental Health Department

Inyo County Environmental Health Department, Hazardous Materials Program, is the CUPA responsible for administering the hazardous materials program within Inyo County.

5.9.2.1.3.3 Mono County Certified Unified Program Agency

Mono County CUPA is the CUPA responsible for administering the hazardous materials program within Mono County.

5.9.2.1.3.4 Inyo County Airport Land Use Commission Policy Plan and Airport Comprehensive Land Use Plan

These plans are implemented to avoid creating hazards to avigation and protect the lives and property of nearby residents and other occupants and involve the creation of airport hazard overlay districts for seven airports located in Inyo County.

5.9.2.2 Touch Thresholds

5.9.2.2.1 California Division of Occupational Safety and Health

California Division of Occupational Safety and Health (Cal/OSHA) regulations on electrical safety require California employers to provide workers with a safe and healthful workplace. These regulations are contained in Title 8 of the California Code of Regulations. Most of the electrical health and safety regulations can be found in Chapter 4, Subchapter 5 in the Electrical Safety Orders, Sections 2299 through 2989.

Cal/OSHA regulations on electrical safety are grouped by electrical voltage. Regulations for low voltage (0-600V) are given in Sections 2299-2599 and the regulations for high voltage (above 600V) are given in Sections 2700-2989. Section 1518 addresses the safety requirements for the protection of workers and others from electric shock in construction.

5.9.3 Impact Questions

5.9.3.1 Impact Questions

The significance criteria for assessing the impacts to hazards and hazardous materials come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site that is included on a list of hazardous material sites, compiled pursuant to Government Code Section 65962.5, and as a result would create a significant hazard to the public or the environment
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the project would result in a safety hazard or excessive noise for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

5.9.3.2 Additional CEQA Impact Questions

The CPUC has identified additional CEQA significance criteria. According to these additional CEQA significance criteria, a project causes a potentially significant impact if it would:

- Create a significant hazard to air traffic from the installation of new power lines and structures.
- Create a significant hazard to the public or environment through the transport of heavy materials using helicopters?
- Expose people to a significant risk of injury or death involving unexploded ordnance?
- Expose workers or the public to excessive shock hazards?

5.9.4 Impact Analysis

5.9.4.1 Impact Analysis

5.9.4.1.1 Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

5.9.4.1.1.1 Construction

Less than Significant Impact. No acutely hazardous materials would be used or stored on location during construction of the CSP Project. Construction of the CSP Project would require the use of gasoline, diesel fuel, oil, solvents, and lubricants associated with vehicles and construction activities. Hazardous materials management would include compliance with a project-specific SWPPP and a SPCC Plan, if necessary, and implementation of BMPs related to fueling and the handling, use and storage of hazardous materials. All transport of hazardous materials would comply with applicable laws, rules, regulations, and would use applicable BMPs, including the acquisition of required shipping papers, package marking, labeling, transport vehicle placarding, training, and registrations. SCE crews and/or SCE's construction contractor would implement proper hazardous materials management activities, which would include preparation and implementation of plan(s) such as a hazardous materials management plan for the CSP Project before field construction activities begin that would outline the proper procedures for the handling, use, storage, and disposal of hazardous materials.

An inadvertent release could also occur from the use of hazardous materials during construction within temporary storage sites, while transporting hazardous materials to and from work areas, or during refueling and servicing of equipment. The potential for an inadvertent release will be ameliorated through

compliance with applicable laws, rules, and regulations related to the transport, use, and disposal of hazardous materials, and thus impacts would be less than significant.

Depending on the type, condition, and original chemical treatment, any wood poles removed would be returned to a staging yard and either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or in a RWQCB-approved Class III landfill or equivalent facility.

All hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public, and therefore impacts would be less than significant. These less than significant impacts would be further reduced through implementation of a CSP Project-specific HMMP, as specified in APM HAZ-1. This Plan would be prepared and implemented throughout construction of the CSP Project. The plan would include safety information regarding the transport, use, and disposal of hazardous materials.

5.9.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.9.4.1.2 Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

5.9.4.1.2.1 Construction

Less than Significant Impact. Construction of the CSP Project would require the limited use of hazardous materials, such as fuels, lubricants, and cleaning solvents. As described in Chapter 3, fuel storage and refueling of vehicles and helicopters may occur in designated areas during construction activities. A small volume of fuels, lubricants, and solvents with low toxicity are anticipated to be used during the construction of the CSP Project. All hazardous materials would be stored, handled, and used in accordance with applicable regulations, and safety data sheets (SDS) would be available. The most likely incidents involving these hazardous materials are associated with minor spills or drips.

Site-specific construction SWPPPs would be prepared and followed, as applicable, to ensure quick response to minor spills and minimal impacts to the environment. The SWPPPs would identify the locations for storing hazardous materials during construction, as well as protective measures, notification, and cleanup requirements for any incidental spills or other potential releases of hazardous materials.

In the event of a release of hazardous materials, such as minor spills and drips from construction equipment and refueling, SCE would use the SWPPPs as guidance for appropriate handling and response. In addition, implementation of the WEAP as described in Chapter 3 would provide site personnel with instruction on the SWPPPs and site-specific BMPs, when applicable.

During construction, the potential exists that subsurface utilities (e.g., a natural gas line) or structures (e.g., an underground storage tank) might be encountered and damaged, resulting in a release of a hazardous material. During construction, screening activities would include contacting DigAlert, conducting visual observations, and using buried line locating equipment. In addition, SCE would develop and implement an HMMP per APM HAZ-1 to further reduce the risk of hazards to the public, workers, and the environment.

A low potential exists for contaminated soil to be encountered during excavation or other ground-disturbing activities, and thus the risk of hazards to the public, workers, and the environment from the release of such materials would be less than significant. To further minimize the potential impact, SCE would develop and implement a Soil Management Plan per APM HAZ-2. The Plan would direct that, if encountered, contaminated soil would be segregated, sampled, and tested to determine appropriate treatment and disposal options. If the soil is classified as hazardous, it would be properly managed on location and transported in accordance with the USDOT regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. Similarly, there is a low potential for encountering contaminated groundwater during excavation or other ground-disturbing activities. No contaminated groundwater underlying the CSP Project site was identified during the review of Envirostor and Geotracker data. If, however, potentially-contaminated groundwater is encountered, then groundwater samples would be collected and tested to determine appropriate treatment and disposal. Hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public. The location(s) where hazardous materials may be disposed is unknown at this time would be at the discretion of SCE's construction contractor; however, the nearest such facilities are located in Adelanto, CA; Buttonwillow, CA; and Beatty, NV.

Based on small quantities of hazardous materials to be used during construction, implementation of project-related training and procedures, and absence of known contaminated sites within the CSP Project alignment, less than significant impacts are anticipated during construction of the CSP Project. Implementation of APMs HAZ-1 and HAZ-2 would further reduce these less than significant impacts.

5.9.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.9.4.1.3 Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

5.9.4.1.3.1 Construction

No Impact. No schools are located within one-quarter mile of the CSP Project alignment or within one-quarter mile of any Project-related work area. Therefore, no impact would occur under this criterion.

5.9.4.1.3.2 Operations

No Impact. No schools are located within one-quarter mile of the CSP Project alignment or within one-quarter mile of any Project-related work area. Therefore, no impact would occur under this criterion.

5.9.4.1.4 Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

5.9.4.1.4.1 Construction

No Impact. No component of the CSP Project is located on a site listed pursuant to Government Code Section 65962.5; therefore, no impacts would be realized under this criterion.

5.9.4.1.4.2 Operations

No Impact. No component of the CSP Project is located on a site listed pursuant to Government Code Section 65962.5; therefore, no impacts would be realized under this criterion.

5.9.4.1.5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the CSP Project area?

5.9.4.1.5.1 Construction

Less than Significant Impact. Eastern Sierra Regional Airport is located 1 mile south of Segment 3 of the CSP Project. Based on the Airport Hazard overlay district boundary described in the Inyo County *Policy Plan and Airport Comprehensive Land Use Plan*, approximately 6.1 miles of Segment 3 is located within this buffer.

While a portion of the CSP Project would be constructed within two miles of this public airport, the existing subtransmission infrastructure in that area would be replaced in or immediately adjacent to the existing alignment. Prior to construction, SCE would submit the required Notice of Proposed Construction or Alteration to the FAA pursuant to Title 14 CFR, Section 77.9. SCE does not anticipate that the FAA will determine that any CSP Project components should be modified to include marker balls and/or aviation lighting for safety purposes.

Further, SCE would coordinate with local airports regarding helicopter operations and flight plans during project construction, and thus would not result in a safety hazard to aviation.

As described in Section 5.13, Noise, the CSP Project would not generate excessive noise. Therefore, the impact would be less than significant.

5.9.4.1.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.9.4.1.6 Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

5.9.4.1.6.1 Construction

Less than Significant Impact with Mitigation. As discussed in Section 5.17, the CSP Project would not be expected to significantly impact traffic circulation or increase demands on existing emergency response services during temporary construction activities, and would not significantly impact emergency access in the area or increase the demand for existing emergency response services. Although it is not anticipated that construction activities would result in the blockage of any roadways (including U.S. 395 and U.S. 6, which are identified as evacuation routes) that could be used in the case of an emergency, in the event that any construction-related activity may result in such a blockage or closure, SCE would implement APM TRA-1, which calls for coordination with local authorities including emergency responders regarding appropriate procedures. As directed in APM TRA-1, construction activities completed within public street rights-of-way would require the use of a traffic control service, and all lane

closures would be conducted in accordance with APM TRA-1. Therefore, the impacts associated with construction activities would be less than significant under this criterion.

5.9.4.1.6.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.9.4.1.7 Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

5.9.4.1.7.1 Construction

Less than Significant Impact. As previously discussed, the majority of the CSP Project alignment is located within the CAL FIRE "moderate" fire hazard severity zone. Portions of the CSP Project are also located within identified CAL FIRE "high" fire hazard severity zones, and areas that are undesignated. The entirety of Segment 1 is located in a CPUC-designated Fire Threat Area Tier 2 - Elevated. No other portion of the CSP Project is located in a CPUC-designated Fire Threat Area.

High heat or sparks from vehicles or equipment have the potential to ignite dry vegetation and cause fires. However, CSP Project activities would generally be located within existing SCE owned and/or to-be-acquired ROWs where vegetation would be cleared or trimmed. Vehicles and equipment would primarily use existing roads, and would also use an overland travel method in temporary construction areas where and when such a method can be used safely. Further, SCE would implement standard fire prevention protocols during construction activities and comply with applicable laws and regulations, and therefore impacts would be less than significant. These less than significant impacts would be further reduced through development and implementation of a Fire Prevention and Emergency Response Plan per APM HAZ-3.

In the event that the National Weather Service issues a Red Flag Warning during construction of the CSP Project, additional measures would be implemented to address smoking and fire rules, storage and parking areas, the use of gasoline-powered tools, the use of spark arresters on construction equipment, road closures, the use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. Construction areas would be grubbed/trimmed of vegetation and graded before the staging of equipment, and in such areas where overland travel may occur, dry vegetation would also be trimmed; such activities would minimize the potential for vehicles or equipment to start a fire. As a result of these measures, construction of the CSP Project would have a less than significant impact to the risk of loss, injury, or death involving wildland fires.

Within California, SCE participates with CAL FIRE, the California Governor's OES, and various city and county fire agencies in the Red Flag Fire Prevention Program, and complies with California PRC Sections 4292 and 4293 related to vegetation management in subtransmission line corridors. The portions of the CSP Project located within moderate or high fire hazard severity zones and within CPUC-designated Tier 2-Elevated areas would generally be cleared of vegetation and graded prior to the staging of equipment, minimizing the risk of construction vehicles starting a fire. Based on SCE's participation in the Red Flag Fire Prevention Program and compliance with applicable State and federal laws and regulations during construction, impacts resulting from wildland fire would be less than significant.

5.9.4.1.7.2 Operations

No Impact. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project alignment. As currently performed, SCE would continue to implement its standard fire prevention protocols during O&M activities; comply with applicable laws and regulations; implement additional measures in the event of a Red Flag Warning during construction; and participate with CAL FIRE and other city and county fire agencies in the Red Flag Fire Prevention Program (in compliance with PRC Section 4292 and 4293 relating to vegetation management in subtransmission line corridors).

Among the O&M activities that would continue after construction of the CSP Project would be on-going implementation of SCE's 2019 Wildfire Mitigation Plan in Segment 1, which is located in an area designated by the CPUC as Fire Threat Area Tier 2–Elevated. The Plan describes strategies, programs and activities that are in place, being implemented or are under development by SCE to proactively address and mitigate the threat of electrical infrastructure-associated ignitions that could lead to wildfires. Therefore, no impacts would be realized under this criterion during O&M.

5.9.4.1.8 Would the project create a significant hazard to air traffic from the installation of new power lines and structures?

5.9.4.1.8.1 Construction

No Impact. The CSP Project would not create a significant hazard to air traffic during the installation of replacement structures and conductor, or installation of OPGW. Prior to construction, SCE will submit the required Notice of Proposed Construction or Alteration to the FAA pursuant to Title 14 CFR, Section 77.9. If the resultant FAA determination calls for the marking or lighting of construction equipment such as cranes, said determinations would be implemented by SCE. Further, SCE will coordinate with local airports regarding helicopter operations and flight plans during project construction, and thus will not result in a safety hazard to air traffic.

5.9.4.1.8.2 Operations

No Impact. The replacement infrastructure installed under the CSP Project would not create a hazard to air traffic. There are no height restrictions identified in the Inyo County Policy Plan and Airport Comprehensive Land Use Plan's Airport Hazard Overlay District for the Eastern Sierra Regional Airport or the Inyo County Sheriff Search and Rescue Helipad. No portion of the CSP Project alignment is located in an area with military requirements for above ground facilities.

Prior to construction, SCE will submit the required Notice of Proposed Construction or Alteration to the FAA pursuant to Title 14 CFR, Section 77.9. With respect to the CSP Project, the FAA would conduct its own analysis and may recommend no changes to the design of the CSP Project; or may recommend redesigning the CSP Project near an airport to reduce the height of catenaries or placement of marker balls on wire spans. SCE would evaluate the FAA determinations for reasonableness and feasibility, and in accordance with Title 14, Part 77 of the CFR, SCE may petition the FAA for a discretionary review of a determination to address any issues with the FAA determination. If, after an FAA discretionary review, a determination that marking or lighting is required to eliminate a hazard to air traffic, SCE will comply with the determination. Through compliance with the determination, potential hazards to air traffic would be eliminated, and therefore there would be no impact under this criterion.

5.9.4.1.9 Would the project create a significant hazard to the public or environment through the transport of heavy materials using helicopters?

5.9.4.1.9.1 Construction

No Impact. The CSP Project would not create a hazard to the public or environment through the transport of heavy materials using helicopters. SCE, as part of the CSP Project, would develop and implement a Helicopter Use and Safety Plan in accordance with 14 CFR Part 77, and in coordination with and to be approved by the FAA Flight Standards District Office. SCE would also obtain, as necessary, approval of a Congested Area Plan from the FAA. Through these activities and agency coordination, SCE would eliminate the potential for creating a significant hazard to the public or environment through the transport of heavy materials using helicopters, and no impact would be realized under this criterion.

5.9.4.1.9.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines included under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no new impacts would be realized under this criterion during O&M.

5.9.4.1.10 Would the project expose people to a significant risk of injury or death involving unexploded ordnance?

5.9.4.1.10.1 Construction

No Impact. No portion of the CSP Project alignment overlies a formerly used defense site. Therefore, there would be no impact under this criterion.

5.9.4.1.10.2 Operations

No Impact. No portion of the CSP Project alignment overlies a formerly used defense site. Therefore, there would be no impact under this criterion.

5.9.4.1.11 Would the project expose workers or the public to excessive shock hazards?

5.9.4.1.11.1 Construction

No Impact. The design of CSP Project components, and the construction of those components, would be compliant with all applicable federal and state regulations and standards. To reduce shock hazards and avoid electrocution of workers or the public, SCE would comply with the provisions found in Title 8 of the CCR, particularly the electrical health and safety regulations found in Chapter 4, Subchapter 5 in the Electrical Safety Orders, Sections 2700-2989, which are relevant to high voltage work.

5.9.4.1.11.2 Operations

No Impact. The design of CSP Project components, and the operation and maintenance of those components, would be compliant with all applicable federal and state regulations and standards. To reduce shock hazards and avoid electrocution of workers or the public, SCE would comply with the provisions found in Title 8 of the CCR, particularly the electrical health and safety regulations found in Chapter 4, Subchapter 5 in the Electrical Safety Orders, Sections 2700-2989, which are relevant to high voltage work.

5.9.4.2 Hazardous Materials

The hazardous materials (i.e., chemicals, solvents, lubricants, and fuels) that would be used during construction of the CSP Project are presented in Table 3.5-6.

The materials and quantities thereof that would be used during operation would be unchanged from the materials and quantities currently used during operation of the extant subtransmission lines.

5.9.4.3 Air Traffic Hazards

Discussions of how the CSP Project would not conflict with height restrictions identified in the airport land use plan and how the CSP Project would comply with any FAA or military requirements for the above ground facilities are presented above in Section 5.9.4.1.9.

5.9.4.4 Accident or Upset Conditions

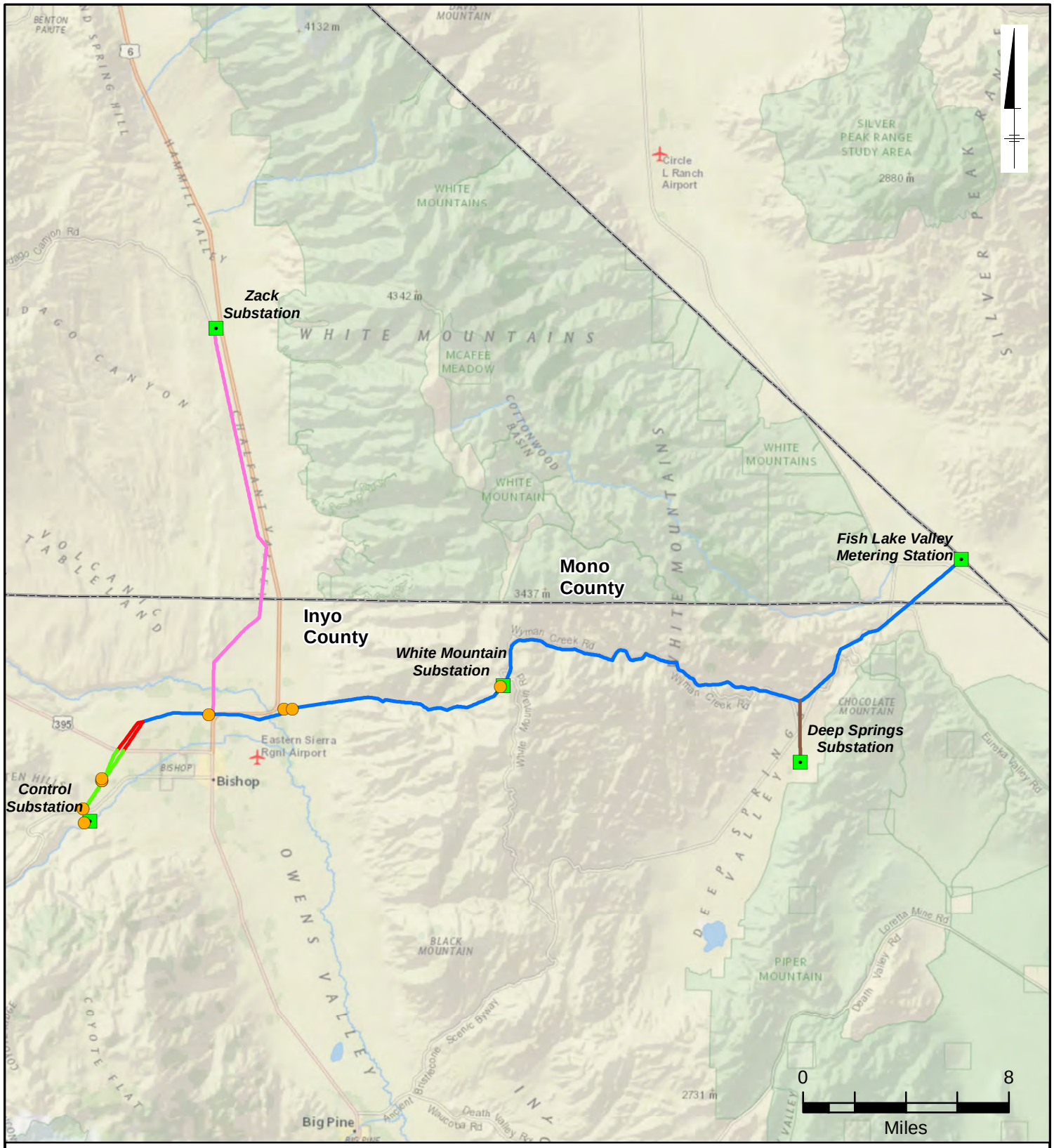
A description of how the CSP Project components would be designed, constructed, operated, and maintained to minimize potential hazard to the public from the failure of project components as a result of accidents or natural catastrophes is presented above in Section 5.9.4.1.2.

5.9.4.5 Shock Hazard

There is no infrastructure along the CSP Project that may be susceptible to new induced current from the installation of components under the CSP Project. Further, the operating conditions of the new conductor would be identical to the existing operating conditions; therefore, no new induced current would be realized from the CSP Project. The strategies that would be employed to reduce shock hazards and avoid electrocution of workers and the public are presented above in Section 5.9.4.1.12.

5.9.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Hazards, Hazardous Materials, and Public Safety resource area.



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Metallic Objects
- Counties

CONTROL-SILVER PEAK PROJECT

METALLIC OBJECTS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.9-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.10 Hydrology and Water Quality

This section describes the hydrology and water quality along the CSP Project alignment, as well as the potential impacts of construction and operation of the CSP Project. Hydrology and water quality along the CSP Project alignment were evaluated through review of the following:

- City and county General Plans
- USGS 7.5 minute quadrangle maps
- Aerial photographs
- Jurisdictional delineation reports prepared for the CSP Project (found in Appendix C to this PEA)
- Publicly available data sources, including the USFWS National Wetlands Inventory and USGS's National Hydrologic Dataset
- Lahontan RWQCB Water Quality Control Plan (Basin Plan)
- 2014 and 2016 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report)

5.10.1 Environmental Setting

The CSP Project alignment is located in Inyo and Mono counties. Segments 1 and 2 are located wholly within the Owens Valley; the western portion of Segment 3 is also located in the Owens Valley. Segment 4 is located in the Chalfant Valley, and Segment 5 is located in Deep Springs Valley. Elevation in the Owens Valley in the vicinity of the CSP Project alignment is approximately 4,000 ft amsl. In Segments 1, 2, the western portion of 3, and locations where work would occur in Segment 4, surface water on large alluvial fans, bajadas, and mountain streams of the eastern Sierra and White Mountains drain into Owens Valley and Chalfant Valley and eventually the Owens River and Owens Lake. Drainages in the central portion of Segment 3, and where work would be performed along Segment 5, terminate in Deep Springs Lake. Drainages in the eastern portion of Segment 3 drain to the Fish Lake Valley. Soils across the CSP Project alignment vary from extremely-gravelly to sandy loam.

The CSP Project alignment lies in the rain shadow Mojave and Sonoran deserts in California, the Great Basin in California lies in the rain shadow of the Sierra Nevada and Cascade Range. The west end of the CSP alignment occurs west of Bishop in the Owens Valley. One segment travels up the Chalfant Valley to the Zack Substation in Mono County, northeast of Fish Slough. The other segment extends to the east over the White Mountains (at over 10,900 feet [3,334 meters]) to the Deep Springs Valley nestled between the White and Inyo mountains; the eastern terminus of the area surveyed is in Fish Lake Valley, west of the Silver Peak Range in Esmeralda County, Nevada and east of the White Mountains in Inyo and Mono counties, California.

Great Basin ecosystems are governed by elevation, rainfall, temperature, latitude, and geology. In Bishop, yearly precipitation averages 6.01 inches (15.3 centimeters). Precipitation in winter often falls as snow; most months record some precipitation, which can average as low as 0.13 inches (0.3 centimeters) between June and October (Western Regional Climate Center 2021).

At Deep Springs College, yearly precipitation averages 5.2 inches (13.2 centimeters). Precipitation in winter often falls as snow; most months record some precipitation, which can average as low as 0.26 inches (0.6 centimeters) in June and again in October, with averages for every month recording some precipitation (Western Regional Climate Center 2021).

5.10.1.1 Waterbodies

Waters of the U.S., including wetlands, occur throughout the CSP Project alignment. Drainages within the western portion of the CSP Project alignment in Segments 1, 2, and the western portion of Segment 3 are typical ephemeral washes, and intermittent and perennial drainages of the Great Basin, and are typically characterized as single channels. These drainages are susceptible to widening and avulsions during moderate to high discharges, and drain into tributaries of the Owens River or directly into the Owens River itself. The CSP Project alignment crosses both the perennial Owens River and the intermittent Silver Creek in Segment 3.

In the central portion of Segment 3, the CSP Project alignment crosses Wyman Creek; this feature is generally more perennial, with dense riparian vegetation, and is less susceptible to change during high flows. Paleo features or channels and swales occur across the CSP Project alignment in all Segments.

Table 5.10-1 below identifies, by milepost, the perennial waterbodies that are crossed by the CSP Project alignment; these are shown in Figure 5.10-1. Intermittent and ephemeral waters are not listed in Table 5.10-1 due to the very large number of such waters crossed by the CSP Project alignment; such waters are listed in the Wetlands and Other Waters Jurisdictional Delineation Report in Appendix C. The water quality classification, as available, is also presented.

Table 5.10-1: Waterbodies Adjacent to or Crossed by CSP Project Alignment

Project Marker	Waterbody	Water Quality Classification
3-9.5	Owens River	Not Impaired
Various locations between 3-12.1 and 3-16.8	Unnamed (Silver Creek)	Not Impaired
Various locations between 3-26.2 and 3-30.8	Wyman Creek	Not Impaired
3-23.1	Crooked Creek	Not Impaired

Two wetland types occur within the CSP Project alignment: emergent-marsh wetland and scrub-shrub wetland. These features generally occur in the western portion of the CSP Project alignment in Segments 1, 2, and 3. Within the CSP Project alignment, there are approximately 15.4 acres (670,895 square feet) of wetlands and 21.8 acres (949, 608 square feet) of other waters under CWA 404 and 401 jurisdiction. Approximately 87.1 acres (130,057 square feet) of features under CDFW 1602 jurisdiction were identified within the CSP Project alignment. Table 5.4-9 provides a summary of the results of the wetland delineation.

5.10.1.2 Water Quality

The CSP Project alignment is located within the jurisdiction of the Lahontan RWQCB. The Lahontan RWQCB's Water Quality Control Plan for the Lahontan Region (Basin Plan) designates beneficial uses for surface waters and groundwater in the basin and also sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and to conform to the State's antidegradation policy. Details regarding the surface water objectives can be found in Chapter 3: Water Quality Objectives, of the Basin Plan. Beneficial uses for drainages located along the CSP Project alignment are shown below in Table 5.10-2; the CSP Project alignment crosses or is adjacent to each of the named features in this table.

5.10.1.2.1 Impaired Waterbodies

The SWRCB and RWQCBs assess water quality data for California's waters every two years to determine if they contain pollutants at levels that exceed protective water quality criteria and standards. This biennial assessment is required under Section 303(d) of the CWA. Bishop Creek is the only impaired

water body within the vicinity of the CSP Project alignment. Within Inyo County, Bishop Creek is listed as impaired for bacteria in the Lahontan RWQCB 2018 Integrated Report. Currently, there is no Total Maximum Daily Load established for Bishop Creek but the Lahontan RWQCB has established a long-term vision project for the impaired Bishop Creek watershed, including Bishop Canal.

5.10.1.3 Groundwater Basin

Groundwater resources (basins) are delineated by the CDWR. A basin is defined as an alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom. Groundwater in the region is used for agricultural and urban supply, particularly in drought years. Aquifers range from large extensive alluvial valleys with thick multilayered aquifers and aquitards to small inland valleys (DWR 2003). Depth to groundwater along the CSP Project alignment ranges considerably, from the surface to more than 600 feet towards the northern portion of the alignment.

5.10.1.3.1 Fish Lake Valley Groundwater Basin

The Fish Lake Valley Groundwater Basin underlies a northwest-trending valley located in the eastern parts of Mono and Inyo counties. The basin is bounded by the White Mountains on the west, the Sylvania Mountains on the south, and the California-Nevada state line on the north and east. Fish Lake Valley and its underlying groundwater system extend into Nevada. The California portion of the valley is drained by Cottonwood Creek and several other washes, which drain the White Mountains on the west side of the basin. These washes flow eastward through the valley and eventually into Nevada.

5.10.1.3.2 Owens Valley Groundwater Basin

The Owens Valley Groundwater Basin is a relatively narrow and long north-south trending basin that extends approximately 125 miles from Benton Valley in southeastern Mono County to Haiwee in southwestern Inyo County. The basin underlies Benton, Hammil, and Chalfant valleys in Mono County and underlies Round Valley and Owens Valley in Inyo County. The basin is bound by impermeable rocks of the Benton Range on the north, the Coso Range on the south, the Sierra Nevada on the west, and the White and Inyo Mountains on the east. The numerous valleys overlying the basin are drained by several creeks to the Owens River, which flows southward to Owens (Dry) Lake, a closed drainage depression in the southern part of the Owens Valley.

5.10.1.3.3 Deep Springs Valley Groundwater Basin

The Deep Springs Valley Groundwater Basin underlies an elongate northeast-trending intermontane valley in northeastern Inyo County. The basin is surrounded by impermeable Cambrian marine deposits and Pre-Tertiary granitic rocks of the White and Inyo mountains. The Deep Springs Valley is a closed basin where the surrounding mountains drained by Crooked, Wyman, Birch, and Payson Canyon Creeks terminate at Deep Springs Lake.

5.10.1.1 Groundwater Wells and Springs

There are a limited number of domestic groundwater wells along the CSP Project alignment; the location of domestic groundwater wells along the alignment, and the geographic density of those wells, is shown in Figure 5.10-4a. The average depth for domestic wells is less than approximately 200 feet; the deepest identified wells are located in Deep Springs Valley west of the Chocolate Mountains and west of Bishop as shown on Figure 5.10-4b. There are no springs within 150 feet of the CSP Project alignment identified in the National Hydrography Dataset or in CDFW's Terrestrial Significant Habitats dataset.

5.10.1.2 Groundwater Management

The groundwater resources overlain by the CSP Project alignment are managed by the County of Inyo Groundwater Sustainability Authority and the Mono County Tri-Valley Groundwater Management District; the jurisdictional boundaries for each is shown on Figure 5.10-3. No groundwater resources have been adjudicated. No Groundwater Sustainability Plans have been developed for areas crossed by the CSP Project alignment.

Water from the groundwater basins identified in Section 5.10.1.3 above may be used during construction of the CSP Project. Any such water would be obtained by SCE from commercial or municipal purveyors; no groundwater extraction wells would be developed as part of the CSP Project.

5.10.2 Regulatory Setting

Federal, state, and local regulations were reviewed for applicability to the CSP Project.

5.10.2.1 Regulatory Setting

5.10.2.1.1 Federal

5.10.2.1.1.1 Clean Water Act

Enacted in 1972, the Federal CWA (33 U.S.C. § 1251 et seq.) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary federal law applicable to water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the USEPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.". The CWA also established the NPDES and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

The CWA authorizes States to adopt water quality standards and includes programs addressing both point and non-point pollution sources. In California, programs and regulatory authority under the CWA have been delegated by USEPA to the SWRCB and its nine RWQCBs. Under Section 402 of the CWA as delegated to the State of California, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit. The SWRCB and RWQCBs have developed numeric and narrative water quality criteria to protect beneficial uses of state waters and waterways. Beneficial uses along the CSP Project alignment include water supply, groundwater recharge, aquatic habitat, wildlife habitat, and recreation.

5.10.2.1.1.2 Section 303(d), Impaired Water Bodies and Total Maximum Daily Loads

Section 303(d) of the CWA requires states to identify waters where adopted water quality standards and beneficial uses are still unattained. These lists of prioritized impaired water bodies, known as the "303(d) lists," are submitted to the USEPA every two years.

The law requires the development of Total Maximum Daily Loads (TMDL) to improve water quality of impaired water bodies. TMDLs are the quantities of pollutants that can be assimilated by a water body without violating water quality standards. A TMDL must account for point and nonpoint sources as well as background (natural) sources and are implemented by allocating the total allowable pollutant loading among dischargers. States are developing TMDLs for impaired water bodies to maintain beneficial uses, achieve water quality objectives, and reduce the potential for future water quality degradation.

In 2013, the USEPA adopted A Long-term Vision for Assessment, Restoration and Protection under the Clean Water Act Section 303(d) Program. The Program provides an updated framework for managing

CWA program activities to identify and addresses impaired waters. The Program allows for the consideration of tools, in addition to TMDLs, to achieve water quality standards.

5.10.2.1.1.3 Section 404, Placement of Dredge or Fill Material into Waters of the U.S., including Wetlands

The USACE administers permits under CWA Section 404 for placement of dredge or fill material into waters of the U.S, including wetlands. Waters of the U.S. refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands. Project proponents must obtain a permit from the USACE for all discharges of fill or dredged material before proceeding with a proposed activity. The USACE may issue either an individual permit or a general permit.

The Navigable Waters Protection Rule (NWPR) became effective on June 22, 2020. The NWPR changes the definition of Waters of the U.S. Two key elements of the NWPR that affect the IC Project are: 1) ephemeral streams are no longer jurisdictional and 2) the definition of jurisdictional wetlands has been revised.

The NWPR excludes ephemeral drainages from federal jurisdiction. Features that contain water only as a result of precipitation are no longer jurisdictional. This includes streams, gullies, swales, rills, and pools. Features that are perennial (surface flow year-round) or intermittent (surface flow during certain times of the year and not solely in response to precipitation) are still jurisdictional. Perennial features and intermittent features remain jurisdictional under the NWPR.

Under the NWPR, wetlands are only jurisdictional when they are adjacent to: territorial seas; traditional navigable waters; a tributary; or lakes, ponds or impoundment that are jurisdictional. Wetlands that are separated from any of these features by a natural berm are considered adjacent wetlands and are jurisdictional. However, the following wetlands are not considered adjacent and would not be jurisdictional: wetlands that do not abut jurisdictional features; wetlands that are separated by more than a natural berm; wetlands that are not flooded by jurisdictional waters in a typical year; and wetlands that do not have a hydrologic connection.

5.10.2.1.1.4 Section 401, Water Quality Certification

Section 401 of the CWA specifies that the SWRCB or applicable RWQCB must certify that any federal action meets with state water quality standards, (23 CCR § 3830, et seq.). Under California's policy of no net loss of wetlands, the SWRCB and RWQCBs require mitigation for dredge and fill impacts to wetlands and waterways (see Section 5.4, Biological Resources). Dredge and fill activities in wetlands and waterways that impact waters of the U.S. will require a CWA Section 404 permit from the USACE. These permits trigger the requirement to obtain a Section 401 certification, which must be obtained prior to issuance of a CWA Section 404 permit.

5.10.2.1.1.5 Section 402, National Pollution Discharge Elimination System

The SWRCB and the RWQCBs implement and enforce the NPDES program in California. Issued in 1972, the NPDES regulations initially focused on municipal and industrial wastewater discharges, followed by stormwater discharge regulations, which became effective in December 1990. NPDES permits provide two levels of control: technology-based limits and water quality-based limits. Technology-based limits are based on the ability of dischargers to treat wastewater, while water quality-based limits are required if technology-based limits are not sufficient to protect the water body. Additionally, stormwater permitting for construction site discharges is described below under state Regulations.

Dischargers with water quality-based effluent limitations must achieve water quality standards in the receiving water. Published by the USEPA on May 18, 2000, the California Toxics Rule (CTR) largely reflects the water quality criteria contained in the USEPA's Section 304(a) Gold Book (USEPA 1986) and the later National Recommended Water Quality Criteria. (USEPA 2006) With promulgation of the

CTR, these federal criteria are legally applicable in California to inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. NPDES permits must also incorporate TMDL waste load allocations when they are developed.

5.10.2.1.2 State

5.10.2.1.2.1 Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) governs water quality in California. The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility to the SWRCB and the nine RWQCBs for implementing CWA, including Sections 401 through 402 (see above).

The nine RWQCBs also implement CWA Section 303(d). Under Section 303(d), the RWQCBs identify streams and waters that have "Water Quality Limited Segments," or portions that do not meet water quality standards even after point sources of pollution have installed the minimum required levels of pollution control technology. Pursuant to the CWA, the SWRCB establishes priority rankings for water on the lists and develops total maximum daily load criteria (i.e., the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects) to improve water quality.

Under the Porter-Cologne Act and the NPDES, the SWRCB administers California's stormwater permitting program. This program requires all projects that will disturb more than one acre of land to implement stormwater BMPs to prevent discharge of sediments and stormwater. The permit (General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ) requires preparation of a SWPPP and implementation of BMPs, stormwater sampling, and reporting.

The SWRCB and the RWQCBs are responsible for addressing dredge and fill impacts to wetlands and waterways in California to support the State goal of no net loss of wetlands. The SWRCB and the RWQCBs are responsible for the issuance of Section 401 water quality certifications for federal actions that result in dredge and fill activities in federally jurisdictional wetlands and waterways. Dredge and fill activities in non-federally jurisdictional wetlands and waterways must be covered under a waste discharge requirement (WDR) issued by the SWRCB or applicable RWQCB.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The Basin Plans are updated every three years.

In April 2019, the SWRCB issued the State Wetland Definition and Procedures for Discharges for Dredged or Fill Materials to Waters of the State (Procedures). The Procedures became effective on May 28, 2020 but were challenged in California Superior Court. The Court found that the Board overreached their authority in implementing the Procedures related to non-federal waters of the State by not identifying the correct policy for which their authority resides. The Court found that the SWRCB has the authority to regulate all waters of the State, even non-federal waters but is currently prohibited from requiring the Procedures for waters of the State that are not waters of the U.S. until changes to the policy are made.

Table 5.10-2: Beneficial Uses

Feature	MUN	AGR	PROC	IND	GWR	FRSH	NAV	POW	REC-1	REC-2	COMM	AQUA	COLD	WARM	SAL	WILD	BIOL	RARE	MGR	SPWN	WQE	FLD
Lahontan Region Basin Plan																						
Bishop Creek	x	x		x	x				x	x	x		x	x		x						x
Owens River	x	x		x	x				x	x	x	x			x		x		x	x		x
Owens River Wetlands	x	x		x	x				x	x			x	x		x			x		x	x
Mc Nally canals	x	x		x	x				x	x	x		x	x		x						x
Wyman Creek	x	x		x	x				x	x	x			x		x						x
Crooked Creek	x	x		x	x	x			x	x	x			x		x					x	x
Minor Surface Waters	x	x		x	x				x	x	x		x	x		x		x				x
Minor Wetlands	x	x		x	x	x			x	x	x		x	x		x					x	x

Acronyms & Abbreviations:
MUN – Municipal
AGR – Agricultural Supply
PROC – Industrial Process Supply
IND – Industrial Service Supply
GWR – Ground Water Recharge
FRSH – Freshwater Replenishment
NAV – Navigation
POW – Hydropower Generation
REC1 – Water Contact Recreation
REC2 – Non-contact Water Recreation
COMM – Commercial and Sport Fishing
AQUA – Aquaculture
COLD – Cold Freshwater Habitat
WARM – Warm Freshwater Habitat
SAL – Inland Saline Water Habitat
WILD – Wildlife Habitat
BIOL – Preservation of Biological Habitats of Special Significance
RARE – Rare, Threatened or Endangered Species MGR – Migration of Aquatic Organisms
SPWN – Spawning, Reproduction, and Development
WQE – Water Quality Enhancement
FLD – Flood Peak Attenuation/Flood Water Storage
x – Existing Beneficial Uses

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5.10.2.1.2.2 Lahontan Basin Plan

The CSP Project alignment falls within the jurisdiction of the Lahontan Regional Water Quality Control Board. The water quality objectives for the Lahontan Region, and specifically the Owens Valley, include measures to reduce the potential for contaminants. The Basin Plan lists restrictions on waste discharges and sediment and erosion control requirements. The Basin Plan identifies the majority of issues related to water quality within the Region are a result of non-point sources. The allocation of waters within the Region to areas outside the Region are also identified. Because of the size of the Region, careful consideration between water quality and water quantity is a primary goal in the planning process for the Region.

5.10.2.1.2.3 California Fish and Game Code § 1600-1617

CFGC Section 1600 et seq. requires any person, state or local governmental agency, or public utility to notify CDFW before beginning an activity that would substantially modify the bank or bed of a river, stream, or lake (i.e., prior to causing any potential hydrological impacts). Refer to Section 5.4, Biological Resources, for additional information.

5.10.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.10.2.1.3.1 Inyo County General Plan

The Inyo County General Plan Public Safety Element contains objectives to preserve natural water courses and reduce the potential for erosion and sedimentation, and encourage groundwater recharge. General Plan policies to improve water quality include development of detention basins, reducing channelization of water course, and restoration of degraded areas. It does not contain any specific goals or policies that are relevant to the CSP Project.

5.10.2.1.3.2 Mono County General Plan

The Mono County General Plan Conservation/Open Space Element addresses the availability and quality of surface and groundwater resources, and the Safety Element addresses flood hazards. The General Plan does not contain any specific Objectives, Policies, or Actions that are relevant to the CSP Project.

5.10.3 Impact Questions

5.10.3.1 Impact Questions

The significance criteria for assessing the impacts to hydrology and water quality come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality

- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the CSP Project may impede sustainable groundwater management of the basin
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would
    - Result in substantial erosion or siltation on site or off site
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
    - Impede or redirect flood flows
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

5.10.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.10.4 Impact Analysis

5.10.4.1 Impact Analysis

5.10.4.1.1 Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

5.10.4.1.1.1 Construction

Less than Significant Impact. Construction of the CSP Project would require ground-disturbing activities that could increase soil erosion rates, potentially resulting in violating water quality standards and impacts to beneficial uses in adjacent water bodies. The CSP Project crosses erosion-prone areas and areas with potential for sedimentation. To minimize soil erosion and resulting impacts on water quality, SCE would comply with state stormwater regulations and the terms of ministerial grading permits from county jurisdictions (if such permits are necessary). No waste discharge requirements are anticipated to be required for the CSP Project. SCE would apply for coverage under a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ. This general permit requires submittal of a Notice of Intent, preparation of project-specific SWPPPs and implementation of site-specific BMPs to address material management, non-stormwater discharge, sediment discharge, and erosion control to meet water quality standards. Site-specific BMPs would be developed to prevent stormwater discharges during construction and could include, but are not limited to installation of silt fencing, straw wattles, retention basins, sediment stabilization, and good site housekeeping.

Construction of the CSP Project would not contribute to the degradation of water quality within a 303(d) listed waterbody, as the CSP Project alignment does not cross a 303(d) listed waterbody. Bishop Creek occurs adjacent to the alignment but Project activities will not cross this feature.

Materials used during construction (e.g., diesel fuel, hydraulic fluid, oils, grease, and concrete) have the potential to be transported by storm water runoff and threaten aquatic life. These materials could violate water quality standards if they come in contact with storm water and/or are transported to nearby water

resources or a municipal separate storm sewer system. The general handling, storage, and disposal of potentially hazardous materials are discussed in Section 5.9, Hazards and Hazardous Materials, and specific measures to manage hazardous materials would be addressed in the SWPPPs. Further, SCE would implement additional measures contained in APMs HAZ-1 and WET-1 (see Section 3.11).

Wastewater would be generated by construction workers during construction of the CSP Project. However, the wastewater generated during the construction period would be contained within portable restrooms and disposed of by a licensed contractor. No wastewater would be discharged from the site.

Potential water quality impacts during construction within jurisdictional drainages would be minimized through compliance with the conditions set forth in the federal or state permits and agreements, and coordination with the resource agencies. Work within CWA wetlands and other waters may require a CWA Section 404 permit from the USACE for the placement of dredge or fill material in federally jurisdictional waters of the U.S. As such, SCE would also be required to obtain a Section 401 water quality certification from the SWRCB or applicable RWQCB. Work within streams or drainages may require a 1602 Lake or Streambed Alteration Agreement from CDFW. Obtaining permits for dredge and fill activities and compliance with the terms and conditions in these authorizations would ensure that these activities would not violate any water quality standards and would not otherwise substantially degrade surface or groundwater quality.

Earth moving activities including vegetation removal and rehabilitation of existing access roads have the potential to create stormwater runoff during rain events and violate water quality standards. With the implementation of site-specific BMPs required under the state construction stormwater permit and compliance with terms and conditions of other required permits (including ministerial grading permits), the CSP Project would not violate water quality standards or applicable waste discharge requirements associated with construction activities. With implementation of the CSP Project-specific BMPs provided in the SWPPPs, implementation of APMs HAZ-1 and WET-1, and with proper disposal of any groundwater encountered during construction activities, the CSP Project would not violate any water quality standards or waste discharge requirements, and would not otherwise substantially degrade surface or ground water quality; therefore, impacts would be less than significant.

5.10.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.10.4.1.2 Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

5.10.4.1.2.1 Construction

Less than Significant Impact. During earth-disturbing activities, water would be used to control dust and stabilize unvegetated areas. Water for dust control would be obtained from existing surface water- and groundwater-fed supplies. It is estimated that on the order of 1,200 acre-feet of water may be used over the construction period; this is a conservative estimate, and actual water consumption would be substantially less due to refinements in construction scheduling during final engineering.

The consumptive use of on the order of 1,200 acre-feet over the three year construction period would not substantially deplete groundwater supplies: LADWP alone pumped an average of 72,000 acre-feet per year

over the 1992-2018 period from the Owens Valley; approximately 39,000 acre-feet are planned to be pumped in 2019 from LADWP wellfields proximate to the City of Bishop (LADWP 2019). No current data are available regarding the annual groundwater withdrawals from Deep Springs Valley or Fish Lake Valley.

The CSP Project's approximate 400 acre-feet of annual water consumption represents less than 1 percent of the annual groundwater pumped from LADWP wellfields proximate to the City of Bishop, and thus would not substantially decrease groundwater supplies. Further, the short-term withdrawals of groundwater for the CSP Project would not impede the inherently long-term sustainable management of the basin.

During installation of poles and underground facilities, shallow groundwater may be encountered. In these instances, excavations would be dewatered and either discharged on-site to land or stored in Baker tanks or similar equipment prior to disposal off-site. This water may also supplement other water supplies for dust control. Groundwater dewatered from excavations and discharged to land or used for dust control would infiltrate into the existing groundwater system; during this process some groundwater would be lost to evapotranspiration, but this loss would be minor and would not substantially deplete groundwater supplies.

The CSP Project would result in a decrease in the number of subtransmission structures across the CSP Project alignment. This would result in a net reduction of impervious surface in the CSP Project area, and therefore the CSP Project would not impede groundwater recharge or restrict infiltration to the groundwater table.

Because of the relatively small volume of groundwater that would be used during construction when compared to the existing groundwater supplies in the area; the limited volumes of dewatering waters; and the reduction of the amount of impervious surface in the CSP Project area, the CSP Project would not impede groundwater recharge or restrict infiltration to the groundwater table, and construction-related impacts would be less than significant.

5.10.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.10.4.1.3 Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

5.10.4.1.3.1 Construction

Less than Significant Impact. The CSP Project crosses several ephemeral and intermittent drainages as well as the Owens River. The CSP Project involves vegetation removal and grading associated with the rehabilitation of existing access and spur roads and the establishment of structure installation and removal sites, pull sites, and other construction work areas; the installation of replacement subtransmission poles; and the establishment and use of staging areas. Many of the existing access and spur roads cross ephemeral or intermittent drainages, or are located in areas that are prone to erosion and sedimentation. Rehabilitation of these existing access and spur roads may result in localized changes to the existing drainage patterns. The CSP Project would result in a decrease in the number of subtransmission structures across the CSP Project alignment; this small decrease in impervious surfaces would not result in a change in the drainage patterns that could result in erosion and sedimentation on or off-site.

Removal of existing subtransmission structures may cause minor changes in existing drainage patterns. Where poles would be removed, final grading and contouring would return the removal areas to pre-project conditions to the extent feasible. Site-specific SWPPPs would be prepared that would identify BMPs to reduce runoff which would minimize the potential for erosion and sedimentation that could alter drainage patterns.

Work within streams or rivers would be avoided to the extent feasible. However, where work within drainages is required, SCE would implement measures contained in APM WET-1 (see Section 3.11), including the implementation of appropriate site-specific BMPs (e.g., silt fencing and straw wattles) to reduce the risk of an unintended release of sediments or other materials into jurisdictional waters. Where required, permits per CWA Sections 404 and 401, the Porter Cologne Act, and CDFW 1602 LSAA would be obtained and all conditions of approval would be implemented including, but not limited to, returning all drainage features temporarily impacted during construction to pre-project conditions. Therefore, impacts would be less than significant during construction under this criterion.

5.10.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.10.4.1.4 Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

5.10.4.1.4.1 Construction

Less than Significant Impact. As described above, work associated with the CSP Project would result in a minor decrease in impervious surface compared with existing conditions, and vegetation removal and grading would result in minor changes to drainage patterns. However, the overall drainage patterns would remain unchanged and the CSP Project would not alter the course of a stream or river. The CSP Project SWPPP would include measures to control stormwater runoff which would minimize the potential for significant alteration of drainage patterns that would result in flooding on-site or off-site. Improvements to existing access roads and spur roads would include design considerations to maintain or improve drainage patterns, where feasible. Through drainage design and SWPPP implementation, the CSP Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition decrease of impervious surfaces which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, and thus impacts would be less than significant.

5.10.4.1.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.10.4.1.5 Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

5.10.4.1.5.1 Construction

Less than Significant Impact. The CSP alignment crosses several streams but none would be substantially altered. Temporary impacts on stream channels could occur during construction but these features would be returned to pre-project topography and grade and no permanent drainage patterns would be altered. As previously described, the CSP Project would not substantially increase the area of impervious surfaces that could result in a substantial increase in runoff. Grading of construction work areas, rehabilitation of access roads and spur roads, and construction of TSP foundations could contribute to minor increases of polluted runoff during construction. These activities would be temporary, and impacts would be reduced by the implementation of site-specific BMPs identified in the SWPPP. Because CSP Project activities would not substantially increase polluted runoff, impacts would be less than significant.

5.10.4.1.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.10.4.1.6 Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

5.10.4.1.6.1 Construction

Less than Significant Impact. Some replacement subtransmission structures to be installed under the CSP Project would be placed within drainages, including in the floodplain associated with the Owens River. These structures would have a small footprint and cross-section within the floodplain that would not significantly impede or redirect flood flows. Further, some existing structures installed within drainages, including in the floodplain associated with the Owens River, would be removed. Because these structures have a small cross-sections and footprint within the floodplain, their removal would not redirect flood flows. If flooding is threatened during the construction period, equipment and personnel would be removed from floodplain areas. Therefore, any impacts would be less than significant.

5.10.4.1.6.2 Operations

No Impact. Operation and maintenance activities, that exist today, would not change as a result of the CSP Project. Any additional structures or facilities installed during the operations phase of the CSP Project would be analogous to those installed during the Construction phase, and as such would not alter drainage patterns or impede or redirect flood flows. Therefore, no impacts would occur during operation of the CSP Project under this criterion.

5.10.4.1.7 Would the Project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

5.10.4.1.7.1 Construction

Less than Significant Impact. The CSP Project alignment is not located within a tsunami zone and there are no large bodies of water that could result in a seiche within the vicinity of the alignment. Approximately 0.5 miles of the CSP Project alignment is located in the floodplain associated with the Owens River; this area could be inundated during flooding. In the unlikely event of flooding or threatened flooding, construction crews would evacuate in accordance to established evacuation plans and routes. Therefore, construction equipment would not be subject to inundation, and there would be less than significant impacts under this criterion.

5.10.4.1.7.2 Operations

Less than Significant Impact. The CSP Project alignment is not located in a tsunami or seiche zone. Approximately 0.5 miles of the CSP Project alignment is located in the floodplain associated with the Owens River; this area could be inundated during flooding. In the unlikely event of flooding or threatened flooding, O&M crews (if in this area at the time) would evacuate in accordance with established evacuation plans and routes. The four poles to be installed in this flood area do not contain any potential pollutants. Therefore, less than significant impacts would be realized under this criterion.

5.10.4.1.8 Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

5.10.4.1.8.1 Construction

No Impact. As stated above, construction of the CSP Project would require that SCE obtain a CWA Section 401 water quality certification from the Lahontan RWQCB under the 2019 Procedures. Receipt of this certification would ensure that the CSP Project does not conflict with the Lahontan RWQCB's Water Quality Control Plan. There are no sustainable groundwater management plans for the areas crossed by the CSP Project alignment. However, as stated above, because of the relatively small volume of groundwater that would be used during construction when compared to the existing groundwater supplies in the area; the limited volumes of dewatering waters; and that installed poles would not impede groundwater recharge or restrict infiltration to the groundwater table, the CSP Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the CSP Project may impede sustainable groundwater management of the basin. Therefore, the CSP Project is unlikely to conflict with a sustainable groundwater management plan when developed. As such, no impacts would be realized under this criterion.

5.10.4.1.8.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.10.4.2 Hydrostatic Testing

Hydrostatic testing is not included under the CSP Project.

5.10.4.3 Water Quality Impacts

Potential water quality impacts associated with the CSP Project are addressed in the impact analyses above.

5.10.4.4 Impermeable Surfaces

The CSP Project will result in the creation of zero acres of new impermeable surfaces: The number of poles along the alignment will be reduced under the CSP Project, and the diameter of the poles to be installed will be approximately equivalent to the diameter of the poles to be removed. Therefore, there will be no increased run-off or impacts on groundwater recharge due to construction of impermeable surfaces.

5.10.4.5 Waterbody Crossings

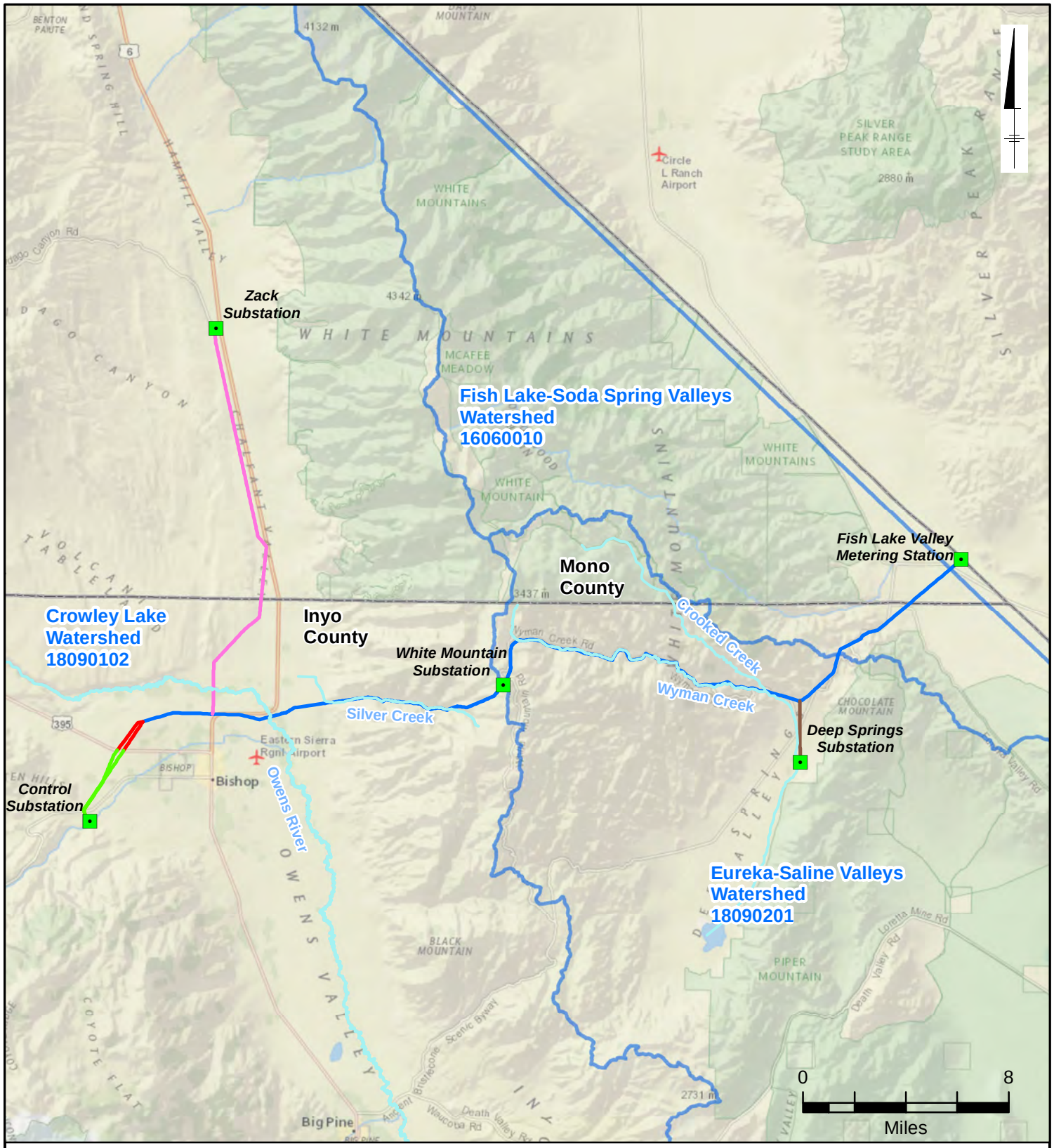
The waterbodies to be crossed under the CSP Project include the Owens River, South McNally Canal, Wyman Creek, and Crooked Creek. The Owens River and South McNally Canal will be crossed utilizing existing bridges; Wyman Creek and Crooked Creek will be crossed at-grade where these creeks are crossed by the existing County road. The waterbodies cannot be avoided. No additional work areas or staging areas will be required at waterbody or wetland crossings. No dewatering or water diversions will be required during construction. The restoration methods to be employed in the areas near waterbody crossings are addressed in Section 5.4.

5.10.4.6 Groundwater Impacts

There are no sustainable groundwater management plans for the areas crossed by the CSP Project alignment; therefore, the CSP Project would not be inconsistent with any applicable sustainable groundwater management plan.

5.10.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Hydrology and Water Quality resource area.



Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Perennial Water
- Watersheds-HUC08
- Counties

CONTROL-SILVER PEAK PROJECT

PERENNIAL WATERBODIES

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.10-1

City: Div/Group: Created By: Last Saved By: ADavis
Project (Project #)
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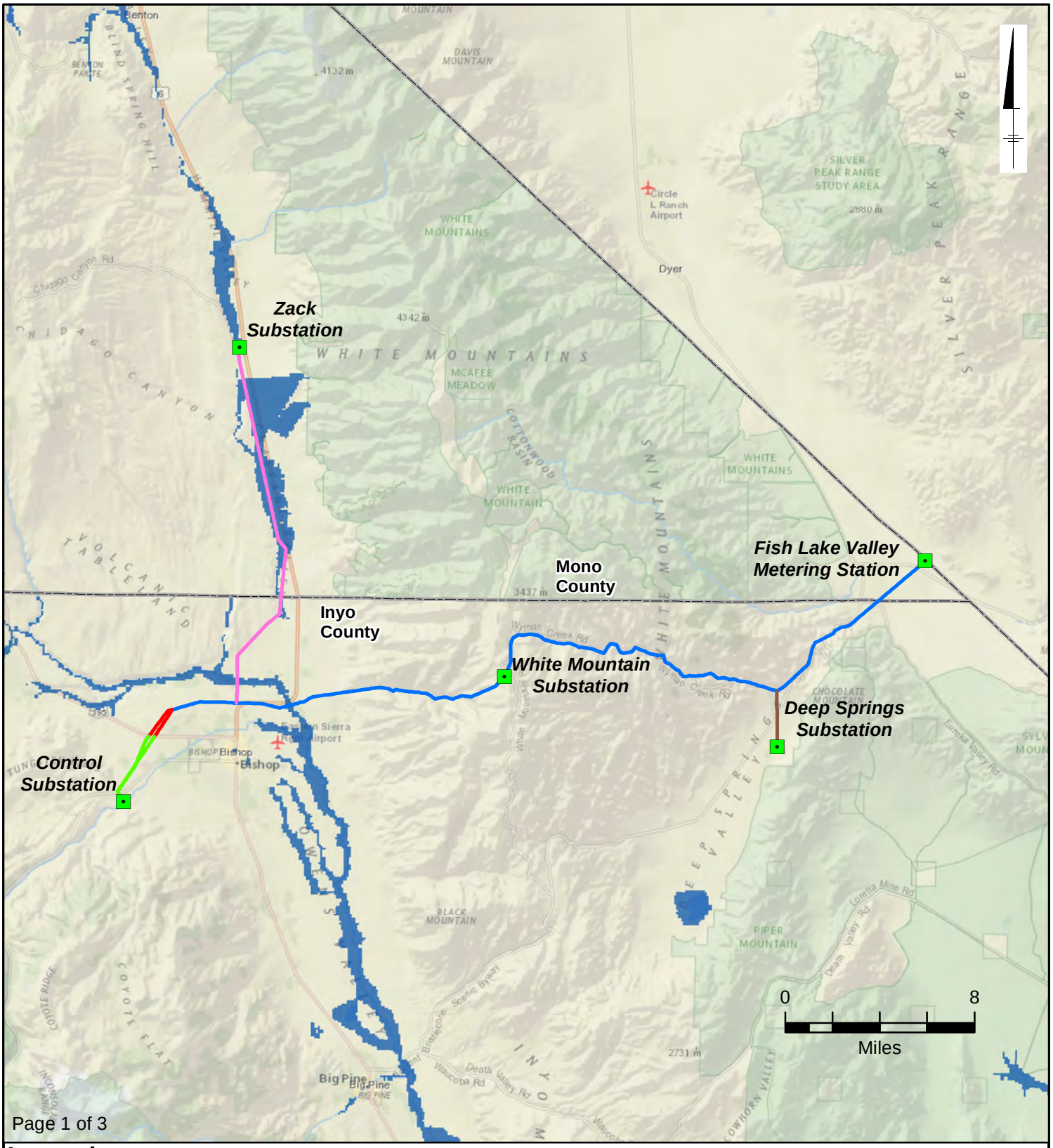

Page 1 of 3

Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Counties
- Floodplain

CONTROL-SILVER PEAK PROJECT

FLOODPLAINS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.10-2

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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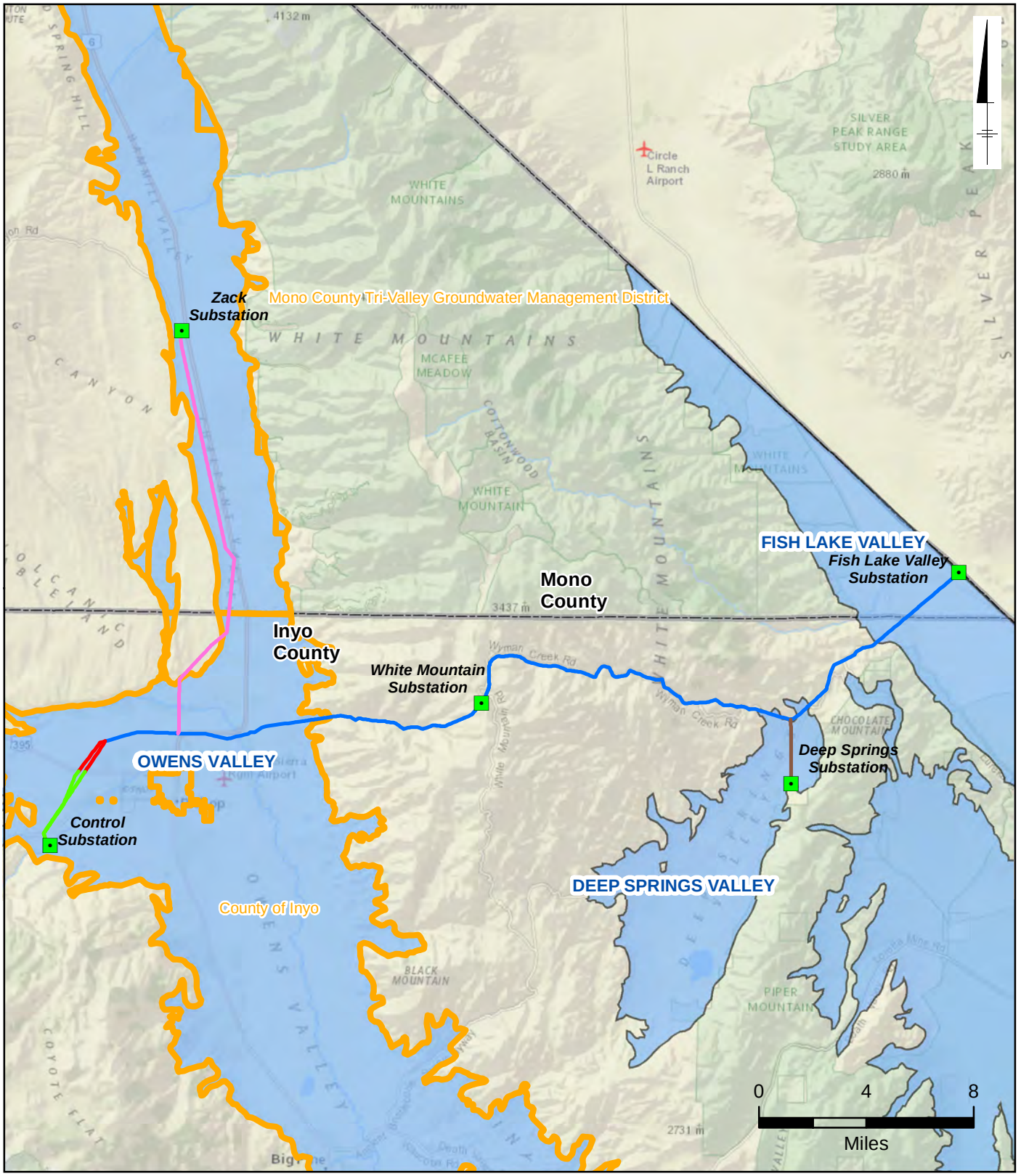

Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Groundwater Sustainability Agencies
- Groundwater Basins
- Counties

CONTROL-SILVER PEAK PROJECT

GROUNDWATER BASINS AND AQUIFERS

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURE 5.10-3

City: Div/Group: Created By: Last Saved By: mgl01044
Project (Project #)
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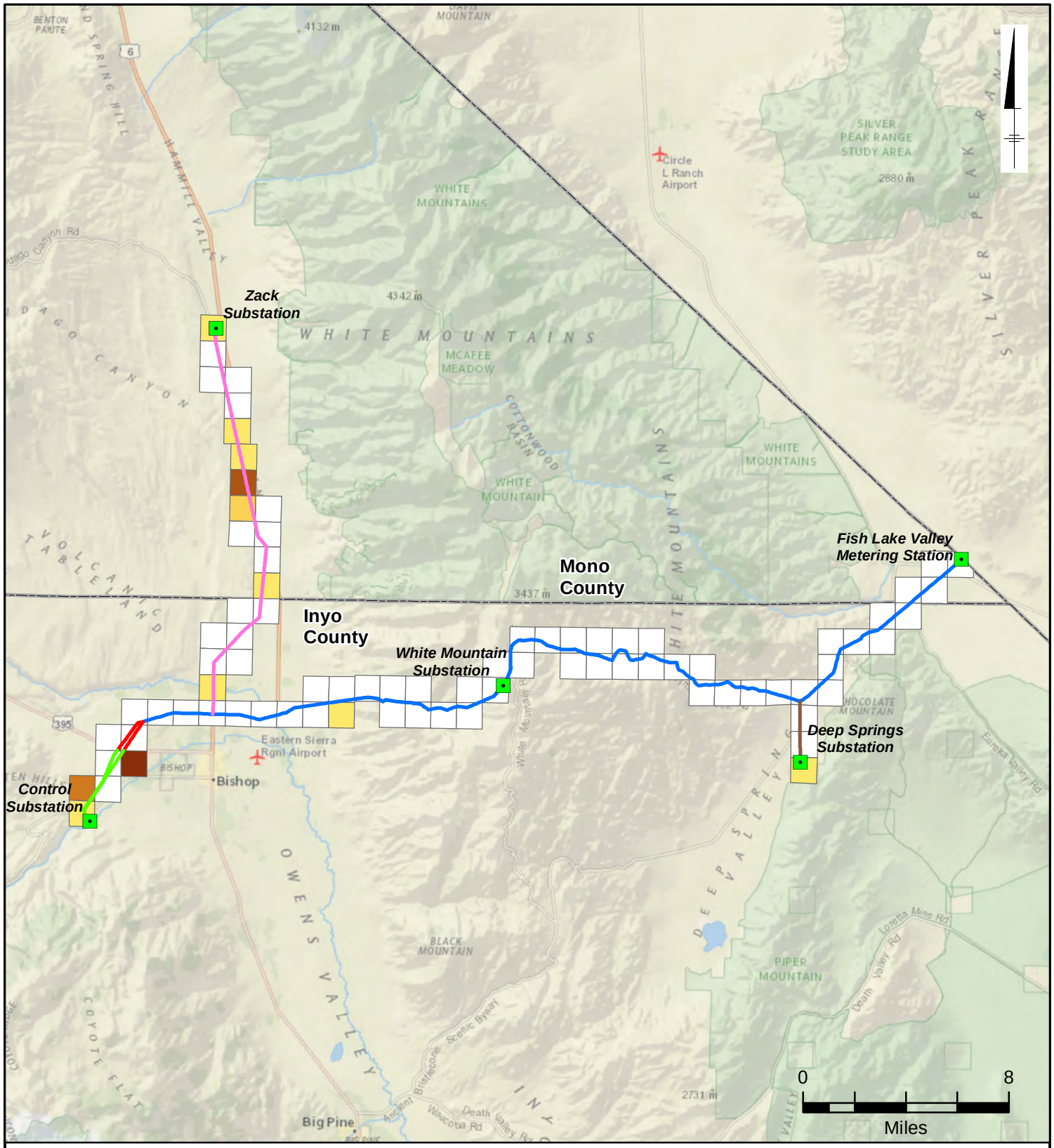

Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties

Domestic Well Count

- 0
- 1 - 5
- >5 - 10
- >10 - 15
- >15- 20
- >20 - 25
- >25 - 30
- >30 - 100
- >100 - 113

CONTROL-SILVER PEAK PROJECT

GROUNDWATER WELLS - DOMESTIC WELL COUNT PER SECTION

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE

5.10-4a

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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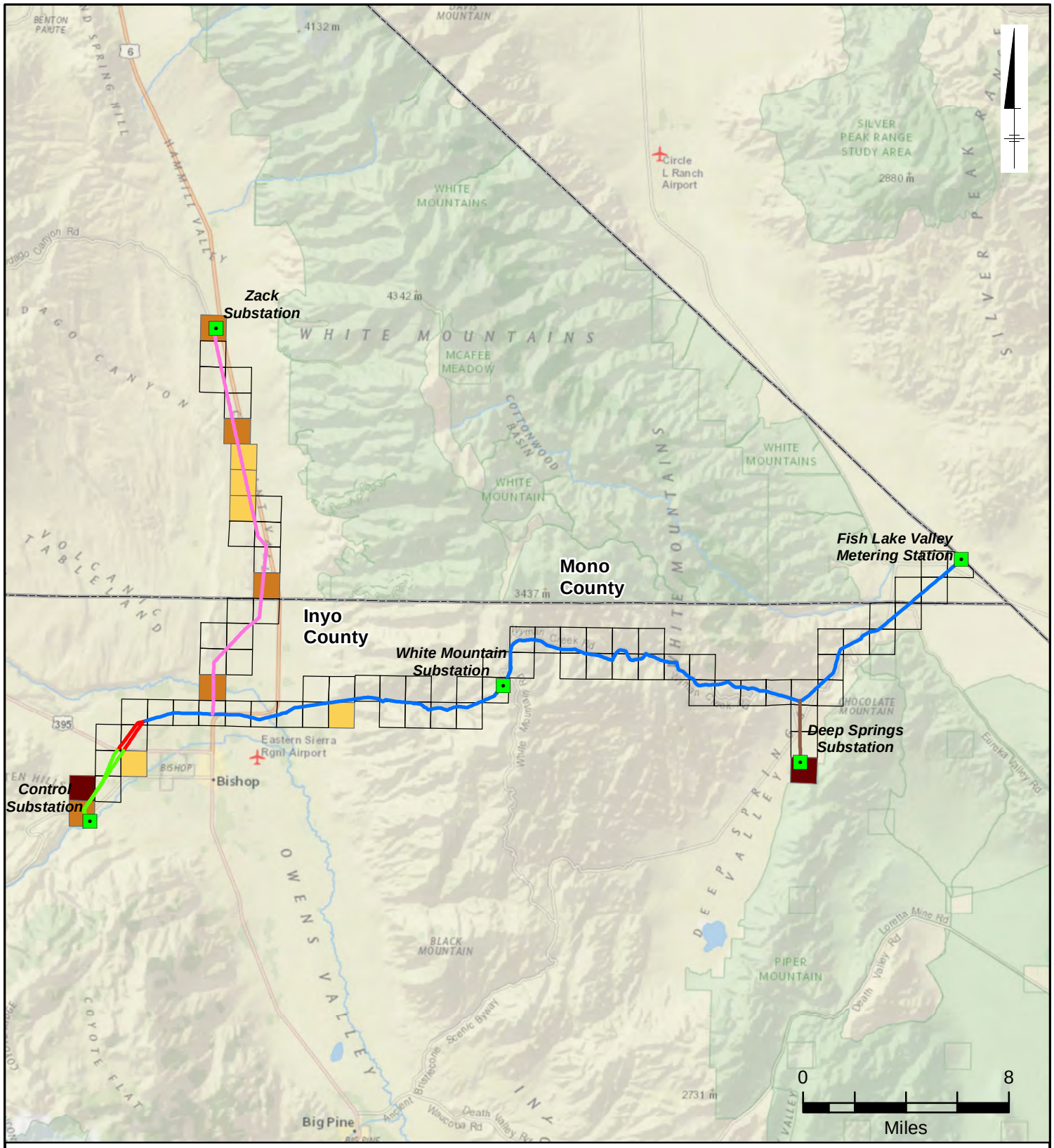

Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties

Average Domestic Well Depth

- No Data
- 1 - 100
- 101 - 200
- 201 - 300
- 301 - 321

CONTROL-SILVER PEAK PROJECT

GROUNDWATER WELLS - DOMESTIC WELL DEPTH PER SECTION

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE **5.10-4b**

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.11 Land Use and Planning

This section discusses the existing land use within the vicinity of the CSP Project and the potential impacts to existing land use as a result of construction and operation of the CSP Project. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed. Figuresets 5.11-1 and 5.11-2 show the designated land use and zoning in the area of the CSP Project.

5.11.1 Environmental Setting

5.11.1.1 Land Use

The existing land use along the CSP Project alignment is summarized by Segment as follows:

- Segment 1, Inyo County: The area around Segment 1 is characterized as mostly open space, with scattered residential land uses.
- Segment 2, Inyo County. The area around Segment 2 is characterized as mostly open space, with one adjacent recreational facility.
- Segment 3, Inyo County: The western and central portions of Segment 3 in Inyo County are characterized as mostly open space, with scattered residential and commercial land uses in the vicinity of the City of Bishop and the community of Laws. The central portion of Segment 3 is located entirely on federally-managed lands.
- Segment 3, Mono County: The eastern portion of Segment 3 in Mono County is primarily open space, with some irrigated agriculture and associated residences in Fish Lake Valley near the eastern terminus of the Segment.
- Segment 4, Mono County: The sites where work would be performed in Segment 4 are characterized as open space.
- Segment 5, Inyo County: The southern portion of Segment 5 where work would be performed is characterized as mostly open space, with an institutional use (Deep Springs College) adjacent to the southern terminus of the Segment.

The majority of the CSP Project alignment is located on lands managed by the BLM and USFS.

5.11.1.2 Special Land Uses

5.11.1.2.1 Lands Administered by Federal, State, or Local Agencies

5.11.1.2.1.1 Bureau of Land Management, Bishop Resource Management Plan

Portions of Segment 1 is located in the Owens Valley Management Area, which encompasses 153,750 acres of Bureau land in the Owens Valley between Bishop and Lone Pine. The area contains the scenic Alabama Hills, three developed campgrounds, and areas of dispersed recreation use. The area is managed for the full spectrum of uses, with an emphasis on recreational use and environmental education while providing for land disposals (i.e., the transfer of public lands to private ownership) (BLM 1993).

A portion of Segment 3 and the sites in Segment 4 where work would be performed are located in the Bishop Resource Management Plan (BRMP) Benton Management Area; this area extends from Benton to Bishop and contains 178,220 acres of Bureau land. Extensive mineral material deposits occur throughout the area. The area is managed to provide for a variety of dispersed recreation opportunities, to enhance scenic and wildlife resources, while providing for land disposals along U.S. Highway 6 (BLM 1993).

5.11.1.2.1.2 Bureau of Land Management, Desert Renewable Energy Conservation Plan, Land Use Plan Amendment

The eastern portion of Segment 3 is located on lands managed per their designation in DRECP LUPA. The DRECP LUPA establishes Conservation and Management Actions (CMAs) that designate allowable and non-allowable actions for siting, design, pre-construction, construction, maintenance, implementation, operation, and decommissioning activities on BLM land.

5.11.1.2.1.3 Special Recreation Management Areas

No portion of the CSP Project alignment is located on lands designated as a Special Recreation Management Area (SRMA).

5.11.1.2.1.4 Extensive Recreation Management Areas

No portion of the CSP Project alignment is located on lands designated as an Extensive Recreation Management Area (ERMA).

5.11.1.2.1.5 California Desert National Conservation Lands

The LUPA identifies California Desert National Conservation Lands, in accordance with the Omnibus Public Land Management Act of 2009 (Omnibus Act), which are nationally significant landscapes within the CDCA with outstanding cultural, ecological, and scientific values. The LUPA also establishes CMAs to conserve, protect, and restore these landscapes. The eastern portion of Segment 3 and Segment 5 are located on lands so-identified.

5.11.1.2.1.6 Areas of Critical Environmental Concern

The CSP Project alignment crosses one BLM-designated Areas of Critical Environmental Concern (ACEC). The White Mountain City ACEC encompasses 820 acres. Located in Deep Springs Valley, this ACEC was designated to protect prehistoric cultural resource values along Wyman Creek, and the ruins of the historic White Mountain City.

5.11.1.2.1.7 Bureau of Land Management, General Public Lands

No portion of the CSP Project alignment crosses lands designated as General Public Lands.

5.11.1.2.1.8 Bureau of Land Management, Development Focus Areas

No portion of the CSP Project alignment crosses lands designated as a Development Focus Area.

5.11.1.2.1.9 Bureau of Land Management, Wilderness Area

No portion of the CSP Project alignment traverses a BLM Wilderness Area.

5.11.1.2.1.10 Inyo National Forest Land Management Plan

The INF Land Management Plan includes a host of desired conditions, objectives, goals, standards, and guidelines that are used to adaptively manage Forest lands. The majority of these are applicable Forest-wide; some are specific to management areas and other discrete locations. The majority of the Forest lands traversed by the CSP Project alignment in Segment 3 are not included in a specific management area. The central portion of Segment 3 traverses the Ancient Bristlecone Pine Forest. This 28,978 acre area was established to protect the bristlecone pines for public enjoyment and scientific study.

5.11.1.2.2 Designated Coastal Zone Management Areas

No portion of the CSP Project alignment is located in a designated coastal zone management area.

5.11.1.2.3 Designated or Proposed Candidate National or State Wild and Scenic Rivers

No portion of the CSP Project alignment crosses or is proximate to a designated or proposed candidate national or state wild and scenic river.

5.11.1.2.4 National Landmarks

No portion of the CSP Project alignment is located on or proximate to a national landmark.

5.11.1.2.5 County and City Land Use and Zoning Designations

The Land Use and Zoning designations for parcels crossed by the CSP Project alignment are presented in Table 5.11-1 below.

Table 5.11-1: Land Use and Zoning Designations

Jurisdiction	Segment	Land Use Designation	Zoning Designation
Inyo County	1	Agriculture (A) Natural Resources (NR) Resource Protection (RP) State and Federal Lands (SFL)	Open Space – 40 acre minimum (OS-40)
Inyo County	2	Agriculture (A) Natural Resources (NR) Open Space and Recreation (OSR)	Open Space – 40 acre minimum (OS-40)
Inyo County	3	Agriculture (A) General Industrial (GI) Natural Resources (NR) Open Space and Recreation (OSR) Public Service Facilities (PF) Residential Medium Density (RM) State and Federal Lands (SFL)	General Industrial and Extractive - 20,000 sq ft minimum (M1-20,000) Light Industrial - 20,000 sq ft minimum (M2-20,000) One Family Residential - 7,200 sq ft minimum (R1-7,200) Open Space – 40 acre minimum (OS-40)
Inyo County	4	Natural Resources (NR) State and Federal Lands (SFL)	Open Space – 40 acre minimum (OS-40)
Inyo County	5	Resource Protection (RP) State and Federal Lands (SFL)	Open Space – 40 acre minimum (OS-40)
Mono County	3	Agriculture (AG) Resource Management (RM)	Mono County utilizes a “one-map approach”; the County’s zoning code incorporates the General Plan land use designations by reference.
Mono County	4	Open Space (OS) Resource Management (RM)	Mono County utilizes a “one-map approach”; the County’s zoning code incorporates the General Plan land use designations by reference.

5.11.1.3 Habitat Conservation Plan

The CSP Project alignment does not overlap any area addressed under any habitat conservation plan.

5.11.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.11.2.1 Regulatory Setting

5.11.2.1.1 Federal

5.11.2.1.1.1 Federal Land Policy and Management Act

Under the FLPMA, Federal land management agencies are required to acknowledge local plans and participation. Title 43, United States Code Annotated (USCA) Section 1712(c)(9) states the Secretary shall:

> "to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments within which the lands are located. … In implementing this directive, the Secretary shall, to the extent he finds practical, keep apprised of State, local and tribal land use plans; assure that consideration is given to those State, local and tribal plans that are germane to the development of land use plans for public lands, assist in resolving to the extent practical, inconsistencies between Federal and non-Federal Government plans, and shall provide for meaningful public involvement of State and local government officials … in the development of land use programs, land use regulations, and land use decisions for public lands. … Land use plans of the Secretary under this section shall be consistent with the State and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act."

5.11.2.1.1.2 Bureau of Land Management, Bishop Resource Management Plan

The BRMP contains the BLM's final land use decisions for managing public lands administered by the Bishop Resource Area. The BRMP does not contain any land use decisions relevant to the CSP Project.

5.11.2.1.1.3 Desert Renewable Energy Conservation Plan, Land Use Plan Amendment

The DRECP LUPA amends the CDCA Plan, the Northern and Eastern Mojave Resource Management Plan Amendment, and the BRMP. The goal of the DRECP is to "provide a streamlined process for the development of utility-scale renewable energy generation and transmission consistent with Federal and state renewable energy targets and policies, while simultaneously providing for the long-term conservation and management of Special Status Species and vegetation types as well as other physical, cultural, scenic and social resources within the DRECP Plan Area through the use of with durable regulatory mechanisms." (BLM 2016) The DRECP LUPA identifies specific CMAs for lands identified as California Desert National Conservation Lands, ACECs, Wildlife Allocations, SRMAs, ERMAs, DFAs, and GPLs. These CMAs are analogous to the multiple-use classes (MUCs) used in previous BLM land use management documents.

5.11.2.1.1.4 Inyo National Forest Land Management Plan

The INF Land Management Plan includes the following for the Ancient Bristlecone Pine Forest management area:

> **Desired Conditions (DA-ABPF-DC)**
>
> 01 Individual specimens and stands of ancient trees and remnant pieces of wood, which are of known scientific or aesthetic value, are maintained within the natural range of variation.
>
> 02 Natural processes are slow and proceed generally unhampered to maintain the majority of the area in its near natural condition, especially in the bristlecone pine stands and other ecologically significant areas.
>
> **Standards (DA-ABPF-STD)**
>
> 01 Prohibit construction of interpretive trails, observation areas, visitor contact facilities, and parking areas at locations that impact major known scientific study sites.

02 Prohibit management practices that threaten the vegetation condition for which the area was established.

03 Wood remnants should not be removed except for scientific, research, or museum specimens.

04 Soil or watercourses should not be modified except to restore damaged areas to a natural condition or to control or prevent erosion.

Potential Management Approaches

- Acquire all non-Federal lands.
- Place existing utilities underground if technically feasible.

Suitability (DA-ABPF-SUIT)

01 The following uses are not suitable in the Ancient Bristlecone Pine Forest :

a. New above-ground utility rights-of-way

b. Timber harvesting and fuelwood gathering

c. Construction of overnight camping facilities

d. Overnight dispersed recreation use

e. Cross-country over snow vehicle travel

f. Ski areas

g. Commercial enterprise sites and major utility corridors

h. Commercial harvesting of nontimber forest products

i. Mineral resources exploration and development

The Inyo National Forest Land Management Plan includes the following Forestwide Guideline:

Guidelines (LAND-FW-GDL)
01 Minimize the creation of new rights-of-way where feasible by using existing public or private utility rights-of-way to reduce impacts on other resources.

5.11.2.1.2 State

5.11.2.1.2.1 California Public Utilities Commission

Pursuant to GO 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities in the State of California. Under the CEQA, the CPUC is the Lead Agency with respect to such CSP Project elements within the State of California. SCE is required to comply with GO 131-D and is seeking a Permit to Construct from the CPUC for the CSP Project.

5.11.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.11.2.1.3.1 Inyo County General Plan, Land Use Element

This Land Use Element identifies goals, policies and implementation measures designed to encourage and allow appropriate development throughout the County. The Land Use Element also addresses public services and utilities.

The Gas and Electrical Facilities section of the Land Use Element includes the following:

> GOAL PSU-10. To provide efficient and cost-effective utilities that serves the existing and future needs of people in the unincorporated areas of the County.
>
> Policy PSU-10.1 Expansion of Services. The County shall work with local electric utility companies to design and locate appropriate expansion of electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual, and other impacts on existing and future residents

The Land Use Element designations for properties traversed by the CSP Project alignment are presented in Table 5.11-1.

5.11.2.1.3.2 Zoning Ordinance of the County of Inyo, California

Section 18.03.040, Interpretation, of the Zoning Ordinance of the County of Inyo, California, states:

> "The provisions of this title shall be held to the minimum requirements. Nothing in this title shall repeal or amend any ordinance requiring a permit or license to cover any business activity. These regulations are not intended to impair or interfere with any existing easement, covenant or other agreement between parties; provided, however, that where this title imposes a greater restriction upon any use or upon the height or bulk of a building or structure, or requires larger building sites, yards or other open spaces than are imposed or required by any other law, ordinance, covenant or easement, than the provisions of this title shall control. (Ord. 943 § 4, 1995.)"

5.11.2.1.3.3 Mono County General Plan

Mono County utilizes a "one-map approach"; the County's zoning code incorporates the General Plan land use designations by reference. The CSP Project alignment crosses properties with the following land use designations: Estate Residential (ER), Resource Management (RM), Rural Mobile Home (RMH), and Open Space (OS).

The General Plan descriptions for these land use designations are silent regarding electrical infrastructure. Section 11.010 Placement of Utility Infrastructure, Chapter 11—Utilities, in Section VI, Land Development Regulations, of the General Plan notes:

> A. Exemption for Regulated Public Utilities.
>
> The provisions of this section shall not apply to distribution and transmission lines owned and operated as part of the statewide electrical network regulated by the California Public Utilities Commission (PUC). The authority for this exemption is set forth in the California Constitution, Article XII, Section 8, which vests exclusive regulatory authority over the distribution and transmission lines of these utilities in the California Public Utilities Commission. However, the County shall work with the PUC and applicant to cooperatively meet the standards set forth in Section F.

5.11.3 Impact Questions

5.11.3.1 Impact Questions

The significance criteria for assessing the impacts to land use and planning are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Physically divide an established community
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

5.11.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.11.4 Impact Analysis

5.11.4.1 Impact Analysis

5.11.4.1.1 Would the Project physically divide an established community?

5.11.4.1.1.1 Construction

No Impact. The CSP Project would be located in largely rural areas where the land is undeveloped and is generally described as open space. The existing subtransmission alignment is routed around or adjacent to the few residential areas found along the CSP Project alignment; the reconstructed subtransmission line would be located within, or immediately proximate to, the existing alignment, and thus would also be routed around or adjacent to these communities. Neither the replacement subtransmission structures, the conductor, nor OPGW would physically divide an established community. Therefore, no impacts would occur under this criterion.

5.11.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.11.4.1.2 Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

5.11.4.1.2.1 Construction

No Impact. The CSP Project would be constructed in existing and new ROWs located on Federal, LADWP, and private lands within Inyo County and Mono County.

The Zoning Ordinance of the County of Inyo is silent regarding the use of all zones crossed by the CSP Project alignment for the construction or operation of electric transmission lines; the reconstruction of existing electrical infrastructure is not listed as a prohibited use in any zoning designation.

As presented in the Regulatory Setting section, the construction or operation of electric infrastructure as included in the CSP Project is not prohibited in any of the land uses designated in the Inyo County General Plan or Mono County General Plan. The CSP Project is consistent with Policy PSU-10.1 of the

Inyo County General Plan, as the reconstruction of the subtransmission lines in and immediately proximate to the existing alignment would minimize impacts to agriculture and would minimize noise, electromagnetic, visual, and other impacts on existing and future residents.

The CSP Project would result in the reconstruction of existing subtransmission line infrastructure on lands managed according to the Bishop RMP. Because this land use is existing, the CSP Project would not conflict with any of the management directions contained in the Bishop RMP.

The CSP Project crosses BLM lands designated as California Desert National Conservation Lands and as an ACECs. The LUPA-wide CMAs permit transmission lines in ACECs and California Desert National Conservation Lands. The DRECP LUPA recognizes valid existing rights such as those held by SCE and that would be utilized under the CSP Project. The BLM would evaluate the applicability of valid existing rights on a case-by-case basis, and in situations where the BLM retains authority to require design features or mitigation, the BLM would apply DRECP LUPA decisions to the extent authorized by the relevant statutes and regulations. The CSP Project would comply with all conditions and measures included in Federal authorizations for the purpose of avoiding or mitigating an environmental effect. Therefore, construction of the CSP Project would be consistent with the LUPA. Accordingly, no impacts would occur under this criterion.

Reconstruction of existing utility infrastructure within an existing utility ROW is not listed as a "not suitable" land use in the Ancient Bristlecone Pine Forest. Furthermore, the CSP Project is consistent with Forest-wide guideline LAND-FW-GDLLAND-GW-GDL, which calls for minimizing the creation of new rights-of-way where feasible by using existing public or private utility rights-of-way to reduce impacts.

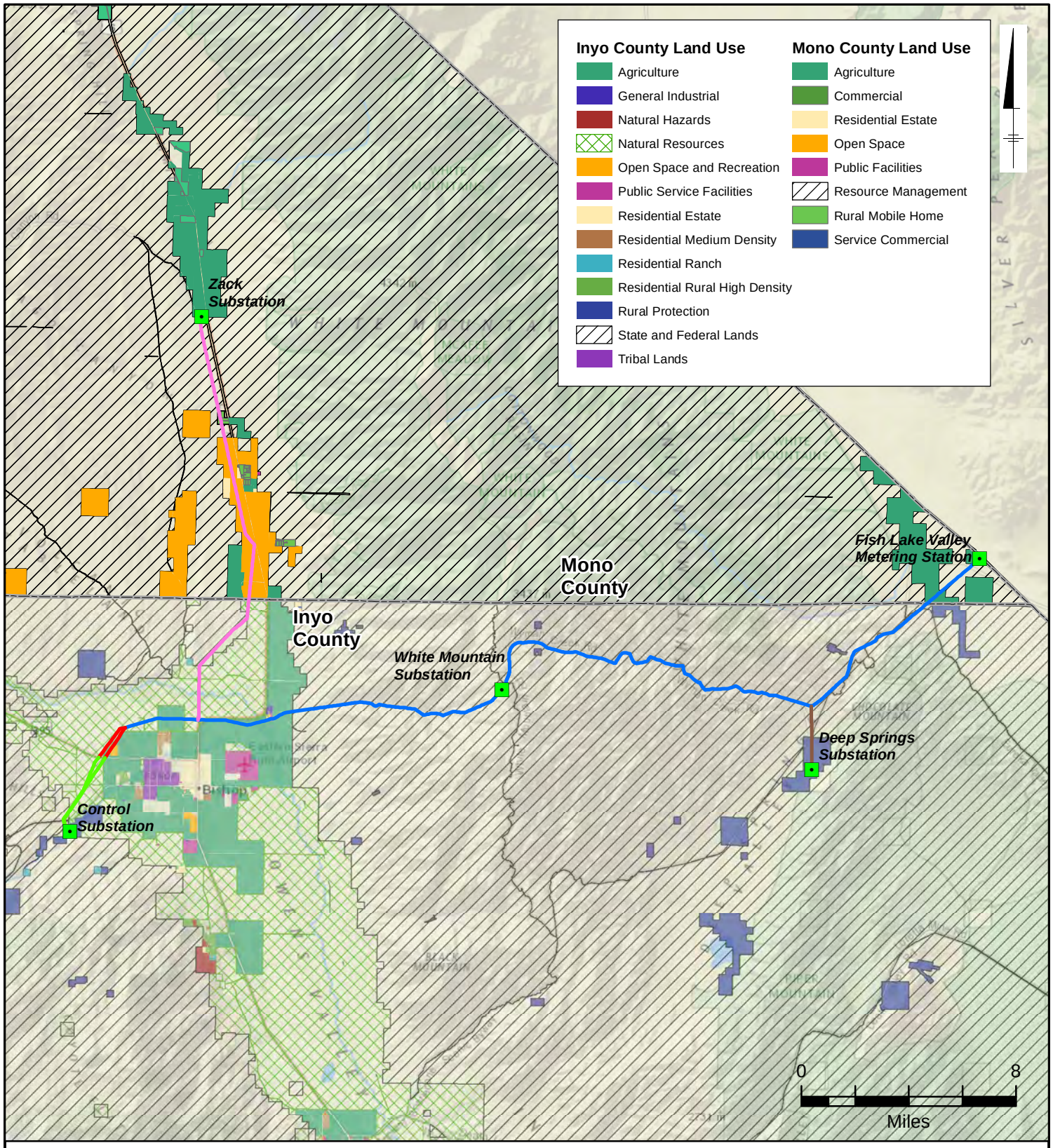
Further, the CSP Project would comply with all conditions and measures included in Federal authorizations for the purpose of avoiding or mitigating an environmental effect. Therefore, construction of the CSP Project would be consistent with each of these plans. Accordingly, no impacts would occur under this criterion.

5.11.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.11.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Land Use and Planning resource area.



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- County

Page 1 of 3

NOTES:
(1) Only Land Use categories intersecting the CSP proposed alignment are shown.
(2) Inyo Co Land Use source:
https://services.arcgis.com/0jRlQ17Qmni5zEMr/arcgis/rest/services/GeneralPlan/FeatureServer

CONTROL-SILVER PEAK PROJECT

LAND USE DESIGNATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.11-1

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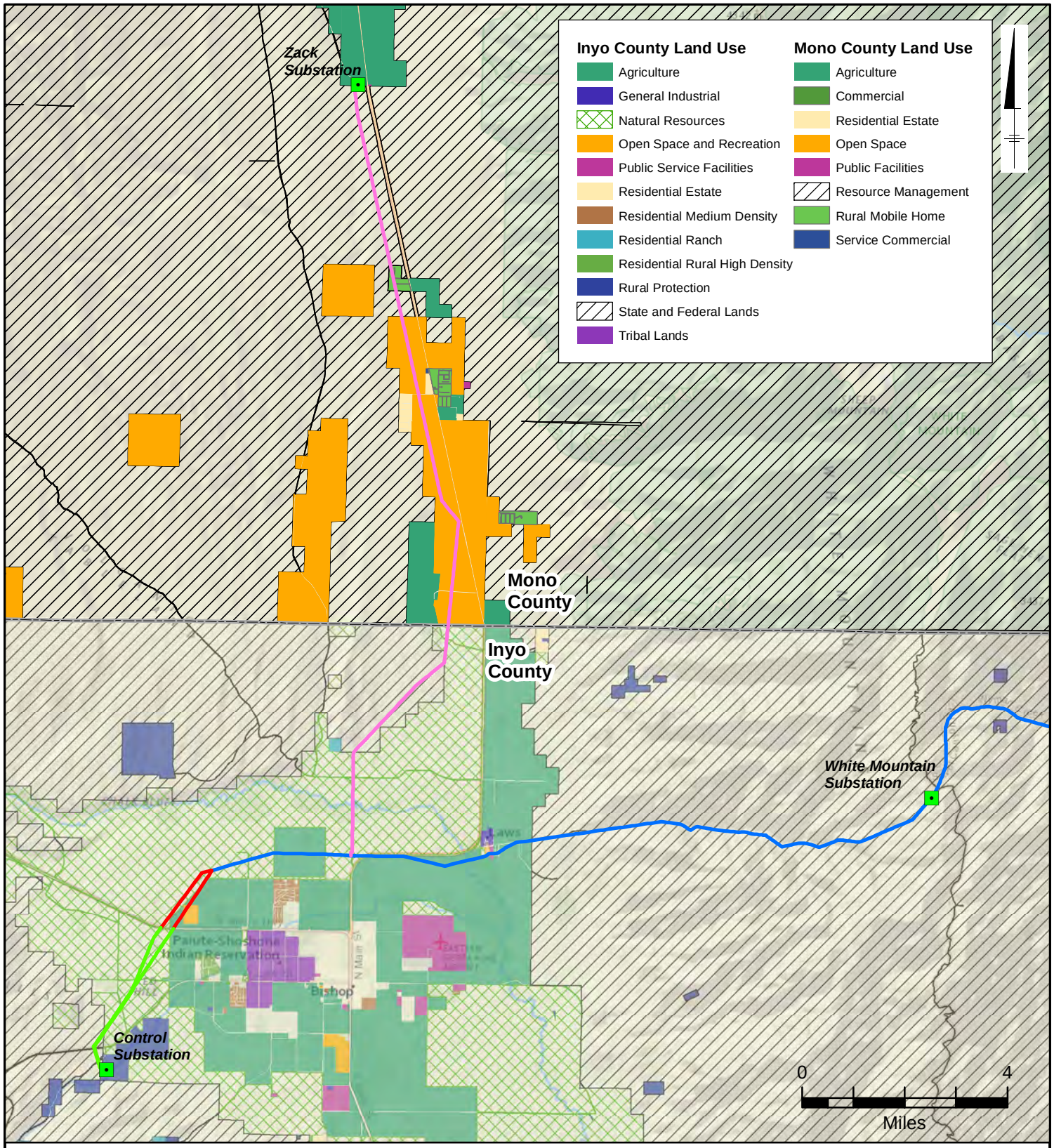

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- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

- Substation
- County

NOTES:
(1) Only Land Use categories intersecting the CSP proposed alignment are shown.
(2) Inyo Co Land Use source:
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CONTROL-SILVER PEAK PROJECT

LAND USE DESIGNATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

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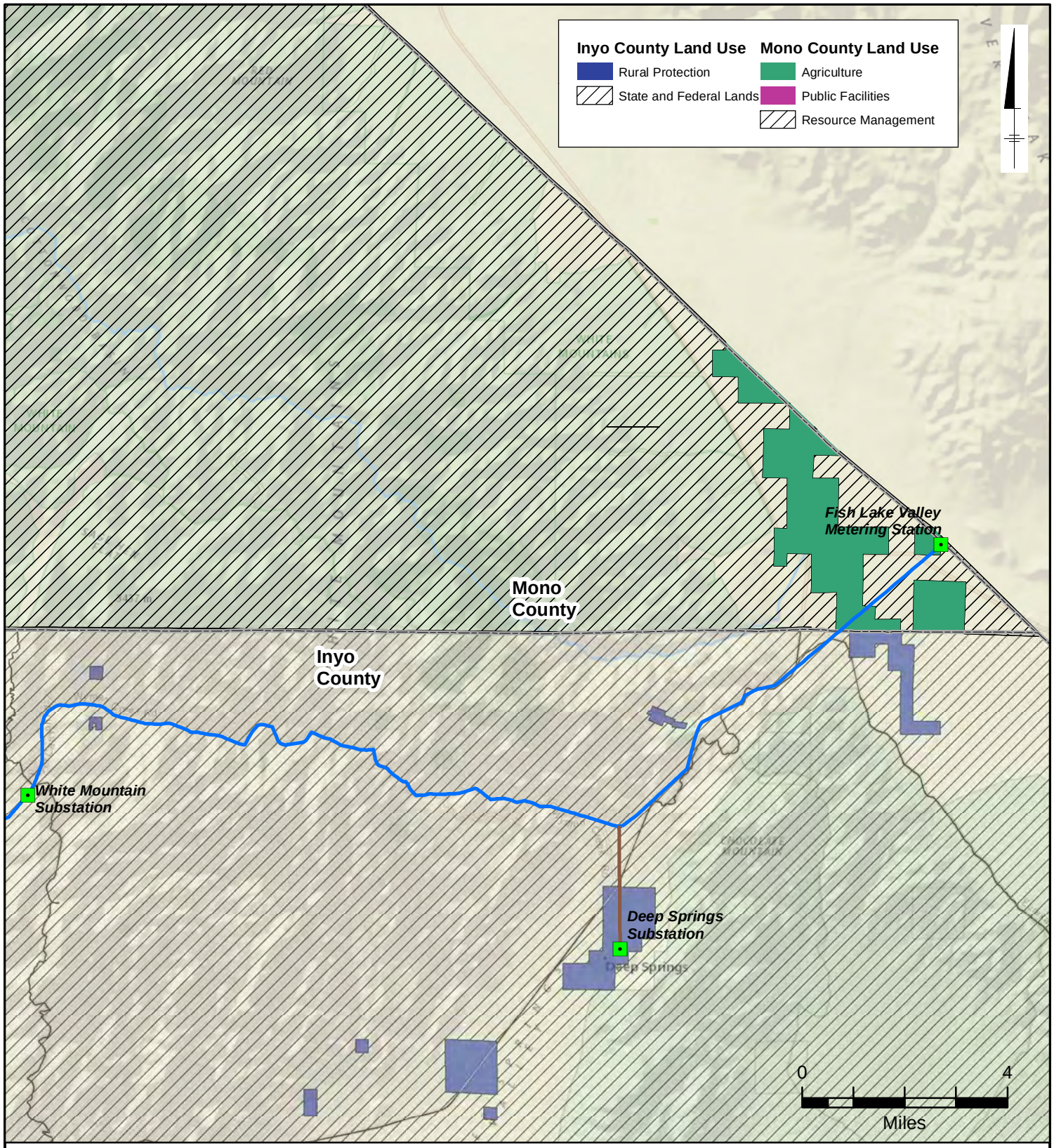

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- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- County

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(1) Only Land Use categories intersecting the CSP proposed alignment are shown.
(2) Inyo Co Land Use source:
https://services.arcgis.com/0jRlQ17Qmni5zEMr/arcgis/rest/services/GeneralPlan/FeatureServer

CONTROL-SILVER PEAK PROJECT

LAND USE DESIGNATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

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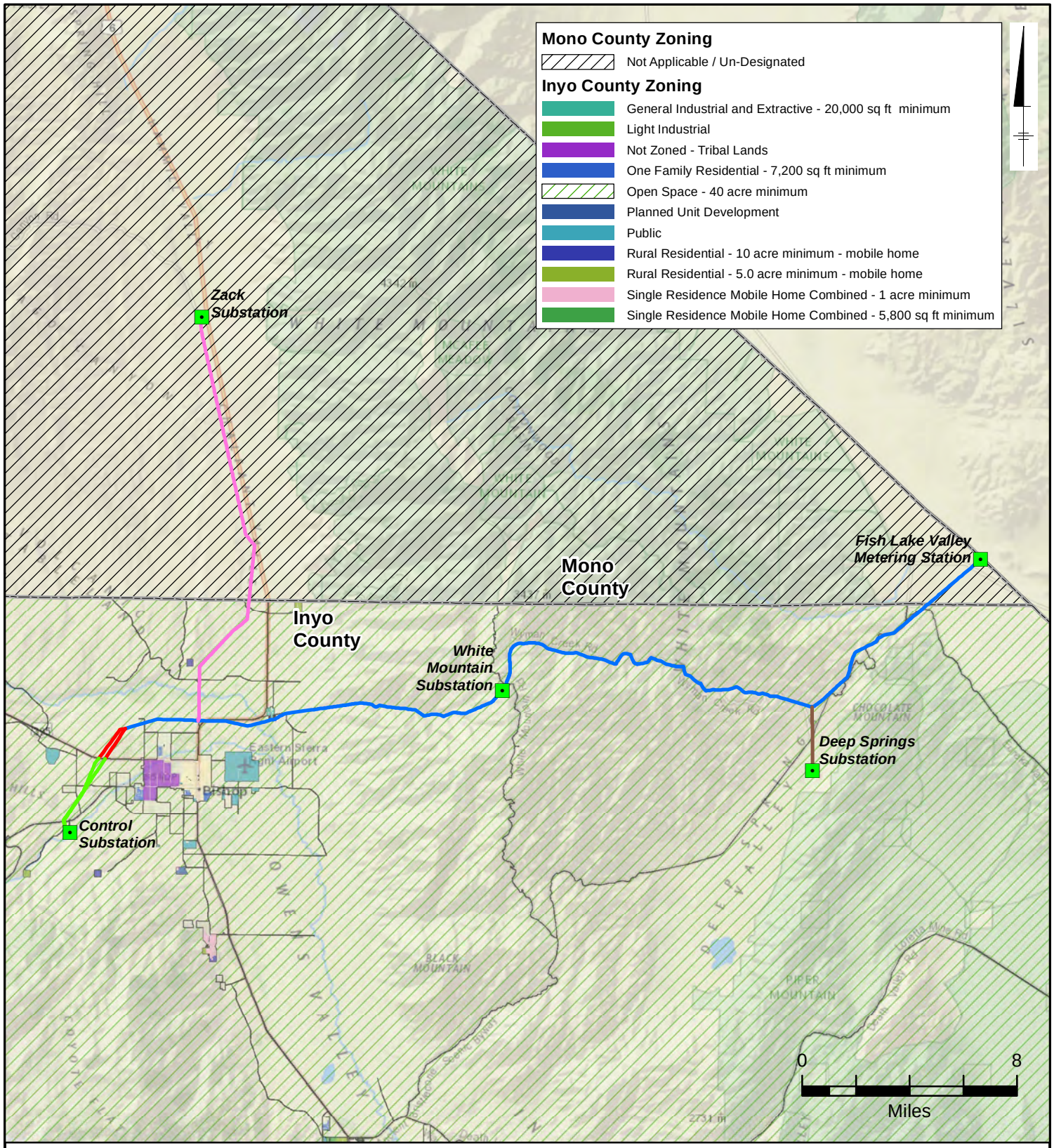

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- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

Page 1 of 3

- Substation
- County

CONTROL-SILVER PEAK PROJECT

ZONING DESIGNATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

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5.11-2

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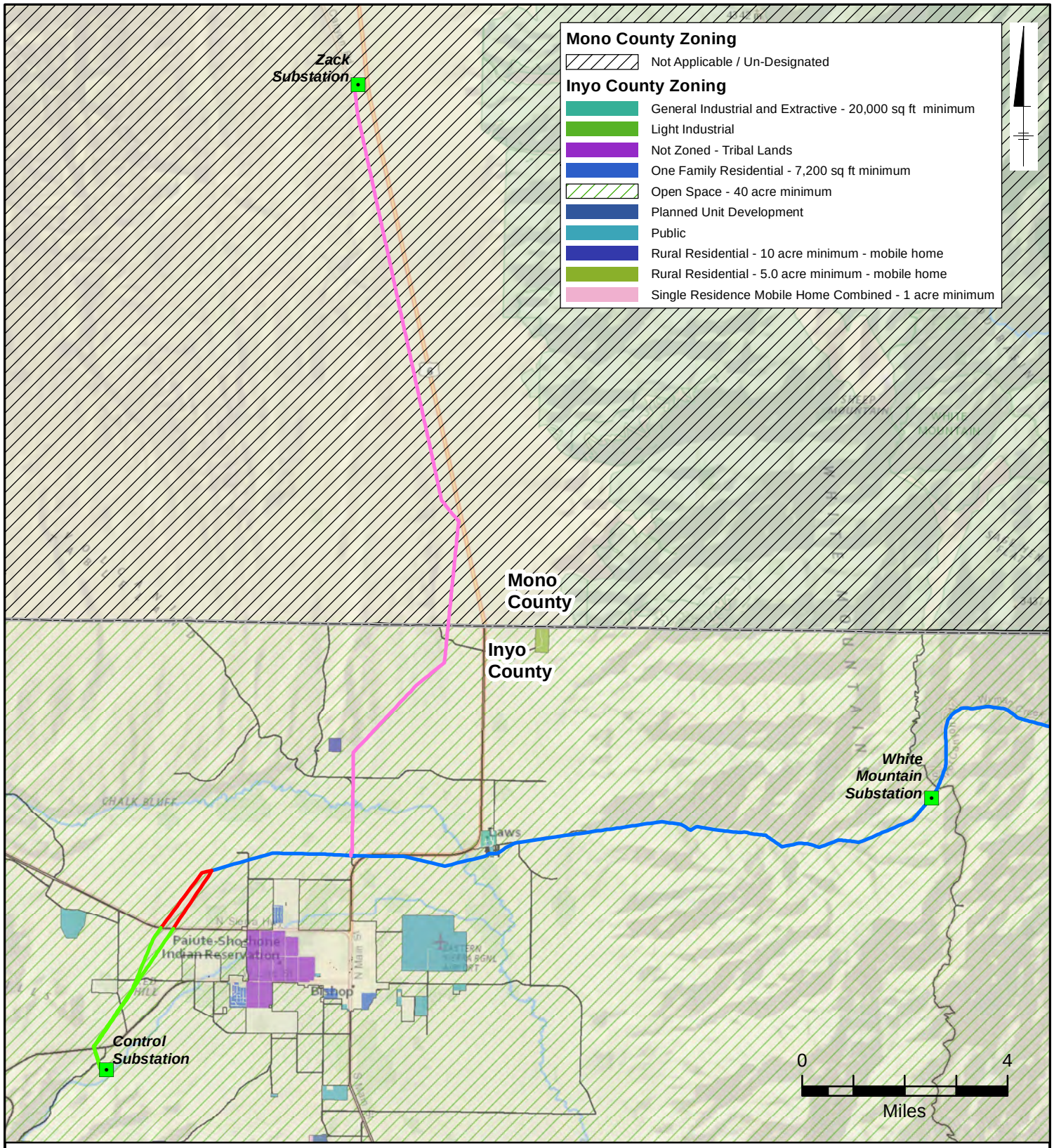

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- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

Page 2 of 3

- Substation
- County

CONTROL-SILVER PEAK PROJECT

ZONING DESIGNATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

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5.11-2

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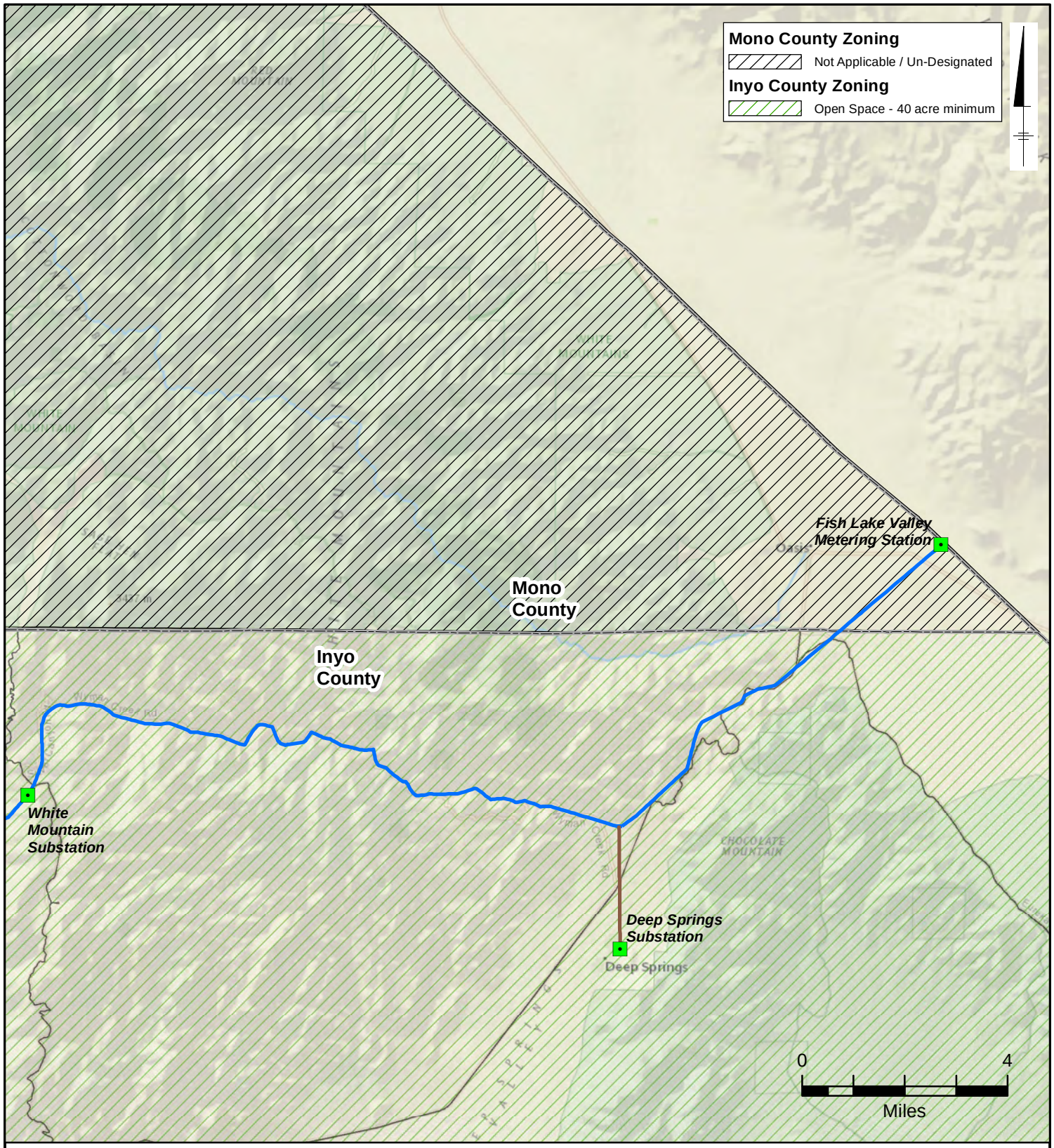

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- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

Substation

County

CONTROL-SILVER PEAK PROJECT

ZONING DESIGNATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.11-2

5.12 Mineral Resources

This section describes the mineral resources in the area of the CSP Project, as well as the potential impacts resulting from construction and operation of the CSP Project.

According to the USGS, a mineral resource is defined as a concentration of naturally occurring solid, liquid, or gaseous materials in or on the earth's crust in such a form and quantity, and of such a grade or quality, that it has reasonable prospects for economic extraction, either currently or in the future. Mineral resources include oil, natural gas, and metallic and non-metallic deposits. Mineral resources data were obtained from the following resources:

- USGS
- California Department of Conservation (DOC)
- CGS
- Inyo County General Plan
- Mono County General Plan

Aerial photographs were also used to analyze mineral resources in the vicinity of the CSP Project.

5.12.1 Environmental Setting

The sections below describe the mineral resources extant along the CSP Project alignment. These discussions are divided by geopolitical boundaries. The locations of active mines within two miles of the CSP Project alignment are presented in Figure 5.12-1.

5.12.1.1 Mineral Resources

5.12.1.1.1 Inyo County

Inyo County is located within the Basin and Range Geomorphic Province; this region has historically produced substantial amounts of mineral resources such as base and precious metals (e.g., gold, silver and copper). Extensive occurrences of known and potential mineral resources are found in Inyo County, along with associated past and current mineral production.

The occurrence of mineral resources was an important factor in much of the early settlement within the County, and mining operations remain a substantial, albeit declining, local industry. Currently, aggregate resources (e.g., sand, gravel, clay and stone) represent the predominant mining activity in the County, although development of other mineral resources such as base and precious metals, borates, volcanic materials (e.g., pumice, perlite and cinders) and geothermal resources are occurring in various locations. A number of studies on mineral resource occurrences and potential have been conducted for areas within the County, including efforts by the USGS, BLM, CGS, and South Coast Geological Society (Inyo County 2001).

The CSP Project alignment does not cross, nor is proximate to, any areas designated as a Mineral Resource Zone (MRZ; California Department of Conservation 2018). No locally important mineral resource recovery sites are delineated in the Inyo County General Plan or associated specific plans or other land use plans.

5.12.1.1.2 Mono County

The Mono County General Plan, Conservation/Open Space Element notes that the County "has significant mineral resources within its boundaries" and that mining "contributes to the economy of Mono

County". The CSP Project alignment does not cross, nor is proximate to, any areas designated as an MRZ (California Department of Conservation 2018). No locally important mineral resource recovery sites are delineated in the Mono County General Plan or associated specific plans or other land use plans.

5.12.1.1.3 Active Mining Claims

The CSP alignment crosses one active mining claim (Claim Name Silver Canyon Lode, Case Serial Number CA101378587); this lode claim is located in Segment 3 on USFS-managed lands.

5.12.1.1.4 Active Mines

The CSP Project alignment is located in close proximity to two active mining sites in Inyo County (Figure 5.12-1). These open pits produce shale and aggregate (California Department of Conservation 2018). The CSP Project alignment is located within one mile of one active mining site in Mono County; this open pit produces aggregate (California Department of Conservation 2018).

5.12.1.1.5 Resource Recovery Sites

There are no mineral resource recovery sites in the vicinity of the CSP Project alignment delineated in any General Plan, in a specific plan, or in any other land use plan.

5.12.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.12.2.1 Regulatory Setting

5.12.2.1.1 Federal

5.12.2.1.1.1 Surface Mining Control and Reclamation Act of 1977

This Act (30 U.S.C. §§ 1201-1328) establishes a program for regulating surface coal mining and reclamation activities. It establishes mandatory uniform standards for these activities on State and Federal lands, including a requirement that adverse impacts on fish, wildlife, and related environmental values be minimized. The Act creates an Abandoned Mine Reclamation Fund for use in reclaiming and restoring land and water resources adversely affected by mining practices.

5.12.2.1.2 State

5.12.2.1.2.1 California Surface Mining and Reclamation Act (Public Resources Code § 2710 et seq.)

The protection of regionally significant mineral resource deposits is one of the main emphases of the Surface Mining and Reclamation Act (SMARA). The law specifically mandates a two-phased process, commonly referred to as classification and designation, for mineral resources. The CGS is responsible under SMARA for carrying out the classification phase of the process.

SMARA requires the State Geologist (who is the chief administrator of the California Geological Survey) to classify lands into MRZs based on the known or inferred mineral resource potential of that land. The classification process is based solely on geology, without regard to land use or ownership. The primary goal of mineral land classification is to help ensure that the mineral resource potential of land is recognized and considered in the land use planning process. MRZ definitions are provided in Table 5.12-1, Mineral Resource Zone Definitions.

The California Mining and Geology Board is responsible for the second phase, which allows the Board to identify areas within a production-consumption region that contain significant deposits of certain mineral resources that may be needed to meet the region's future demand.

Table 5.12-1: Mineral Resource Zone Definitions

MRZ-1	Areas where available geologic information indicates there is little likelihood for the presence of mineral resources.
MRZ-2a	Areas that contain significant measured or indicated reserves.
MRZ-3a	Areas likely to contain undiscovered mineral deposits similar to known deposits in the same producing district or region (hypothetical resources).
MRZ-3b	Areas judged to be favorable geologic environments for mineral resource occurrence, but where mineral discoveries have not been made in the region (speculative resources).
MRZ-4	Areas where geologic information does not rule out either the presence or absence of mineral resources.
ARA-6	Area with aggregate resources rated as highly significant.

Source: California Department of Conservation, Division of Mines and Geology

5.12.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.12.2.1.3.1 Inyo County General Plan, Conservation and Open Space Element

Section 6.3, Mineral & Energy Resources, includes the following goals, policies, and implementation measures:

> GOAL MER-1: Protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.
>
> Policy MER-1.5 Maintain Accessibility: Ensure that extractive resource areas are protected from incompatible development that could interfere with extractive operations, now or in the future.
>
> Implementation Measure 7.0: Discourage incompatible development on lands identified as containing significant mineral resources. Support uses that will not preclude future mining activities.

5.12.2.1.3.2 Mono County General Plan, Conservation and Open Space Element

The Conservation and Open Space Element includes the following goals and objectives:

> GOAL 7. Provide for the conservation and development of mineral resources in a manner that minimizes land use conflicts and maintains a quality environment.
>
> Objective 7.B. Conserve and protect areas containing significant mineral deposits in a manner that avoids or minimizes land use conflicts.

5.12.3 Impact Questions

5.12.3.1 Impact Questions

The significance criteria for assessing the impacts to mineral resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

5.12.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.12.4 Impact Analysis

5.12.4.1 Impact Analysis

5.12.4.1.1 Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

5.12.4.1.1.1 Construction

No Impact. The CSP Project does not cross lands with known mineral resources that are of value to the region and the residents of the State. As stated above and shown in Figure 5.12-1, the CSP Project alignment is located in close proximity to, but does not cross, active mining sites; the CSP Project components would be located no nearer any active mining site. Because these sites are currently active, and because the CSP Project components would be located no nearer these mining sites, no impacts to these mining sites would be realized. The CSP Project does cross lands that have been mined in the past, and thus have an inferred mineral resource. The CSP Project would not result in the loss of availability of any of these potential or inferred mineral resources. The CSP Project involves the reconstruction of existing subtransmission facilities within or immediately proximate to the existing alignment. The existing infrastructure has been in place for more than 100 years; in that time and to the knowledge of SCE, the presence of the subtransmission infrastructure has not resulted in the loss of availability of any mineral resource. Because replacement subtransmission structures would be located proximate to existing subtransmission structures, mineral resources located within or proximate to the existing rights-of-way and easements that can be and are currently available to be safely extracted (i.e., that are available or that are actively mined) would continue to be available. Therefore, there would be no impact under this criterion.

5.12.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.12.4.1.2 Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

5.12.4.1.2.1 Construction

No Impact. No mineral resource recovery sites are delineated in a General Plan, in a specific plan, or in any other land use plan prepared by Inyo County or Mono County. Therefore, there would be no impact under this criterion.

5.12.4.1.2.2 Operations

No Impact. No mineral resource recovery sites are delineated in a General Plan, in a specific plan, or in any other land use plan prepared by Inyo County or Mono County. Therefore, there would be no impact under this criterion.

5.12.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Mineral Resources resource area.

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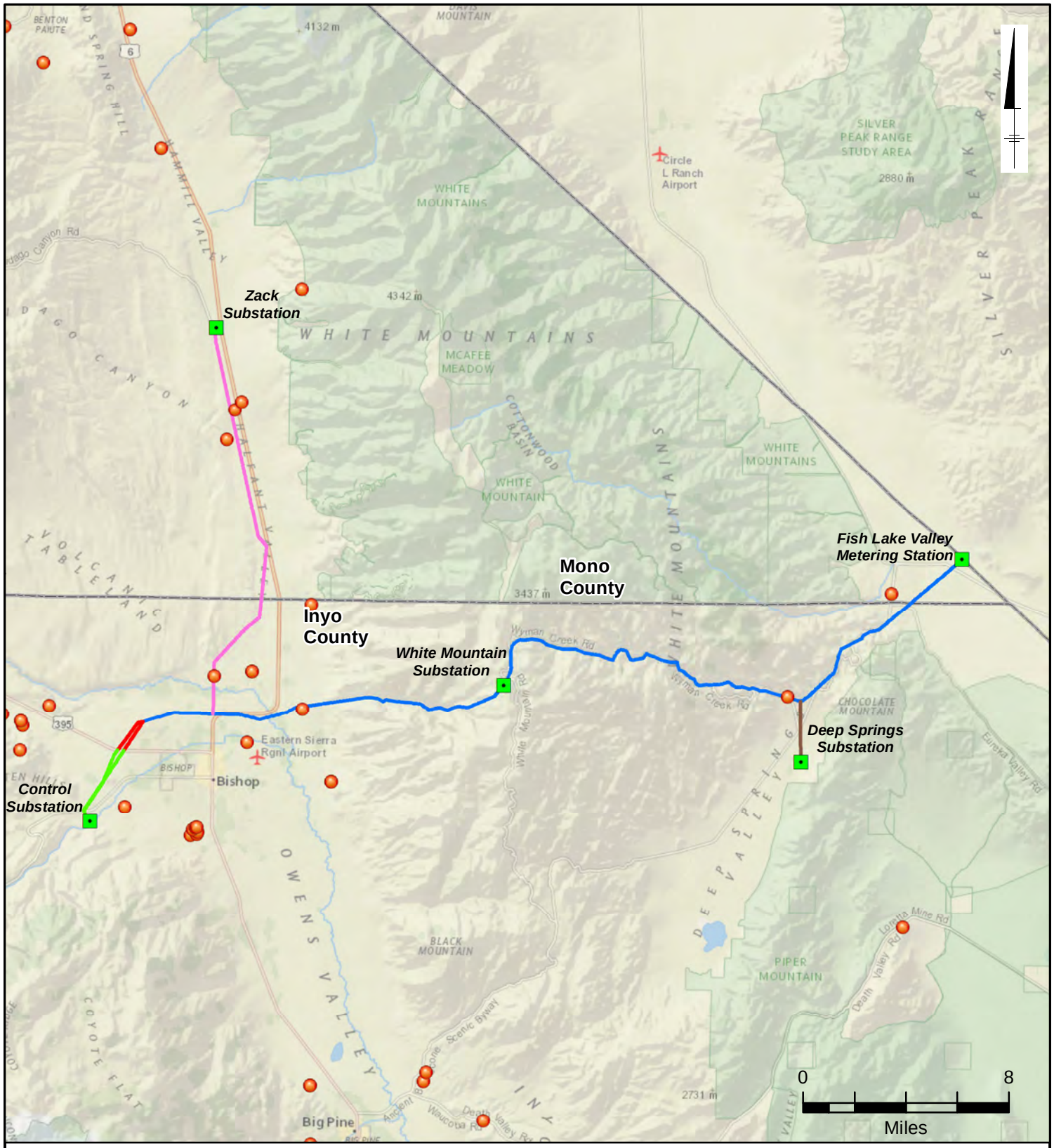

Legend

- Substation
- Mines and Mineral Resources
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties

CONTROL-SILVER PEAK PROJECT

MINES AND MINERAL RESOURCES

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.12-1

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5.13 Noise

This section describes the noise in the area of the CSP Project, as well as the potential impacts resulting from construction and operation of the CSP Project.

5.13.1 Environmental Setting

5.13.1.1 Noise Sensitive Land Uses

The CSP Project is located in unincorporated Inyo County and unincorporated Mono County. Project-related construction activities would occur mainly in open space areas. However, some Project activities would be conducted in the vicinity of rural residences located near the existing subtransmission lines. Existing noise sources in proximity to these potentially noise-sensitive receptors include community noise, roadway and highway noise, and airport noise.

The definition of a sensitive receptor varies by jurisdiction; for the purposes of this analysis, sensitive receptors include those defined in the Mono County General Plan, Noise Element:[19]

- Residential areas
- Hospitals, convalescent homes and extended care facilities
- Schools
- Libraries
- Daycare centers, and other similar land uses.
- Residential areas
- Hospitals
- Convalescent homes and facilities
- Schools
- Libraries
- Community centers
- Certain recreational areas and parks
- Popular visitor destinations and cultural resource sites
- Certain natural areas and sensitive habitat areas and other similar land uses

Few sensitive receptors are located along the CSP Project alignment, and no hospitals, nursing homes, libraries, or religious institutions are located within 1,000 feet of the CSP Project alignment or any construction support area (including helicopter landing zones and staging areas). Within 1,000 feet of the existing and proposed CSP Project alignments and construction support areas, fewer than two dozen residences have been identified: approximately 12 potentially-residential structures in the community of Laws in Segment 3, approximately 4 residences along SR-168 north of Deep Springs College, and approximately 3 potentially-residential structures in the Fish Lake Valley adjacent to Segment 3. Deep Springs College at the southern terminus of Segment 4 also represents a sensitive receptor location.

19 The Inyo County General Plan, Public Safety Element, includes a listing of sensitive receptors; the items in this listing are also included in the Mono County General Plan's listing, presented here.

Sensitive receptor locations are illustrated in Figureset 5.13-1; the distance from the CSP Project alignment to each of these receptors is shown in Table 5.13-1.

Table 5.13-1: Distance from Sensitive Receptor Locations to CSP Project Alignment

Receptor Area	Distance, Nearest (feet)
Community of Laws	60
SR-168 Residences	420
Deep Springs College	80
Fish Lake Valley	140

5.13.1.2 Noise Setting

The CSP Project alignment is generally located in uninhabited areas with few stationary anthropogenic noise sources. Vehicles are the most prevalent source of noise along the CSP Project alignment; where the alignment runs parallel to or crosses roadways, ambient noise greater than 65 dBA (A-weighted decibels) Community Noise Equivalent Level (CNEL) can be expected within approximately 275 feet of the roadway; beyond this distance, ambient noise levels would be less than 65 dBA CNEL.

In the vicinity of Laws, ambient noise measurements indicate a minimum noise level of 25.1 dBA, a maximum of 73.6 dBA, and an Leq of 55.4 dBA. In the City of Bishop, measurements indicate a minimum noise level of 27.2 dBA, a maximum of 85.3 dBA, and an Leq of 65.3 dBA (Inyo County 2014). Ambient noise in the vicinity of SR-168, at times with no traffic, have been recorded at 28 to 30 dBA (FHWA 1978); while these measurements are dated, the lack of development in the area suggests that the findings are still valid. No ambient noise measurements are available in the eastern portion of Segment 3 in the Fish Lake Valley, or along Segments 4 and 5; local roadways and highways are presumed to be the primary sources of noise in these areas.

5.13.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.13.2.1 Regulatory Setting

5.13.2.1.1 Federal

5.13.2.1.1.1 U.S. Environmental Protection Agency

The USEPA has developed and published criteria for environmental noise levels with a directive to protect public health and welfare with an adequate margin of safety (USEPA 1974). This USEPA criterion (Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety) was developed to be used as an acceptable guideline when no other local, county, or State standard has been established. However, the USEPA criterion is not meant to substitute for agency regulations or standards in cases where States and localities have developed criteria according to their individual needs and situations.

5.13.2.1.1.2 Federal Transit Administration

The Federal Transit Administration (FTA) has developed vibration impact thresholds for noise-sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences and daycare facilities) and 83 VdB at institutional

buildings (e.g., schools and churches). These thresholds apply to conditions where there are an infrequent number of events per day.

The FTA has also identified construction vibration damage criteria to differing types of buildings and structures as shown in Table 5.13-2.

Table 5.13-2: Construction Vibration Damage Criteria

Building/ Structural Category	PPV, in/sec	Vibration Level*
Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

* RMS velocity in decibels, VdB re 1 micro-in/sec

5.13.2.1.2 State

5.13.2.1.2.1 California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare, and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also recognizes that continuous and increasing bombardment of noise exists in urban, suburban, and rural areas. This act declares that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. The Office of Noise Control in the Department of Health Services provides assistance to local communities developing local noise control programs, and works with the Governor's Office of Planning and Research to provide guidance for the preparation of the required noise elements in city and county general plans, pursuant to Section 65302(f) of the California Government Code.

5.13.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.13.2.1.3.1 Inyo County General Plan

The Public Safety Element of the Inyo County General Plan contains the following definition, policies and implementation measure:

- Noise Sensitive Land Uses (Receptors). Noise sensitive land uses (receptors) are defined to include residential areas, hospitals, convalescent homes and extended care facilities, schools, libraries, daycare centers, and other similar land uses as determined by the County.
- Policy NOI-1.7 Noise Controls During Construction. Contractors will be required to implement noise-reducing mitigation measures during construction when residential uses or other sensitive receptors are located within 500 feet.

- Implementation Measure 5.0: Construction activities within 500 feet of existing noise sensitive uses shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall occur on Sunday or federal holidays without a special permit from the County for unusual circumstances.

5.13.2.1.3.2 Inyo County Policy Plan and Airport Comprehensive Land Use Plan

The Inyo County Airport Land Use Commission adopted a Policy Plan and Airport CLUP in December 1991, which guides the orderly development of each public use airport in the County.

5.13.2.1.3.3 Inyo County Code of Ordinances

The Inyo County Code of Ordinances does not contain any standards or regulations applicable to the CSP Project.

5.13.2.1.3.4 Mono County General Plan

The Noise Element of the Mono County General Plan contains a number of goals, objectives, and policies, including the following:

> Objective 1.B. Protect the existing noise quality through abatement.
>
> Policy 1.B.1. The County shall enforce the requirements in the Mono County Noise Ordinance (Mono County Code Chapter 10.16), which is being updated concurrently with this Element.
>
> Policy 1.C.8. Use Federal Transit Authority (FTA) Guidelines on Noise and Vibration to limit exposure of sensitive land uses to groundborne vibration from transportation sources, construction equipment, and other sources.

The Noise Element also notes that "residential uses are the primary noise-sensitive uses within Mono County", and further defines sensitive noise receptors or noise sensitive lands uses to include "residential areas, hospitals, convalescent homes and facilities, schools, libraries, community centers, certain recreational areas and parks, popular visitor destinations and cultural resource sites, certain natural areas and sensitive habitat areas and other similar land uses."

5.13.2.1.3.5 Mono County Noise Ordinances

The Mono County Noise Ordinance includes the following:

> **10.16.060 Noise Level Limitations.**
>
> Exterior Noise Levels
>
> Construction Noise Limits
>
> C. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule:
>
> 1. At residential properties:
>
> a. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than ten days) of mobile equipment shall comply with the noise limits in Table 10.16.060 (B).

b Stationary equipment. Maximum noise levels for repetitively scheduled and relatively long-term operation (ten days or more) of stationary equipment shall comply with the noise limits in Table 10.16.060 (C).

2. At business properties:

a. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than ten days) of mobile equipment, daily including Sunday and legal holidays, at all hours, shall be 85 dBA.

b. Stationary equipment. Maximum noise levels for repetitively scheduled and relatively long-term operation (ten days or more) of stationary equipment, daily including Sunday and legal holidays, at all hours, shall be 75 dBA.

3. All mobile or stationary internal combustion engine-powered equipment or machinery shall be equipped with suitable exhaust and air intake silencers in proper working order.

Table 10.16.060 (B) – Noise Limits for Mobile Construction Equipment
Non-Scheduled, Intermittent, Short-Term Operation

Time Period	Single Family Residential Land Use	Multi-Family Residential Land Use	Mixed Use Residential Commercial
Mon-Sat, 7:00 a.m. – 6:59 p.m.	75 dBA	80 dBA	85 dBA
Mon-Sat, 7:00 p.m. – 6:59 a.m. All Day, Sundays & Legal Holidays	60 dBA	65 dBA	70 dBA

10.16.070 Prohibited acts.

A. No person shall cause, suffer, allow, or permit to be made verbally or mechanically any noise disturbance, as defined in this ordinance.

B. No person shall cause, suffer, allow, or permit the following acts:

6. Construction/Demolition. Operating or permitting the operation of any tools or equipment used in construction, drilling, repair, alteration, earthmoving, excavating, or demolition work between 7:00 p.m. and 7:00 a.m. on weekdays or at any time on weekends or legal holidays, except for emergency work by public service utilities or road crews or by variance issued by the County.

7. Vibration. Operating or permitting the operation of any device that creates a vibration that is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet from the source if on a public space or public ROW.

10.16.100 Variances.

Variances for exceptions from any provision of this ordinance, subject to limitations and restrictions as to area, noise levels, time limits and other terms and conditions, may be sought in the same manner and on the same basis as set forth in Chapter 33, Variances, of the Mono County Land Development Regulations.

5.13.3 Impact Questions

5.13.3.1 Impact Questions

The significance criteria for assessing the impacts from noise are determined from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would cause:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the CSP Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Generation of excessive groundborne vibration or groundborne noise levels
- Exposure of people residing or working in the CSP Project area to excessive noise levels for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport

5.13.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.13.4 Impact Analysis

5.13.4.1 Impact Analysis

5.13.4.1.1 Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

5.13.4.1.1.1 Construction

No Impact. Construction of the CSP Project would not result in any permanent increase in ambient noise levels. There are no established noise level standards applicable to Project-related construction activities in Inyo County; therefore, work in Inyo County would not result in the generation of noise levels in excess of established standards.

Construction activities would require the temporary use of various types of noise-generating construction equipment; Table 5.13-3 provides a list of the typical construction equipment involved in CSP Project activities, and Table 5.13-4 presents the noise generated by typical construction activities. Helicopter operations could be expected to generate noise levels of up to approximately 88 dBA at a distance of 150 feet (USFS 2008).

Table 5.13-3: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85

Table 5.13-3: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Loader	80
Paver	85
Roller	85
Scraper	85
Trucks	80-84

Source: FHWA 2006

Table 5.13-4: Construction Activity Noise Generation

Construction Operation	Contour Distance (feet)				
	75 dBA L_{eq}	70 dBA L_{eq}	65 dBA L_{eq}	60 dBA L_{eq}	55 dBA L_{eq}
Conductor Removal	183	327	572	975	1,610
Existing Pole Removal	171	307	537	916	1,517
TSP Foundation Installation	173	309	539	924	1,534
Wood pole-equivalent pole/TSP Assembly	134	243	428	739	1,240
Wood pole-equivalent pole/TSP Erection	132	239	420	726	1,219
Conductor Installation	204	364	630	1,067	1,757
Staging area	16	28	50	89	158

At two locations in Mono County, construction activities—including existing pole removal—will be performed in proximity to two potentially-inhabitable structures, with construction work occurring approximately 140 and 250 feet distant from these structures. These potentially-inhabitable structures are located on lands designated for agricultural use; the County does not establish noise limits for such land use designations. Work in the vicinity of these potentially-inhabitable structures would be performed between the hours of 7:00 a.m. and 7:00 p.m. on weekdays only, and thus would be consistent with Section 10.16.070, Prohibited acts of the Noise Ordinance. Therefore, no impact would be realized. Further, measures contained in APM NOI-1 would be implemented.

5.13.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.13.4.1.2 Would the Project generate excessive groundborne vibration or groundborne noise levels?

5.13.4.1.2.1 Construction

No Impact. There are no standards related to construction-generated groundborne vibration or groundborne noise levels in Inyo County. Section 10.16.070(B)(7) of the Mono County Noise Ordinance prohibits the "[o]perating or permitting the operation of any device that creates a vibration that is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet from the source if on a public space or public right-of-way." Further, the Noise Element of the Mono County General Plan calls for the use of "Federal Transit Authority (FTA) Guidelines on Noise and Vibration to limit exposure of sensitive land uses to groundborne vibration from transportation sources, construction equipment, and other sources."

Construction activities would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. Construction activities would generate groundborne vibration from geotechnical drill rigs, excavators, augers, dump trucks, backhoes, and other general construction equipment. The threshold of vibration perception for most humans is around 65 VdB, levels in the 70 to 75 VdB range are often noticeable but acceptable, and levels in excess of 80 VdB are often considered unacceptable (FTA 2018). For human annoyance, there is some relationship between the number of events and the degree of annoyance caused by the vibration. More frequent vibration events, or events that last longer, would be more annoying to building occupants. To account for this effect, the FTA's Guidance Manual includes higher VdB impact thresholds for infrequent events, noting that vibration of 85 VdB is "acceptable only if there are an infrequent number of events per day." Based on the approach set forth in the FTA guidelines, and because activities at any single construction work area would be infrequent and temporary, this analysis adopts a threshold of significance of 85 VdB for groundborne vibration impacts for work in Inyo County and Mono County, neither of which have established a threshold of significance.

Vibration impacts associated with construction operations would primarily affect those receptors located closest to wood pole-equivalent installation sites, and those located near conductor removal/replacement locations. Vibration calculations based on the FTA guidelines are provided in Table 5.13-5.

Table 5.13-5: Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level at 25 feet (VdB)
Large bulldozer	87
Caisson drilling	87
Loaded trucks	86
Jackhammer	79
Small bulldozer	58

Construction activities in Mono County would occur as near as approximately 140 feet to a potentially-inhabitable structure in Segment 3. Screening-level calculations indicate that vibration levels associated with these activities would attenuate to a level of less than 65 VdB at the nearest potentially-inhabitable structure given the intervening distance.[20] This analysis shows that vibration levels at all identified sensitive receptors in Mono County would be below the threshold of 85 VdB.

Therefore, no excessive groundborne vibration would occur, and no impact would be realized.

5.13.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

20 The following equation estimates the vibration level Lv at any distance (D):
Lv(D) = Lv(25 feet) – 30Log(D/25), where: Lv(D) = vibration level at a given distance D (in feet)
For a distance of 140 feet, Lv(D) = 87 – 30Log(140/25) = 87 – 22.4 = 65.6 VdB

5.13.4.1.3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

5.13.4.1.3.1 Construction

No Impact. The CSP Project is not located in the vicinity of a private airstrip or within 2 miles of a public airport in Mono County, and is not located in the vicinity of a private airstrip in Inyo County.

A portion of Segment 3 is located within two miles of the Eastern Sierra Regional Airport in Inyo County; the airport is included in the Inyo County Policy Plan and Airport CLUP. The Inyo County Sheriff Department's heliport is co-located with the Airport. The CSP Project alignment is located outside the identified 65 dBA CNEL contour; therefore there would be no additive noise effect from construction and airport activities. As described above, there are no established noise level standards applicable to Project-related construction activities in Inyo County; therefore, work in Inyo County in the vicinity of the Airport would not result in the generation of noise levels in excess of established standards, and would not expose people residing or working in the CSP Project area to excessive noise levels.

Further, increases in noise levels in the vicinity of individual construction work areas during construction would be short term, intermittent, and temporary, and would not expose people residing near individual construction work areas to excessive noise levels. Because the CSP Project alignment is located outside the identified 65 dBA CNEL contour, the CSP Project construction workers would not be exposed to excessive noise levels from airport operations.

Because construction of the CSP Project would not expose people residing within two miles of a public airport and near individual construction work areas to excessive noise levels, and because construction of the CSP Project would not expose workers to excessive noise levels, no impact would be realized under this criterion.

5.13.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M activities.

5.13.4.2 Noise Levels

5.13.4.2.1 Noise Levels for Each Piece of Equipment

Table 5.13-6 identifies each phase of construction, the equipment used in each construction phase, and the length of each phase at any single location.

5.13.4.2.2 Estimated Cumulative Equipment Noise Levels

Estimated cumulative equipment noise levels are presented in Table 5.13-6 below.

5.13.4.2.3 Phases of Operation

There are no operational phases of the CSP Project; noise generated during operation of the CSP Project would not exceed the levels of noise generated currently along the CSP Project.

5.13.4.2.4 Manufacturer's Specifications for Equipment

The specific models of construction equipment to be used during construction and operation of the CSP Project are not known at this time; therefore, the manufacturer's specifications for such equipment cannot be provided at this time. Equipment equipped by the manufacturer with noise-control equipment will be operated with said noise-control equipment. If requested by the CPUC, SCE will provide the manufacturer's specifications for specific models of construction equipment at the time such construction equipment is identified.

5.13.4.2.5 Approaches to Reduce Impacts from Noise

SCE has designed and incorporated APM NOI-1 into the CSP Project to minimize potential impacts to noise sensitive receptors.

5.13.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Noise resource area.

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Table 5.13-6: Construction Noise Levels

Equipment Required	Equipment Noise Level (Leq; 50 feet)	Phase Noise Level (Leq; 50 feet)	Phase Duration at Each Location	Receptor Nearest to Construction Phase	Noise Level at Nearest Receptor (Leq)	Exceeds Noise Standard at Nearest Receptor?	Distance to Not Exceed Standard
Survey							
1-Ton Truck, 4x4	80	80	1 day	Residence, 140’	71	N/A	N/A
Staging area							
1-Ton Truck, 4x4	80	88	180 days	None	N/A	N/A	N/A
R/T Forklift	85						
Boom/Crane Truck	85						
Water Truck	84						
Jet A Fuel Truck	84						
Truck, Semi-Tractor	84						
Road Work							
1-Ton Truck, 4x4	80	88	1 day	Residence, 140’	79	N/A	N/A
Backhoe/Front Loader	80						
Track Type Dozer	85						
Motor Grader	85						
Water Truck	84						
Drum Type Compactor	85						
Excavator	85						
Lowboy Truck/Trailer	84						
TSP Foundation							
3/4-Ton Truck, 4x4	80	88	2 days	Residence, 200’	76	N/A	N/A
Boom/Crane Truck	85						
Backhoe/Front Loader	80						
Auger Truck	84						
Water Truck	84						
Dump Truck	84						
Concrete Mixer Truck	85						
TSP Haul							
3/4-Ton Truck, 4x4	80	85	¼ day	Residence, 10’	99	N/A	N/A
Boom/Crane Truck	85						
Flat Bed Pole Truck	84						
Water Truck	84						
TSP Assembly							
3/4-Ton Truck, 4x4	80	88	1 day	Residence, 200’	76	N/A	N/A
1-Ton Truck, 4x4	80						
Water Truck	84						
Compressor Trailer	65						
Boom/Crane Truck	85						

Table 5.13-6: Construction Noise Levels

Equipment Required	Equipment Noise Level (Leq; 50 feet)	Phase Noise Level (Leq; 50 feet)	Phase Duration at Each Location	Receptor Nearest to Construction Phase	Noise Level at Nearest Receptor (Leq)	Exceeds Noise Standard at Nearest Receptor?	Distance to Not Exceed Standard
TSP Erection							
3/4-Ton Truck, 4x4	80	97	1 day	Residence, 200’	85	N/A	N/A
1-Ton Truck, 4x4	80						
Water Truck	84						
Compressor Trailer	65						
R/T Crane	85						
Medium-duty Helicopter	97						
Wood Pole-Equivalent Haul							
3/4-Ton Truck, 4x4	80	85	¼ day	Residence, 10’	99	N/A	N/A
Water Truck	84						
Boom/Crane Truck	85						
Flat Bed Pole Truck	84						
Wood Pole-Equivalent Assembly							
3/4-Ton Truck, 4x4	80	88	¼ day	Residence, 170’	77	N/A	N/A
Compressor Trailer	65						
1-Ton Truck, 4x4	80						
Water Truck	84						
Boom/Crane Truck	85						
Wood Pole-Equivalent Install							
1-Ton Truck, 4x4	80	97	¼ day	Residence, 170’	86	N/A	N/A
Manlift/Bucket Truck	85						
Boom/Crane Truck	85						
Auger Truck	84						
Water Truck	84						
Backhoe/Frontloader	80						
Extendable Flat Bed Pole Truck	84						
Medium-duty Helicopter	97						
Existing Pole Removal							
1-Ton Truck, 4x4	80	88	¼ day	Residence, 140’	79	N/A	N/A
Compressor Trailer	65						
Manlift/Bucket Truck	85						
Boom/Crane Truck	85						
Flat Bed Pole Truck	84						
Water Truck	84						

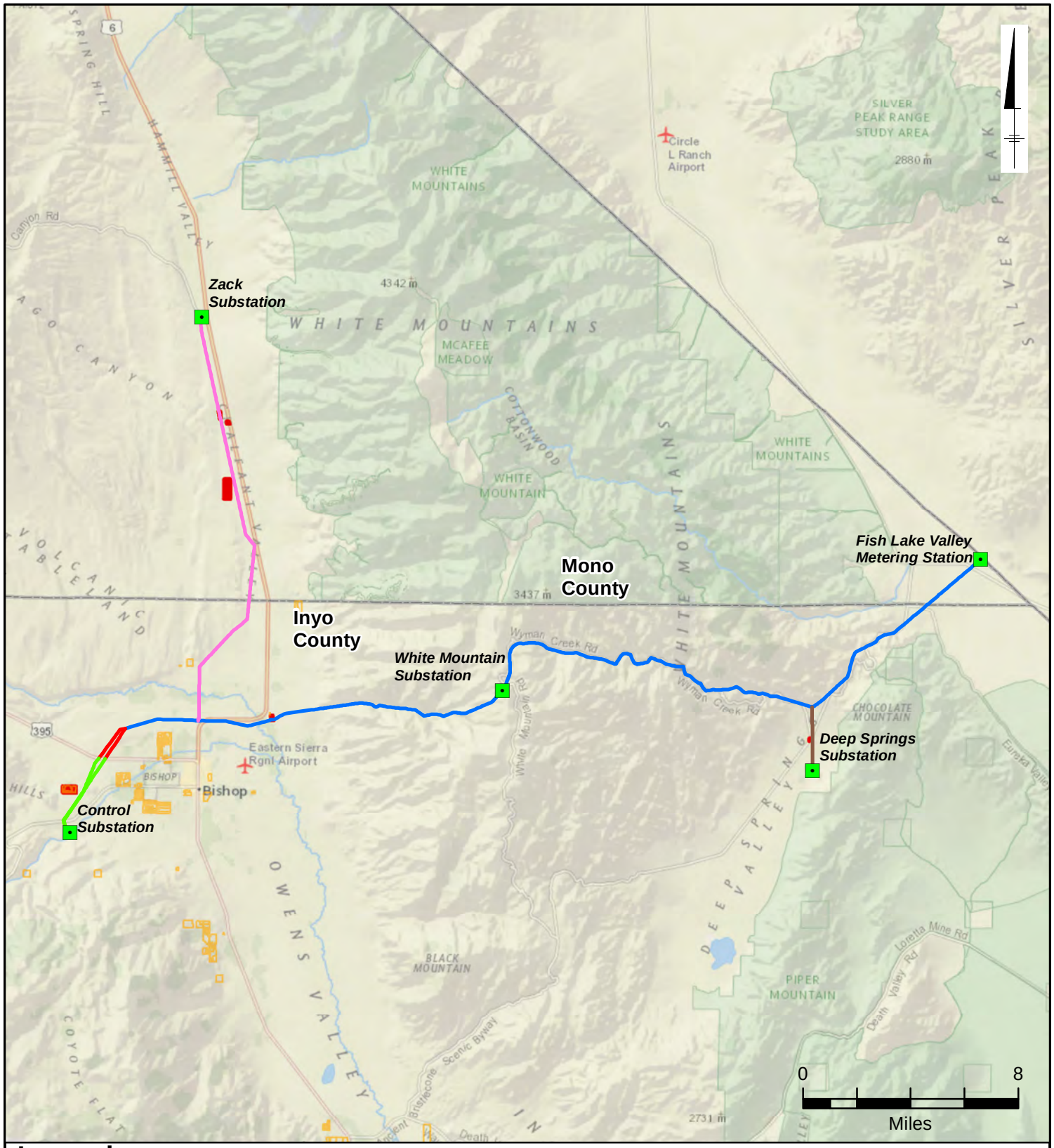
Table 5.13-6: Construction Noise Levels

Equipment Required	Equipment Noise Level (Leq; 50 feet)	Phase Noise Level (Leq; 50 feet)	Phase Duration at Each Location	Receptor Nearest to Construction Phase	Noise Level at Nearest Receptor (Leq)	Exceeds Noise Standard at Nearest Receptor?	Distance to Not Exceed Standard
Remove Conductor							
1-Ton Truck, 4x4	80	88	20 days	Residence, 50’	88	N/A	N/A
Manlift/Bucket Truck	85						
Sleeving Truck	84						
R/T Crane	85						
Flatbed Trailer	0						
Truck, Semi-Tractor	84						
Bull Wheel Puller	84						
Water Truck	84						
Hydraulic Rewind Puller	84						
Install Conductor and OHGW							
¾-Ton Truck, 4x4	80	91	20 days	Residence, 170’	80	N/A	N/A
1-Ton Truck, 4x4	80						
Wire Truck/Trailer	84						
R/T Crane	85						
Dump Truck	84						
Bucket Truck	85						
22-Ton Manitex	85						
Splicing Rig	84						
Splicing Lab	84						
Sock Line Puller	84						
Bull Wheel Puller	84						
Backhoe/Front Loader	80						
D8 Caterpillar	82						
Light-duty Helicopter	90						
Fuel, Helicopter Support Truck	84						
Sag Cat with 2 winches	82						
Static Truck/Tensioner	84						

Table 5.13-6: Construction Noise Levels

Equipment Required	Equipment Noise Level (Leq; 50 feet)	Phase Noise Level (Leq; 50 feet)	Phase Duration at Each Location	Receptor Nearest to Construction Phase	Noise Level at Nearest Receptor (Leq)	Exceeds Noise Standard at Nearest Receptor?	Distance to Not Exceed Standard
Install Guard Structures							
3/4-Ton Truck, 4x4	80	88	½ day	Residence, 50’	88	N/A	N/A
1-Ton Truck, 4x4	80						
Compressor Trailer	65						
Backhoe/Front Loader	80						
Water Truck	84						
Manlift/Bucket Truck	85						
Boom/Crane Truck	85						
Auger Truck	84						
Extendable Flat Bed Pole Truck	84						
Remove Guard Structures							
3/4-Ton Truck, 4x4	80	88	½ day	Residence, 50’	88	N/A	N/A
1-Ton Truck, 4x4	80						
Compressor Trailer	65						
Backhoe/Front Loader	80						
Water Truck	84						
Manlift/Bucket Truck	85						
Boom/Crane Truck	85						
Auger Truck	84						
Extendable Flat Bed Pole Truck	84						
Restoration							
1-Ton Truck, 4x4	80	88	1 day	Residence, 200’	76	N/A	N/A
Backhoe/Front Loader	80						
Motor Grader	85						
Water Truck	84						
Drum Type Compactor	85						
Lowboy Truck/Trailer	84						

NOTES:
There are no established noise level standards applicable to Project-related construction activities in unincorporated Inyo County or Mono County.
Only sensitive receptors within 1,000’ are addressed here.



Legend

- Substation
- SensitiveReceptors
- Inyo County Zoning Residential
- Counties
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

CONTROL-SILVER PEAK PROJECT

SENSITIVE RECEPTORS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET

5.13-1

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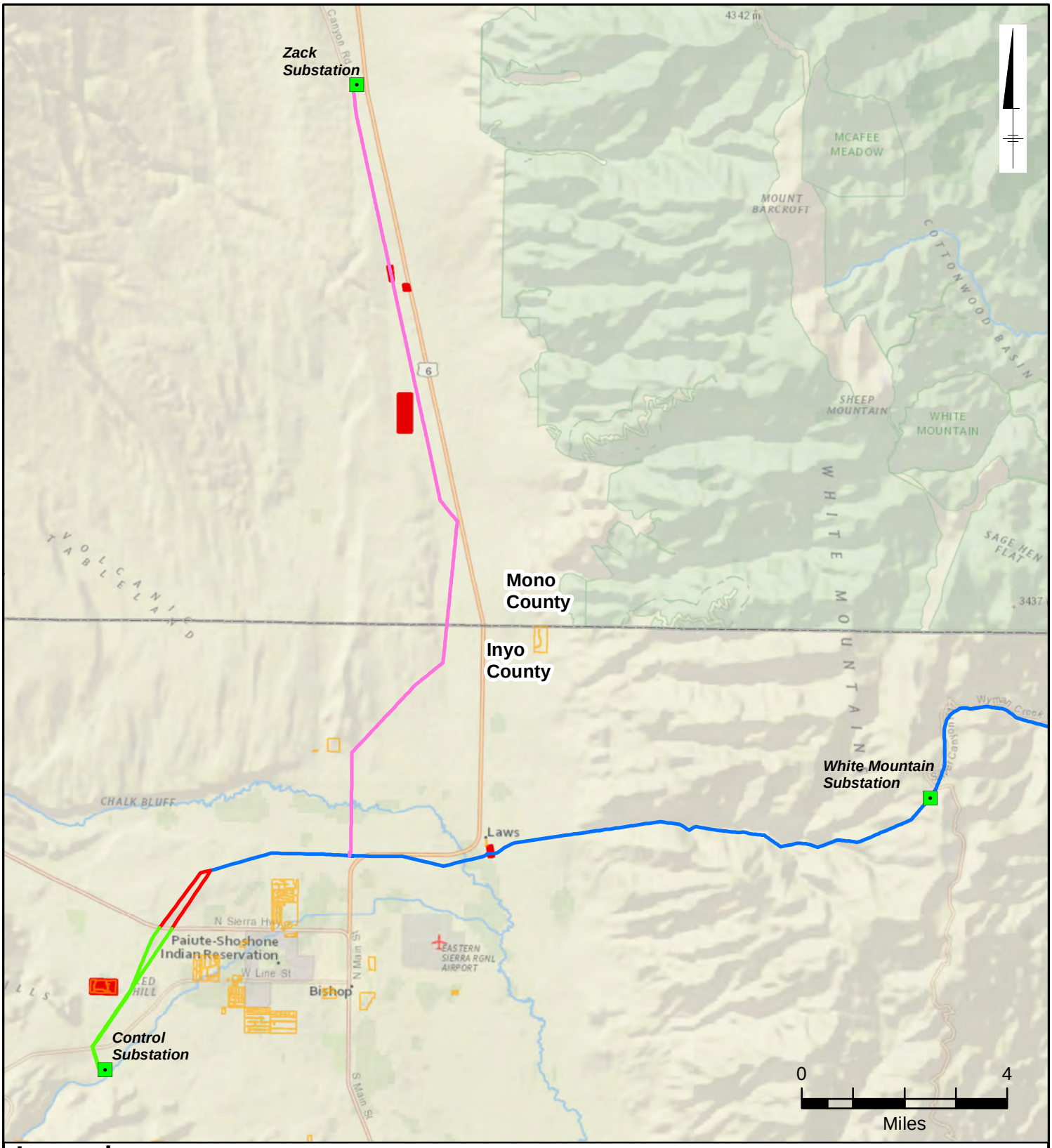

Legend

- Substation
- SensitiveReceptors
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CONTROL-SILVER PEAK PROJECT

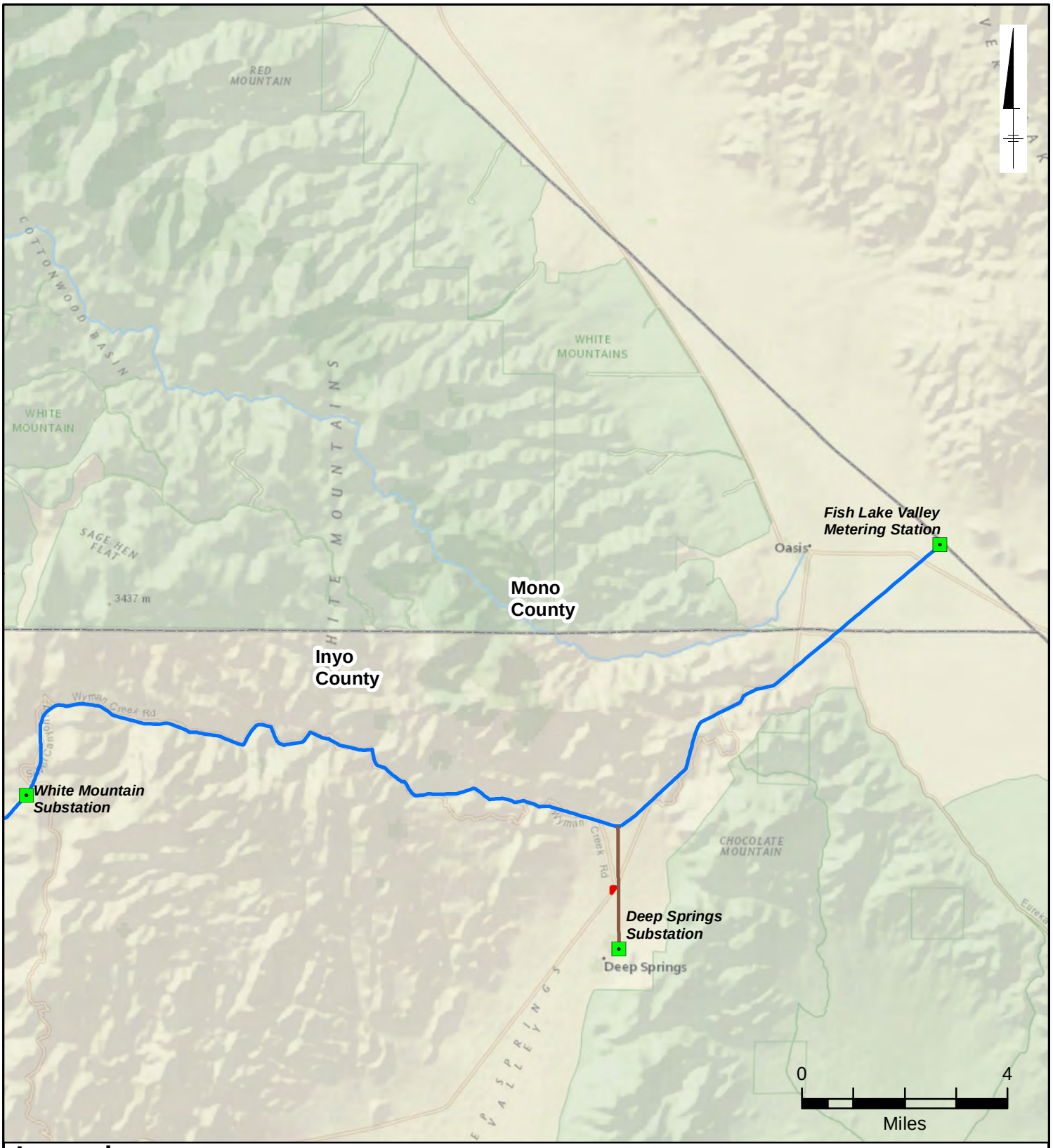
SENSITIVE RECEPTORS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET

5.13-1



Legend

- Substation
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CONTROL-SILVER PEAK PROJECT

SENSITIVE RECEPTORS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.13-1

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5.14 Population and Housing

This section describes the population and housing in the area of the CSP Project, as well as the potential impacts that could result from construction and operation of the CSP Project.

5.14.1 Environmental Setting

The CSP Project traverses unincorporated areas of Inyo County and Mono County; the CSP Project alignment does not cross any Reservation lands or incorporated areas. The CSP Project alignment is located near the following: City of Bishop, West Bishop Census-Designated Place (CDP), Bishop Reservation, Dixon Lane-Meadow Creek CDP, and Chalfant CDP. Figure 5.14-1 illustrates the location of these areas with respect to the CSP Project alignment. Population and housing data are presented in the following sections for these areas. Historical race and ethnicity, population, and housing data presented below were obtained from U.S. Census Bureau decadal censuses. Population projections were obtained from the California Department of Finance.

5.14.1.1 Population Estimates

Historical and projected future population data (where available) are presented in Table 5.14-1 below. From 2000 to 2010, the City of Bishop population grew by approximately 8.5 percent. From 2010 to 2020, Inyo County population shrank by approximately 0.6 percent. The California Department of Finance projects the Inyo County population to shrink by approximately 2.2 percent by 2030, as compared to the U.S. Census Bureau 2020 count. From 2010 to 2020, the population of Mono County shrank by approximately 5 percent. The California Department of Finance projects that the Mono County population would grow by approximately 5 percent by 2030, as compared to the U.S. Census Bureau 2010 count.

Table 5.14-1: Historical and Projected Population Data

Year	Inyo County	Mono County	City of Bishop	Bishop Reservation	West Bishop CDP	Chalfant CDP	Dixon Lane-Meadow Creek CDP
2000	17,945	12,853	3,575	1,441	2,807	—	2,702
2010	18,546	14,202	3,879	1,588	2,607	651	2,645
2020	18,429	13,447	N/A	N/A	N/A	N/A	N/A
2030	18,020	14,118	N/A	N/A	N/A	N/A	N/A
2040	17,552	14,009	N/A	N/A	N/A	N/A	N/A

5.14.1.2 Housing Estimates

Housing data for the City of Bishop and Inyo and Mono counties are presented in Table 5.14-2; rental vacancy rates are presented in Table 5.14-3. Short-term lodging in the vicinity of the CSP Project is available at hotels and motels in the City of Bishop.

Table 5.14-2: Housing Data

	Inyo County	Mono County	City of Bishop	Bishop Reservation	West Bishop CDP	Chalfant CDP	Dixon Lane-Meadow Creek CDP
Total, 2000	9,042	11,757	1,867	530	1,206	__	1,219
Occupied, 2000	7,708	5,137	1,684	488	1,143	__	1,142
Total, 2010	9,478	13,912	1,926	602	1,229	301	1,273
Occupied, 2010	8,049	5,768	1,748	556	1,133	264	1,166

Table 5.14-3: Rental Vacancy Rates in the CSP Project Area

	Inyo County	Mono County	City of Bishop	Bishop Reservation	West Bishop CDP	Chalfant CDP	Dixon Lane-Meadow Creek CDP
Percent, 2000	6.9	20.9	5.7	5.7	1.3	__	5.0
Percent, 2010	5.8	28.5	5.8	7.6	5.2	8.3	0.6

5.14.1.3 Approved Housing Developments

No housing developments have been identified within one mile of the CSP Project alignment or any component of the CSP Project.

5.14.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.14.2.1 Regulatory Setting

5.14.2.1.1 Federal

There are no applicable regulations for population and housing that apply to the CSP Project.

5.14.2.1.2 State

There are no applicable regulations for population and housing that apply to the CSP Project.

5.14.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

There are no applicable regulations for population and housing that apply to the CSP Project.

5.14.3 Impact Questions

5.14.3.1 Impact Questions

The significance criteria for assessing the impacts to population and housing are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Induce substantial unplanned population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of new roads or other infrastructure)
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere

5.14.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.14.4 Impact Analysis

5.14.4.1 Impact Analysis

5.14.4.1.1 Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

5.14.4.1.1.1 Construction

No Impact. The CSP Project would not induce, either directly or indirectly, population growth in the area. Construction of the CSP Project is anticipated to occur for approximately 33 months, and during peak times, SCE expects to utilize less than 100 workers per day. The labor demands of the CSP Project would be met by existing SCE employees or by hiring specialty electrical transmission contractors. Given the small number of positions required for construction of the CSP Project and the short term of the construction period, no population growth would be induced by the rebuilding of the subtransmission lines.

The CSP Project would not be expected to indirectly induce an increase in population. The CSP Project is designed to remediate GO 95 clearance discrepancies; it is not intended to provide additional electrical service. In addition, the CSP Project does not include any new infrastructure such as publicly accessible roads that could induce population growth. Therefore, no impacts would occur under this criterion as a result of the CSP Project.

5.14.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.14.4.1.2 Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

5.14.4.1.2.1 Construction

No Impact. The CSP Project would not displace any existing housing or people. There are no occupied housing units within the existing SCE ROW or in areas where the subtransmission line would be relocated. Therefore, no housing or people would be displaced during construction of the CSP Project, and no replacement housing would be constructed elsewhere.

5.14.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.14.4.2 Impacts to Housing

No existing homes occur within the footprint of any proposed CSP Project elements or ROW; the elements of the CSP Project would be constructed within easements or rights-of-way for the use of SCE, and therefore no homes could be proposed in those areas. No housing impacts (e.g., demolition and relocation of residents) would occur as a result of the CSP Project.

5.14.4.3 Workforce Impacts

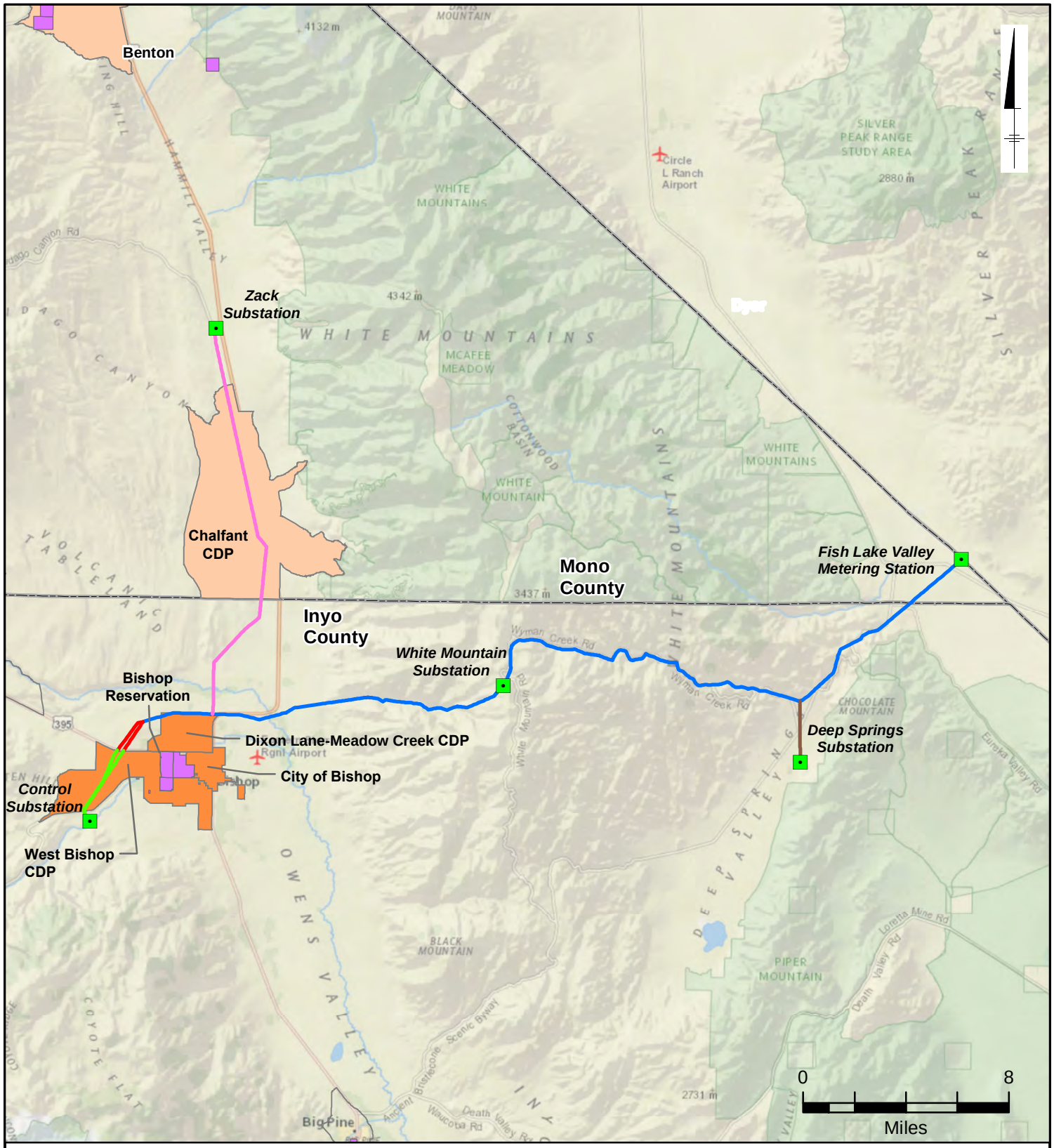
SCE expects to utilize up to approximately 100 workers per day. The numbers of construction personnel that may work on the CSP Project and who currently reside within the impact area is unknown and unknowable, as are the numbers of construction personnel who would commute daily to the site from outside the impact area or who would relocate temporarily within the impact area. No permanent employment opportunities would be created by the CSP Project.

5.14.4.4 Population Growth Inducing

Information regarding the CSP Project's growth inducing impacts are addressed in Section 7.2.1.

5.14.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Population and Housing resource area.



Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Reservation
- Counties

Census Populated Places

CONTROL-SILVER PEAK PROJECT

CITIES, RESERVATIONS, AND CENSUS DESIGNATED PLACES

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.14-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.15 Public Services

This section of the PEA describes the public services in the area of the CSP Project, as well as the potential impacts resulting from construction and operation of the CSP Project.

5.15.1 Environmental Setting

The environmental setting section describes the existing public services in the CSP Project area; these services are shown in Figure 5.15-1.

5.15.1.1 Service Providers

5.15.1.1.1 Service Providers

5.15.1.1.1.1 Police

The Inyo County Sheriff's Office (ICSO), Bishop Police Department, and California Highway Patrol (CHP) provide law enforcement services along and in the vicinity of Segments 1, 2, 3, 4 and 5. The Mono County Sheriff's Office (MCSO) and CHP provide law enforcement services along the eastern portion of Segment 3 and the area where work would occur on Segment 5. The ICSO and MCSO provide public safety services to areas of unincorporated Inyo and Mono counties, and the Bishop Police Department provides police services to locations within its jurisdiction. Table 5.15-1 provides a list of police stations in the vicinity of the CSP Project.

The Bishop Police Department is located approximately 2.5 miles from the CSP Project; it is co-located with the ICSO's Bishop Operations Headquarters. The CHP's Bishop Office is located approximately 3 miles from the CSP Project alignment. There are no MCSO stations in the vicinity of the CSP Project alignment.

Table 5.15-1: Law Enforcement Stations Proximate to the CSP Project

Project Segment	Name	Location	Approximate Distance to the CSP Project Alignment (miles)
1, 2, 3	Bishop Police Department	Bishop	2.5
1, 2, 3, 4	Inyo County Sheriff's Office, Bishop Operations Headquarters	Bishop	2.5
1, 2, 3, 4, 5	California Highway Patrol, Bishop Office	Bishop	3.0

5.15.1.1.1.2 Fire Protection

The Bishop fire protection district (FPD)—a volunteer fire department—provides fire protection services in Inyo County and the City of Bishop. The BLM Bishop Field Office fire organization is combined with the INF fire organization into one Interagency Fire Management Organization. The management area combines the public land of the INF and Bishop Field Office in Inyo and Mono counties in California. The Interagency Fire Management Organization maintains 8 fire stations with 9 engines, 7 fire prevention patrol units, 2 water tenders, a 10-person hand crew, a 20-person hotshot crew, an air tanker reload base and a helitack base. Of these, the following are located along the CSP Project alignment:

- USFS White Mountain Ranger Station. This station, located in Bishop, has a Type 3 wildland engine, two fire prevention patrol units, one 20-person hotshot crew (the Boundary Peak Hotshots), a District Fire Management Officer and an Assistant District Fire Management Officer, all from the USFS. In the summer, a BLM fire prevention unit also works out of this station. Also located in Bishop are various "Fire Overhead" personnel—fire planners, Forest Fire Management Officers, Interagency Mitigation/Education Specialist, etc. These employees are a

mixture of USFS and BLM employees, and manage the overall direction of the interagency fire program for the area.

- USFS Bishop Air Tanker Reload Base. At the Eastern Sierra Regional Airport is the Bishop Air Tanker Base, capable of reloading nearly all air tankers in service today, except for the Very Large Air Tankers (VLATs) such as the DC-10 and 747. The tanker base is operated on an as-needed basis, but also hosts a Single Engine Air Tanker (SEAT) during the summer.

Fire stations proximate to the CSP Project are presented in Table 5.15-2.

Table 5.15-2: Fire Stations Proximate to the CSP Project

Project Segment	Name	Location	Approximate Distance to Project Alignment (miles)
1, 2, 3	USFS White Mountain Ranger Station	798 N Main Street, Bishop	2.0
1, 2, 3	USFS Bishop Air Tanker Reload Base	Bishop Airport	2.5
1, 2, 3	Bishop Fire Protection District—Station 1	209 W Line Street, Bishop	2.5
1, 2, 3	Bishop Fire Protection District—Station 2	3206 W Line Street, Bishop	1.4
1, 2, 3	Bishop Fire Protection District—Station 3	2190 North Sierra Highway, Bishop	1.6

5.15.1.1.1.3 Schools

The Bishop Unified School District has four schools; three are located in the City of Bishop: Bishop Elementary School, Home Street Middle School, and Bishop Union High School. Other schools located in the City of Bishop include the Keith Bright Juvenile Court School, the privately-operated Bishop Seventh-day Adventist Elementary School and the Jill Kinmont Boothe school, operated by the Inyo County Superintendent of Schools. Cerro Coso Community College is located east of the City of Bishop. Segment 4 is located in the Eastern Sierra Unified School District; no schools are located along Segment 5. Deep Springs College, a private 2-year college, is located at the southern terminus of Segment 5. Deep Springs College and Cerro Coso Community College are the only schools with buildings within 0.5 miles of the CSP Project alignment. Table 5.15-3 provides a list of schools in the vicinity of the CSP Project.

Table 5.15-3: Schools in the Vicinity of the CSP Project

Project Segment	Name	Location	District	Grades	Approximate Distance to the CSP Project Alignment (miles)
1, 2, 3	Bishop Elementary School	Bishop	Bishop Unified School District	K-5	3.0
1, 2, 3	Home Street Middle School	Bishop	Bishop Unified School District	6-8	3.0
1, 2, 3	Bishop Union High School	Bishop	Bishop Unified School District	9-12	3.0
1, 2, 3	Keith Bright Juvenile Court School	Bishop	Bishop Unified School District	6-12	2.0
1, 2, 3	Bishop Adventist Christian School	Bishop	N/A	K-8	3.0
1, 2, 3	Calvary Christian School	Bishop	N/A	1-12	2.7
1, 2, 3	Jill Kinmont Boothe	Bishop	Inyo County Superintendent of Schools	K-12	2.0
1, 2, 3	Eastern Sierra College Center / Cerro Coso Community College	Bishop	Kern Community College District	N/A	0.4
5	Deep Springs College	Deep Springs	N/A	N/A	0

5.15.1.1.1.4 Parks

Public parks, open spaces, and recreational areas in the vicinity of the CSP Project alignment are described in detail in Section 5.16, Recreation.

5.15.1.1.1.5 Hospitals

The closest major hospital to the CSP Project is the Northern Inyo Hospital in Bishop; this facility is located approximately 2.5 miles from the CSP Project alignment.

5.15.1.1.2 Documented Performance Objectives and Data

Existing emergency response times for police and fire services in the CSP Project area have not been identified.

5.15.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.15.2.1 Regulatory Setting

5.15.2.1.1 Federal

No Federal regulations related to public services are applicable to the CSP Project.

5.15.2.1.2 State

5.15.2.1.2.1 California Fire Code

The CCR, Title 24, Part 9 is known as the California Fire Code. This code provides provisions for planning, precautions, and preparations for fire safety and fire protection during various activities, including, but not limited to, construction and demolition, as well as requirements for buildings and guidelines for working with flammable chemicals and materials. The CSP Project is located in areas that range from moderate to high fire hazard potential (CAL FIRE 2007). As such, the California Fire Code was reviewed for this analysis.

5.15.2.1.2.2 California Public Resources Code Sections 4292 and 4293

California PRC Section 4292 states:

> [A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line…shall, during such times and in such areas as are determined to be necessary by the director or the agency, has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightening arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower. (CPRC 4292)

California PRC Section 4293 states:

> [A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such area, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:

(a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet
(b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet
(c) For any line which is operating at 110,000 or more volts, 10 feet

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard. (CPRC 4293)

5.15.2.1.2.3 Red Flag Fire Warning and Weather Watches

Like PRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red flag warnings and fire weather watches.

5.15.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.15.2.1.3.1 Inyo County General Plan

The Inyo County General Plan does not contain any specific goals relevant to the CSP Project.

5.15.2.1.3.2 Mono County General Plan

The Mono County General Plan does not contain any specific goals relevant to the CSP Project. The Mono County General Plan contains an exemption for regulated public utilities and does not apply to distribution and transmission lines owned and operated as part of the statewide electrical network regulated by the CPUC.

5.15.3 Impact Questions

5.15.3.1 Impact Questions

The significance criteria for assessing the impacts to public services are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- fire protection
- police protection
- schools

- parks
- other public facilities

5.15.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.15.4 Impact Analysis

5.15.4.1 Impact Analysis

5.15.4.1.1 Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

5.15.4.1.1.1 Construction

No Impact. The CSP Project would not affect service ratios, response times, or other objectives for public services in the area. Fire, emergency and police services currently serve, and would continue to serve, the areas in which the existing and rebuilt subtransmission lines are located.

The CSP Project would not require the expansion of fire protection services. Work areas would be cleared of vegetation, or have vegetation trimmed, before staging construction equipment, thus minimizing the probability of fire during construction. Although the need for emergency services may arise during construction of the CSP Project, such a need would not substantially affect the provision of existing emergency services or require the provision of service beyond existing capacities. Construction is not anticipated to affect response times because any lane or road closures, if necessary, would be temporary and would be coordinated with local jurisdictions per APM TRA-1, and traffic control would be implemented as necessary per APM TRA-1 (see Section 5.17).

It is not anticipated that the CSP Project would adversely affect the use or operation of any public services or facilities in the vicinity of the CSP Project alignment, including schools, fire, and police protection services, emergency services, hospitals, or other services. Construction of the CSP Project would not generate the need for new or additional public services such as school or other facilities because it would not result in construction of residential or other land uses that would directly or indirectly induce population growth in the area. Therefore, no impacts on public services are anticipated during construction of the CSP Project.

5.15.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.15.4.2 Emergency Response Times

The CSP Project would not impede ingress and egress of emergency vehicles; all construction activities sited on or adjacent to public roadways would be coordinated with local jurisdictions per APM TRA-1, and traffic control would be implemented as necessary per APM TRA-1 (see Section 5.17).

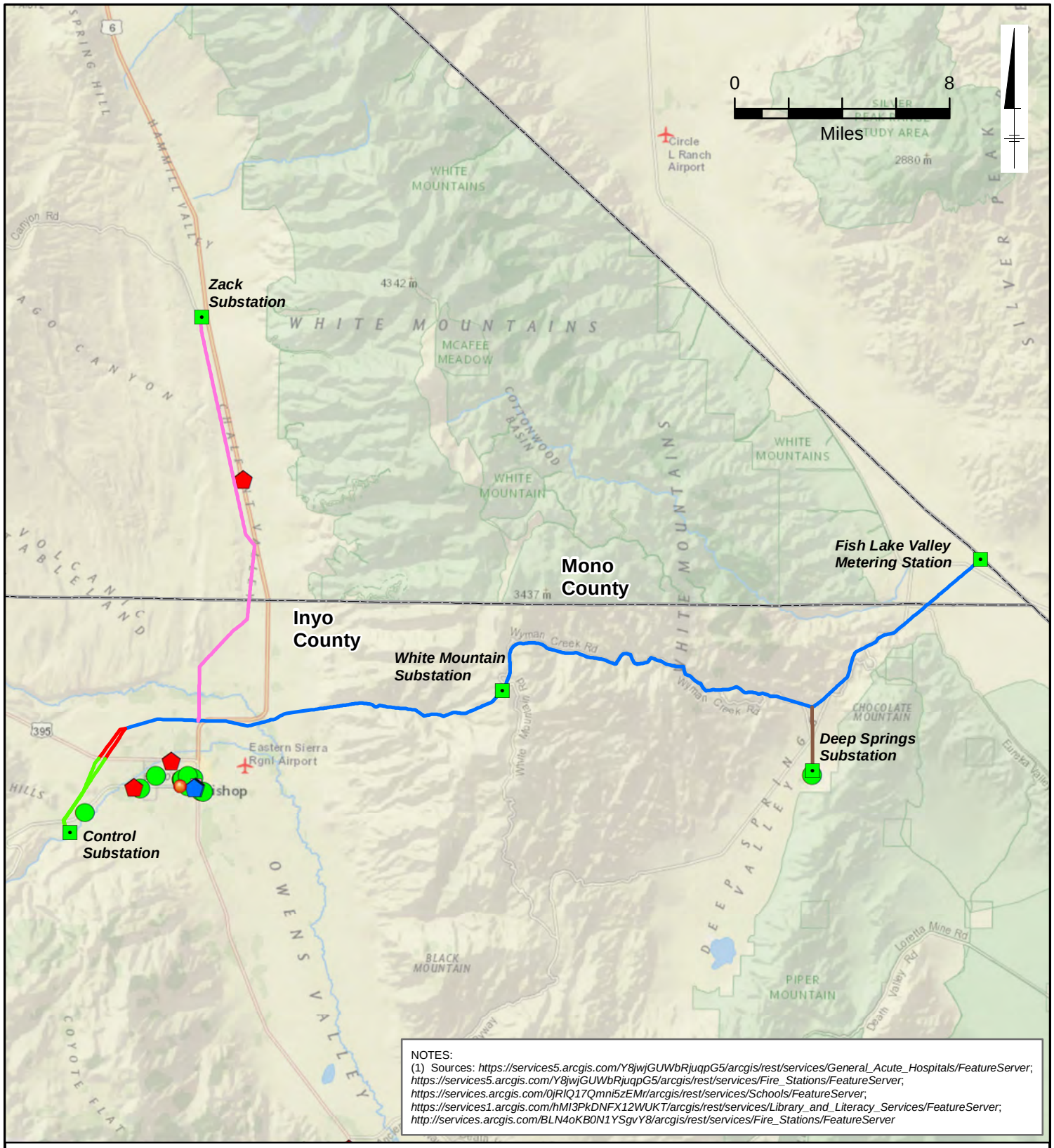
Emergency response times for police and fire services in the CSP Project area have not been identified. Impacts on emergency response times during project construction and operation, including impacts during any temporary road closures, and approaches to address impacts on emergency response times, are addressed in Section 5.17.4.1.4. Construction is not anticipated to affect response times because any lane or road closures, if necessary, would be temporary and would be coordinated with local jurisdictions per APM TRA-1, and traffic control would be implemented as necessary per APM TRA-1 (see Section 5.17).

5.15.4.3 Displaced Population

As presented above in Section 5.14, the CSP Project would neither create permanent employment nor displace people.

5.15.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Public Services resource area.



NOTES:
(1) Sources: *https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/arcgis/rest/services/General_Acute_Hospitals/FeatureServer*; *https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/arcgis/rest/services/Fire_Stations/FeatureServer*; *https://services.arcgis.com/0jRlQ17Qmni5zEMr/arcgis/rest/services/Schools/FeatureServer*; *https://services1.arcgis.com/hMI3PkDNFX12WUKT/arcgis/rest/services/Library_and_Literacy_Services/FeatureServer*; *http://services.arcgis.com/BLN4oKB0N1YSgvY8/arcgis/rest/services/Fire_Stations/FeatureServer*

Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Police Station
- Fire Station
- School
- Hospital
- Libraries
- County

CONTROL-SILVER PEAK PROJECT

PUBLIC SERVICES IN THE PROPOSED PROJECT VICINITY

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.15-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.16 Recreation

This section describes recreation in the vicinity of the CSP Project, as well as the potential impacts that could result from construction and operation of the CSP Project.

5.16.1 Environmental Setting

5.16.1.1 Recreational Setting

The CSP Project is located in unincorporated Inyo County and unincorporated Mono County. The CSP Project alignment extends generally from the City of Bishop in the west to the community of Oasis in the east. Generally, dispersed recreation on public lands is the principal recreational opportunity available in the area.

Parks and recreation areas in the vicinity of the CSP Project alignment were identified by reviewing General Plans and other documents developed by Inyo County and Mono County, and the City of Bishop, along with LADWP, INF, and BLM land management documents. Parks and recreational facilities within one mile of the CSP Project alignment were identified; these are discussed by jurisdiction below and shown in Figure 5.16-1.

5.16.1.1.1 Federal Lands

5.16.1.1.1.1 Bureau of Land Management

The CSP Project traverses federal lands administered by the BLM Bishop and Ridgecrest field offices (Figure 5.16-1). Recreation on these lands is generally dispersed, and not tied to developed infrastructure. The CSP Project alignment does not cross lands designated as a SRMA or ERMA.

5.16.1.1.1.2 Inyo National Forest

Segment 3 of the CSP Project traverses the INF for approximately 21 miles. The majority of this length is routed on lands designated as a Sustainable Recreation Management Area, and identified as a Challenging Backroad Area (Low Use). The recreational opportunity spectrum (ROS) designation for these lands are semi-primitive motorized (summer and winter seasons), roaded natural (summer and winter seasons), and semi-primitive non-motorized (winter season).

No data on the number of visitors or type of recreation pursued along the CSP Project alignment are available from the USFS. Approximately 2.3 million individuals visited the INF in 2016. Of these, approximately 850,000 visits were to undeveloped areas such as those found along the CSP Project alignment (USFS 2016). No developed recreation areas are located within 1 mile of the CSP Project alignment; the nearest developed facility is the Ancient Bristlecone Pine Forest Visitor Center at Schulman Grove, located at a distance of approximately 2 miles. Silver Canyon Road, Wyman Creek Road, and White Mountain Road provide access for dispersed backcountry recreation activities.

5.16.1.1.2 State Lands

5.16.1.1.2.1 California Department of Fish and Wildlife

The Owens River is crossed by Segment 3 northwest of the City of Bishop; the river is regularly stocked with trout by the CDFW.

5.16.1.1.3 Inyo County

There are no Inyo County Parks and Recreation regional parks or campgrounds within one mile of the CSP Project.

5.16.1.1.4 Mono County

No developed parks or recreational facilities are located within one mile of sites where work would occur in Segments 3 or 4 in Mono County.

5.16.1.1.5 City of Bishop

The City of Bishop Parks Commission manages various parks and facilities; none are located within one mile of the CSP Project alignment. The Laws Railroad Museum, operated by the Bishop Museum & Historical Society, is located on Silver Canyon Road in Laws, adjacent to the CSP Project alignment. The museum comprises 11 acres of exhibits, and is open year-round; no data on the number of visitors have been identified.

5.16.1.1.6 Los Angeles Department of Water and Power

The LADWP owns approximately 250,000 acres in Inyo County and 60,000 acres in Mono County, generally in the area of the Los Angeles Aqueduct and related watershed. Approximately 75 percent of LADWP-owned land in Inyo and Mono counties is open to the public for recreational uses.

No developed recreation areas (e.g., campgrounds, golf courses, parks, or visitor centers) owned by LADWP, or located on lands owned by LADWP, are located within one mile of the CSP Project.

5.16.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.16.2.1 Regulatory Setting

5.16.2.1.1 Federal

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.16.2.1.1.1 BLM Bishop Resource Management Plan

The BLM BRMP states that the type of recreation best suited for eastern Sierra BLM land is "predominantly dispersed use in semi-primitive, undeveloped settings." The RMP strategy is to maintain and enhance these undeveloped settings.

General Policy Number 4 states that "public lands will be managed in a manner that will…provide for outdoor recreation and human occupancy and use". The area-wide management strategy includes the following:

Emphasize primitive, semi-primitive motorized, semi-primitive nonmotorized and roaded natural experiences.

Maintain and enhance semi-primitive and other physical settings by providing compatible recreation opportunities within those settings.

Manage visitor use to conform with semi-primitive and other physical settings.

Recreation management may include developing trails for hiking, mountain biking, and horseback riding; providing off-highway vehicle use opportunities; designating scenic byways; interpreting natural and cultural resources; and establishing an environmental education program.

Vehicle use is limited to designated roads and trails.

More specific management strategies are discussed by area:

A portion of Segment 1 is located within the "Owens Valley Management Area," more than 150,000 acres between Bishop and Lone Pine. The management theme for this area is to "emphasize recreational use and

environmental education while providing for land disposals." One of the needs for this area is to "coordinate mutual recreation interests with the City of Los Angeles Department of Water and Power and Inyo County."

A portion of Segment 3 and 4 is located within the "Benton Management Area," more than 178,000 acres between Bishop and Benton. One of the management themes for this area is to "provide for a variety of dispersed recreation opportunities."

5.16.2.1.1.2 Inyo National Forest, Revised Land Management Plan

The lands of the INF, and activities thereon, are managed per the Revised Land Management Plan. The Plan contains a host of desired conditions, objectives, goals, standards, guidelines, and potential management approaches for the lands crossed by the CSP Project alignment. Of relevance to the CSP Project is the following:

> Standard (REC-FW-STD)
> 01 The recreation opportunity spectrum will be used for decisions on facility and infrastructure design and development.
>
> Guidelines (REC-FW-GDL)
>
> 03 During implementation of projects with the potential to adversely affect recreation activities, implement measures to minimize adverse effects to recreation activities, facilities and visitor safety.
>
> Potential Management Approaches
>
> Use management strategies to mitigate recreation use and resource conflicts.

There are no standards, potential management approaches, or suitabilities identified for the Ancient Bristlecone Pine Forest that are applicable to the CSP Project.

5.16.2.1.2 State

There are no State regulations pertaining to the CSP Project and this resource.

5.16.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.16.2.1.3.1 Inyo County General Plan

The Inyo County General Plan contains a number of goals, policies, and implementation measures related to parks and recreational facilities; none are relevant to the CSP Project.

5.16.2.1.3.2 Mono County General Plan

The Mono County General Plan contains a number of goals, policies, and implementation measures related to parks and recreational facilities; none are relevant to the CSP Project.

5.16.3 Impact Questions

5.16.3.1 Impact Questions

The significance criteria for assessing the impacts to recreational resources are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

5.16.3.2 Additional CEQA Impact Questions

The CPUC has identified additional CEQA significance criteria. According to these additional CEQA significance criteria, a project causes a potentially significant impact if it would:

- Reduce or prevent access to a designated recreation facility or area
- Substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas
- Damage recreational trails or facilities?

5.16.4 Impact Analysis

5.16.4.1 Impact Analysis

5.16.4.1.1 Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

5.16.4.1.1.1 Construction

No Impact. The use of parks and recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase proportionally. Similarly, the loss of existing parks and recreational facilities may result in a concentration of use at remaining parks and facilities.

As presented in Section 5.14, Population and Housing, the CSP Project would not directly or indirectly induce any population growth. During construction, local parks may be used by workers during their lunch or break periods; the short duration of construction activities and the small number of construction workers would not result in a significant increase in the use of existing parks or recreational facilities.

The limited increase in the use of parks and recreational facilities by workers during construction and the lack of population growth resulting from the CSP Project would not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration to existing parks and recreational facilities. Therefore, no impacts would occur under this criterion as a result of construction of the CSP Project.

5.16.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.16.4.1.2 Would the Project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

5.16.4.1.2.1 Construction

No Impact. The CSP Project does not include any recreational facilities. The CSP Project is not expected to result in a population increase and would not require the construction or expansion of any recreational facilities. As a result, there would be no adverse physical effect on the environment from the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts would occur under this criterion as a result of the CSP Project.

5.16.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.16.4.1.3 Would the project reduce or prevent access to a designated recreation facility or area?

5.16.4.1.3.1 Construction

Less than Significant Impact with Mitigation. During construction of the CSP Project, portions or the entireties of Silver Canyon Road and Wyman Canyon Road will be either closed to non-project traffic or the direction of non-project traffic will be controlled. This will result in access to designated recreation facilities and areas being reduced (if the direction of traffic is controlled) or prevented (if that portion of the road that is the sole access to a given recreation facility is closed).[21] Closures or traffic controls will be in place during the entirety of each construction season in the White Mountains. The impact of the reduction or prevention of access will be mitigated through implementation of APMs REC-1 and TRA-1: SCE will engage at the earliest possible reasonable time with Inyo County, the USFS, and the BLM to inform typical user groups and the public of closures and travel restrictions, and will communicate suitable detour routes if the direction of travel is controlled rather than the roadway being closed. Further, the impact of the reduction or prevention of access from Silver Canyon Road and Wyman Canyon Road will be reduced for recreation facilities that can be accessed by routes other than Silver Canyon Road or Wyman Canyon Road. Additionally, access to the large majority of trail-miles in the White Mountains will not be impacted by the reduction or prevention of access from Silver Canyon Road and Wyman Canyon Road. Therefore, with implementation of APMs REC-1 and TRA-1, and the availability of recreation facilities that would not be impacted by construction of the CSP Project, impacts would be less than significant.

21 For the purposes of this analysis, trails identified in the U.S. Forest Service Enterprise Map Services Program's EDW_TrailNFSPublish_01 layer are considered designated recreation facilities.

5.16.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines included under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no new impacts would be realized under this criterion during O&M.

5.16.4.1.4 Would the project substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas?

5.16.4.1.4.1 Construction

Less than Significant Impact. The CSP Project alignment is located on BLM and USFS lands that are or may be used for recreation.

The CSP Project would not substantially change the character of any recreational area. On BLM and USFS lands, the CSP Project would replace conductor on existing structures and would install OPGW on those existing structures. This minor change would not change the character of these areas.

Given the minor change associated with the CSP Project as addressed above and throughout this PEA document, less than significant impacts would occur.

5.16.4.1.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines included under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no new impacts would be realized under this criterion during O&M.

5.16.4.1.5 Would the project damage recreational trails or facilities?

5.16.4.1.5.1 Construction

No Impact. The CSP Project subtransmission lines cross one USFS trail. Construction work areas will overlap this trail; however, this trail is not improved, no permanent disturbance would be realized in this area, and no structure would be installed on this trail. No components of the CSP Project are located on a recreational facility. Therefore, there would be no impact under this criterion.

5.16.4.1.5.2 Operations

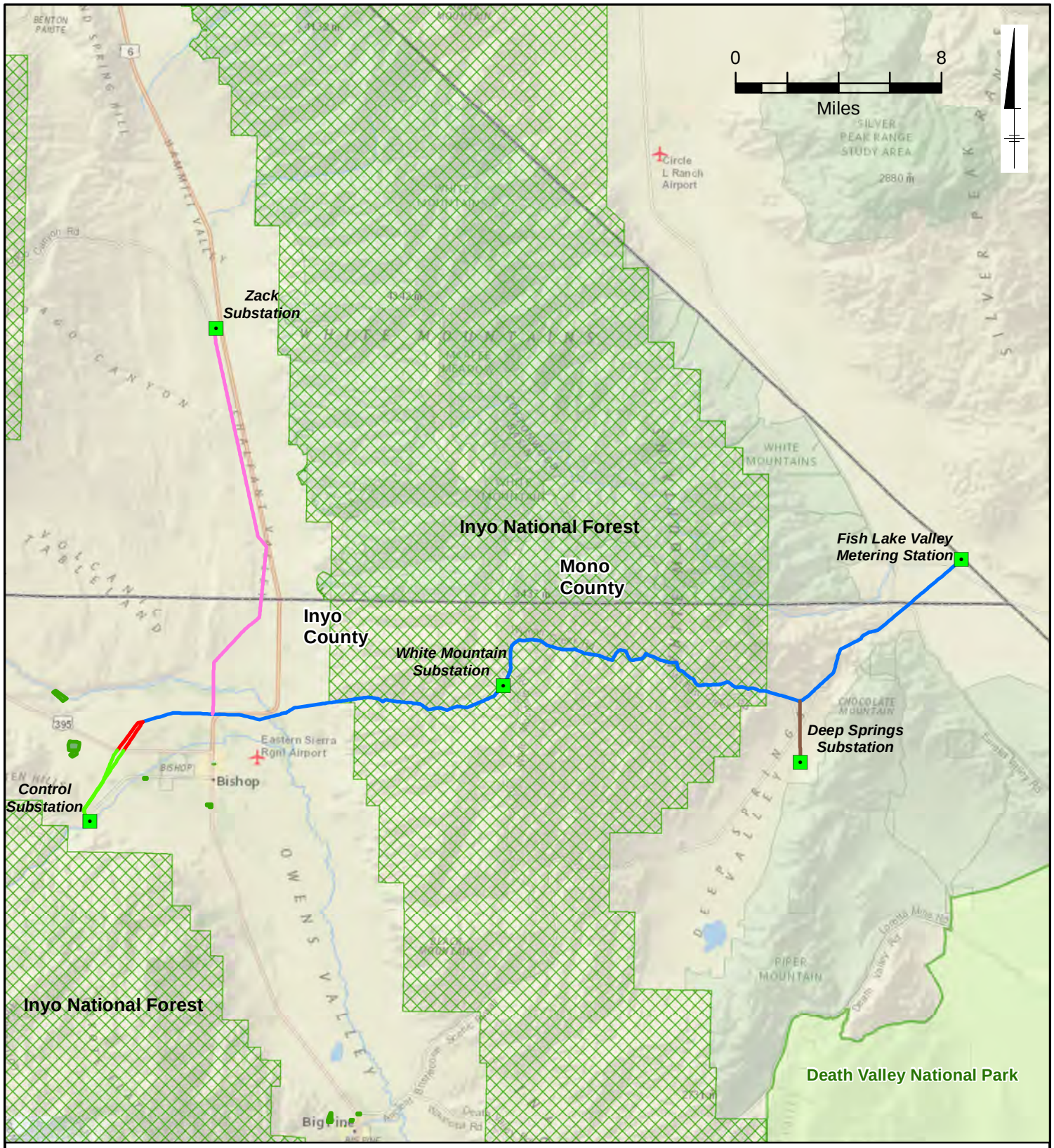
No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines included under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no new impacts would be realized under this criterion during O&M.

5.16.4.2 Impact Details

The maximum extent of each impact, and when and where the impacts would or would not occur, are identified above.

5.16.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Recreation resource area.



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Inyo County Parks
- National Forest
- National Parks
- Counties

CONTROL-SILVER PEAK PROJECT

PARKS AND RECREATIONAL FACILITIES

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.16-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.17 Transportation

This section of the PEA describes the transportation in the area of the CSP Project alignment, as well as an assessment of impacts that have the potential to occur during construction and operation of the CSP Project.

5.17.1 Environmental Setting

The environmental setting section describes the existing conditions for transportation in the CSP Project area. The CSP Project is located within unincorporated Inyo County and unincorporated Mono County, and near the City of Bishop. The predominant land use across the CSP Project alignment is open space. Residential and commercial land uses are generally concentrated in the western portion of the CSP Project alignment in Segments 1, 2, and 3 near the City of Bishop; agricultural uses are found near the eastern terminus of Segment 3. Scattered residential and agricultural land uses are also found along Segment 5. Segment 5 is characterized by open space with a few residences, and an institutional use (Deep Springs College) at its southern terminus. Figure 5.17-1 illustrates the transportation-related infrastructure discussed in the following sections.

5.17.1.1 Circulation System

The CSP Project is located in northern Inyo County and southern Mono County (Figure 5.17-1). The regional transportation system is comprised of highways and county and local roads. U.S. Highway 395 (U.S. 395), U.S. 6, State Route 266 (SR-266), and SR-168 provide regional access to the area. The CSP Project crosses or is proximate to these transportation corridors and numerous USFS, county, and local roads.

The CSP Project crosses land managed by the USFS and the BLM. The CSP Project crosses BLM land managed by the Bishop and Ridgecrest field offices. The CSP Project traverses the INF; the majority of the publicly-accessible roads within the INF over which project-related vehicles would travel are listed by the USFS as county-maintained roads (Inyo National Forest 2016). The BLM BRMP, BLM DRECP, and the INF Travel Analysis Process documentation do not establish performance metrics for roads.

The primary goods movement corridors in the CSP Project area are U.S. 6 and U.S. 395. These connect Eastern California to Southern California, Nevada and points north. The state highway system is also a vital link for the region's economy due to its geographic isolation from large population centers; the region heavily depends upon goods shipped by truck (Caltrans 2015).

5.17.1.2 Existing Roadways and Circulation

The existing roadways that may be used to access the CSP Project alignment and to transport materials during construction, or that are otherwise adjacent to or crossed by the CSP Project alignment, are presented in Table 5.17-1.

Table 5.17-1: Existing Roadways

Roadway	Jurisdiction/ Ownership	Number of Lanes	Traffic Volume (MADT)	Closest Project Feature/ Distance (miles)
Segment 1				
West Line Street/Highway 168	Caltrans	2	800—8,200	Segment 1 / 0
East Bishop Creek Road	County	2	N/A	Segment 1 / 0
Ed Powers Road	County	2	N/A	Segment 1 / 0
Red Hill Road	County	2	N/A	Segment 1 / 0
U.S. 395	Caltrans	4	11,400—19,100	Segment 1 / 0
Segment 3				

Table 5.17-1: Existing Roadways

Roadway	Jurisdiction/ Ownership	Number of Lanes	Traffic Volume (MADT)	Closest Project Feature/ Distance (miles)
Brockman Lane	County	2	N/A	Segment 3 / 0
Riverside Road	County	2	N/A	Segment 3 / 0
Five Bridges Road	County	2	N/A	Segment 3 / 0
U.S. 6	Caltrans	2	2,450—2,700	Segment 3 / 0
Silver Canyon Road	County	1, 2	N/A	Segment 3 / 0
Railroad Street	County	2	N/A	Segment 3 / 0
Joe Smith Road	County	2	N/A	Segment 3 / 0
Laws Frontage Road	County	2	N/A	Segment 3 / 0
Laws-Poleta Road	County	2	N/A	Segment 3 / 0
White Mountain Road	County	1, 2	N/A	Segment 3 / 0
Wyman Creek Road	County	1, 2	N/A	Segment 3 / 0
Highway 168	Caltrans	2	290—390	Segment 3 / 0
Oasis Road	County	1, 2	N/A	Segment 3 / 0.1
Canyon Road	County	1, 2	N/A	Segment 3 / 0
Eureka Valley Road	County	1, 2	N/A	Segment 3 / 0.1
State Line Road	County	1, 2	N/A	Segment 3 / 0
Power Line Road	County	1, 2	N/A	Segment 3 / 0
Segment 4				
West Rudolph Road	County	2	N/A	Segment 4 / 0.2
White Mountain Estates Road	County	2	N/A	Segment 4 / 0.1

5.17.1.3 Transit and Rail Services

The vicinity of the CSP Project area is served by the Eastern Sierra Transit Authority (ESTA). It was established in 2006 as a Joint Powers Authority between the counties of Inyo and Mono, the City of Bishop and the Town of Mammoth Lakes. ESTA is a public transit agency created to meet the growing need for public transportation in and for the four member jurisdictions and throughout the entire Eastern Sierra region (Eastern Sierra Transit Authority 2017). Bus routes in the vicinity of the CSP Project are shown on Figure 5.17-1 and in Table 5.17-2.

Table 5.17-2: Bus Routes and Frequencies

Route	Roadways Traversed	Frequency
Lone Pine—Reno	U.S. 395	Daily each direction
Mammoth Lakes—Lancaster	U.S. 395	Daily each direction
Lone Pine—Bishop	U.S. 395	Four trips each direction per day
Mammoth Express	U.S. 395	Four trips each direction per day
Bishop Creek Shuttle	SR-168	Twice daily each direction
Benton—Bishop	U.S. 6	Daily each direction

Five ESTA bus routes run along U.S. 395 and U.S. 6 in the vicinity of the CSP Project, and a sixth runs along SR-168. The frequency of these routes ranges from daily (one trip in each direction) to four trips in each direction.

There are no active railroads in the vicinity of or crossed by the CSP Project.

5.17.1.4 Bicycle Facilities

The CSP Project falls entirely within Caltrans District 9. Bicyclists are allowed on all Caltrans highways within the vicinity of the CSP Project area (Caltrans 2017). There are no county-designated bikeways within the vicinity of the CSP Project in Mono County (Mono County 2013).

As shown in Figure 5.17-2, in the vicinity of Bishop, two Class I bikeways intersect routes that would be traveled by Project-related vehicles: Sierra Street Path (0.4 mile from the end of Sierra Street northward to U.S. 395) and South Barlow Lane (0.5 miles south of SR-168 along Barlow Lane). The following Class II bikeways intersect or are located on routes that would be traveled by Project-related vehicles: North Barlow Lane and Saniger Lane (runs 0.9 miles from U.S. 395 north to Juniper Street), SR-168 (2.8 miles between Home Street and Red Hill Road), and U.S. 395 (2.7 miles between Elm Street (southbound), City Park (northbound) and Brockman Lane). There is a Class III bikeway along Sunland Drive between SR 168 and U.S. 395. Portions of U.S. 395 through the City of Bishop, and portions of U.S. 6 north of the City of Bishop to the intersection of U.S. 6 and Silver Canyon Road, are designated Class III bikeways; some sections of U.S. 395/Main Street through the City of Bishop have established bike lanes. Portions of U.S. 395 and 5 Bridges Road crossed by the CSP Project alignment are proposed Class II or Class III bikeways (Inyo County 2015).

5.17.1.5 Pedestrian Facilities

There are no important pedestrian facilities, including walkways, near the CSP Project alignment that contribute to the circulation system; this is due to the remote location of much of the alignment.

5.17.1.6 Vehicle Miles Traveled (VMT)

Vehicle miles traveled data for Inyo County and Mono County are presented in Table 5.17-3.

Table 5.17-3: Vehicle Miles Traveled

Jurisdiction	Vehicle Miles Travelled, Daily	Per Capita VMT, Daily
Inyo County	1,775,160	51.4
Mono County	952,900	38.9

Source: California Public Road Data 2019

5.17.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.17.2.1 Regulatory Setting

5.17.2.1.1 Federal

CFR Title 49, Subtitle B includes procedures and regulations pertaining to interstate and intrastate transport (including hazardous materials program procedures), and provides safety measure for motor carriers and motor vehicles that operate on public highways.

All airports and navigable airspace not administered by the DoD are under the jurisdiction of the FAA. Code of Federal Regulations Title 14, Section 77 establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height above ground or extending at a ratio greater than 50 to 1 (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet are considered potential obstructions, and require notification to the FAA. For helicopters, 1 vertical foot for every 25 horizontal

feet for a horizontal distance of 5,000 feet. In addition, the FAA requires a Helicopter Lift Plan for operating a helicopter within 1,500 feet of residences.

5.17.2.1.2 State

5.17.2.1.2.1 California Department of Transportation

Caltrans manages state highways in California. The use of California state highways for reasons other than normal transportation purposes may require written authorization or an encroachment permit from Caltrans. Caltrans has jurisdiction over the state's highway system and is responsible for protecting the public and infrastructure. Caltrans reviews all requests from utility companies that plan to conduct activities within its rights-of-way. Encroachment permits may include conditions or restrictions that limit when construction activities can occur within or above roadways under the jurisdiction of Caltrans.

Caltrans prepared a document, Guide for the Preparation of Traffic Studies (2002) that describes when a traffic impact study is needed. The intent of this guide is to provide a starting point and a consistent basis which Caltrans evaluates traffic impacts to State highway facilities. The applicability of the guide for local streets and roads (non-State highways) is at the discretion of the effected jurisdiction.

The CSP Project falls entirely within Caltrans District 9. Caltrans District 9 encompasses the east-central portion of the State; it is headquartered in Bishop. The District is responsible for all the State Highway Systems in Inyo and Mono counties.

5.17.2.1.2.2 California Transportation Commission

The California Transportation Commission (CTC) was established in 1978 out of a growing concern for a single, unified California transportation policy. The CTC is responsible for the programming and allocating of funds for the construction of highway, passenger rail, active transportation, aeronautics, and transit improvements throughout California. The CTC also advises and assists the Secretary of the California State Transportation Agency (CalSTA) and the Legislature in formulating and evaluating state policies and plans for California's transportation programs. The CTC is also an active participant in the initiation and development of State and Federal legislation that seeks to secure financial stability for the State's transportation needs.

5.17.2.1.2.3 California Streets and Highway Code

The State of California Streets and Highway Code (Code) requires the CSP Project proponents to obtain permits from Caltrans for any roadway encroachment during truck transportation and delivery. The Code includes regulations for the care and protection of highways (both State and county) and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Sections 700 through 711 provide provisions that are specific to utility providers. The Code also outlines directions for cooperation with local agencies, guidelines for permits, as well as general provisions relating to state highways and Caltrans' jurisdiction (State of California 2017).

5.17.2.1.2.4 CEQA Guidelines Section 15064.3. Determining the Significance of Transportation Impacts

(b) Criteria for Analyzing Transportation Impacts.

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the CSP Project area compared to existing conditions should be considered to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the CSP Project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the CSP Project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

5.17.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority is preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.17.2.1.3.1 Inyo County Active Transportation Plan

The Inyo County Collaborative Bikeways Plan was adopted in 2008 and revised in 2011. The plan includes a thorough overview of bicycle needs and an extensive list of proposed bikeways projects. The Bicycle Element of the Active Transportation Plan reflects a minor update of the Bikeways Plan and meets the guidelines for bicycle projects in the Active Transportation Plan Guidelines. The Element contains a number of Guidelines and Implementation Measures; none are of relevance to the CSP Project.

5.17.2.1.3.2 Inyo County Regional Transportation Plan

The Inyo County 2015 Regional Transportation Plan (RTP) provides a coordinated, 20-year vision of the regionally significant transportation improvements and policies needed to efficiently move goods and people in the region. As the Regional Transportation Planning Agency (RTPA), the Inyo County Transportation Commission (ICLTC) is required by California law to adopt and submit an approved RTP to the California Transportation Commission (CTC) every five years. Caltrans assists with RTP preparation and reviews draft documents for compliance and consistency. The RTP must be consistent with other planning guidance in the region such as adopted general plans, airport plans, bicycle plans, and public transit plans (Inyo County 2015).

5.17.2.1.3.3 Inyo County General Plan, Circulation Element

The Circulation Element in the 2001 General Plan contains goals, policies, and implementation measures for circulation topic areas, including the following that is relevant to the CSP Project:

> **Policy RH-1.4 Level of Service:** Maintain a minimum level of service (LOS) 'C' on all roadways in the County. For highways within the County, LOS 'C' should be maintained except where roadways expansions or reconfigurations will adversely impact the small community character and economic viability of designated Central Business Districts.

5.17.2.1.3.4 Mono County Regional Transportation Plan

The Mono County 2013 Regional Transportation Plan was prepared by the Mono County Local Transportation Commission (LTC) and is revised every four years. The goal of the Plan is to provide and maintain a transportation system that provides for the safe, efficient, and environmentally sound movement of people, goods and services, and that is consistent with the socioeconomic and land use needs of Mono County. The Plan notes that the primary transportation mode in the county is the existing highway and road system (Mono County 2013).

5.17.2.1.3.5 Mono County Resource Efficiency Plan

The Mono County Resource Efficiency Plan presents Mono County's path toward creating more sustainable, healthy, and livable communities (Mono County 2014). The strategies outlined in the Plan will reduce GHG emissions and provide energy, fuel, water, and monetary savings while improving the quality of life for residents in Mono County. The Plan establishes a goal of reducing vehicle miles traveled (VMT) from 57,039,040 miles in 2010 to 47,414,300 in the year 2020.

5.17.3 Impact Questions

5.17.3.1 Impact Questions

The significance criteria for assessing the impacts to transportation and traffic are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

5.17.3.2 Additional CEQA Impact Questions

The CPUC has identified additional CEQA significance criteria. According to these additional CEQA significance criteria, a project causes a potentially significant impact if it would:

- Would the project create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations?
- Would the project interfere with walking or bicycling accessibility?
- Would the project substantially delay public transit?

5.17.4 Impact Analysis

5.17.4.1 Impact Analysis

5.17.4.1.1 Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

5.17.4.1.1.1 Construction

Less than Significant Impact. Construction activities would include the movement of light, medium, and heavy-duty vehicles (including oversize vehicles such as cranes) along U.S. 395, U.S. 6, SR-168, SR-266, and county and city-maintained roads. Construction activities would require the temporary closure of traffic lanes or roads during installation or removal of poles located adjacent to roadways, and temporary and short-term road closures would also be required during the removal and installation of overhead wire.

Project-related vehicles and equipment would generally travel from staging yards or contractor yards to work sites in the morning, returning to their points of departure in the evening. SCE anticipates that construction of the CSP Project would take approximately 33 months, and that up to 100 workers could be working along the CSP Project alignment on any given day. It is estimated that work described in Chapter 3—Project Description would generate approximately 140 daily vehicle trips roundtrips across the breadth of the CSP Project. The 140 daily vehicle roundtrips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning to a staging yard, and one trip in the reverse in the evening, for a total of 100 roundtrips per day); due to the working hours of utility and construction crews, the majority of these personal vehicle trips would occur outside the morning and evening peak hours. Due to the topographically-constrained work environment along much of the CSP Project alignment, construction vehicles may be parked along the alignment overnight rather than being driven back to a staging area; further, the constrained work environment would require that the minimum number of vehicles needed to transport crews be driven to the work areas each morning, as parking and turn around areas are limited along much of the alignment in the National Forest. This would serve to reduce the number of vehicle movements per day.

The estimated deployment and number of crew members would vary depending on factors such as material availability, resource availability, and construction scheduling. As a result, the actual number of daily vehicle trips may be lower depending on the final construction schedule; the number of daily vehicle trips used here conservatively estimates potential impacts. Further, vehicle movements would be geographically and temporally dispersed across the CSP Project alignment.

A temporary increase in vehicle movements during Project construction activities would occur along U.S. 6, U.S. 395, SR-168, and SR-266; the small number of Project-related vehicle movements along these roadways, and the timing of those movements generally outside of morning and evening peak times, would not result in the lowering of the existing LOS along these roadways: as shown in Table 5.17-1, increases in AADT greater than the number of vehicle movements associated with the CSP Project would not result in lowering of the existing LOS over the planning horizons. Therefore, the CSP Project-related vehicle movements would not result in the LOS dropping below the Concept LOS, and thus the CSP Project would not conflict with a program, plan, ordinance or policy addressing the circulation system.

Project construction activities would require temporary lane or road closures and may require that the direction of travel on some roads be limited or modified. Temporary closure of travel lanes or roads or the modification of travel directions, could impact the performance of the circulation system in populated areas, including but not limited to intersections, streets, highways, and public transit. In these areas, SCE would obtain encroachment permits from the local jurisdictions and Caltrans, as appropriate, for lane or

roadway closures. In addition, SCE would implement APM TRA-1 to ensure the safe and efficient transit of vehicles, trains, bicyclists, and pedestrians.

The greatest impact to the circulation system would be confined to Silver Canyon Road, Wyman Creek Road, and White Mountain Road on lands managed by the USFS and BLM. Construction activities along Silver Canyon Road and Wyman Creek Road would require road closures or limits on the direction of travel, and the movement of construction equipment along White Mountain Road may impede non-project related traffic. Neither the USFS nor BLM have established measures of effectiveness for the performance of these roads; therefore, the CSP Project would not conflict with an applicable plan, ordinance, or policy. This notwithstanding, construction of the CSP Project would impact the movement of the small number of vehicles that seasonally utilize these roadways. SCE would coordinate with the USFS and BLM to inform typical user groups and the public of closures and travel restrictions to reduce impacts.

Based on the number of daily vehicle trips generated during construction, and the implementation of APM TRA-1, the CSP Project would have a less than significant impact with respect to applicable plans, ordinances or policies that establish measures of effectiveness.

5.17.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.17.4.1.2 Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

5.17.4.1.2.1 Construction

No Impact. The Inyo County Regional Transportation Plan 2015 does not establish any VMT or vehicle hours traveled (VHT) goals. The Mono County Regional Transportation Plan 2013 does not establish any VMT or VHT goals, but the Mono County Resource Efficiency Plan establishes a goal of reducing community VMT from 57,039,040 miles in 2010 to 47,414,300 in the year 2020.

As presented in Chapter 3 – Project Description, SCE anticipates that construction of the CSP Project would take approximately 33 months, and that up to 100 workers could be working along the CSP Project alignment on any given day. SCE anticipates that its own crews or specialty electrical contractors would be used for this work. The short duration of the construction period would not trigger the creation of any new employment positions—SCE crews and contractor crews are currently employed and utilized on projects across the broader region. Because of this, no population growth would be induced by the rebuilding of the subtransmission lines included in the CSP Project, and therefore the CSP Project would not result in an increase in community VMT in Mono County. Because construction of the CSP Project would not result in an increase in community VMT in Mono County, no impact would occur under this criterion.

5.17.4.1.2.2 Operations

No Impact. As presented in Section 5.14 the CSP Project would not provide new or upgraded electrical service to the area around the CSP Project alignment. In addition, the CSP Project does not include any new infrastructure such as publicly accessible roads that could induce population growth during operations.

As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project.

Because the operation of the CSP Project infrastructure would not induce any population growth, and because no material changes in O&M activities would occur, no increase in VMT, VHT, or automobile trips would result, and therefore no impacts would be realized under this criterion during O&M.

5.17.4.1.3 Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

5.17.4.1.3.1 Construction

No Impact. No incompatible uses of public roads are proposed. No construction, or geometric alteration, of any public roads are proposed. Therefore, no impacts would occur under this criterion as a result of the CSP Project.

5.17.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.17.4.1.4 Would the Project result in inadequate emergency access?

5.17.4.1.4.1 Construction

Less than Significant Impact. Construction activities may require temporary closure of travel lanes on public and private roads in habited areas, and would involve the movement of oversize vehicles that could affect emergency vehicle access to and along the CSP Project alignment. During construction, sections of Silver Creek Road and Wyman Canyon Road may be closed to the public, or public use may be limited to travel in one direction; these roads do not serve residences, and neither are the sole access route to any facility.

During planning for and construction of the CSP Project, road or lane closures, limitations on the direction of travel, and vehicle movements along and use of public roads and access roads would be communicated to and coordinated with the appropriate agencies, as necessary. Equipment placed on access or spur roads and in construction work areas would be situated or attended to facilitate emergency vehicle access. To ensure that construction related activities result in less than significant impacts to emergency access, SCE would implement APM TRA-1. Implementation of this APM would provide for efficient and safe transit of emergency vehicles through construction areas. SCE would also obtain the appropriate permits from the local jurisdictions, land management agencies, and Caltrans, as applicable, for construction activities that would encroach upon any public ROW or easement.

5.17.4.1.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.17.4.1.5 Would the project create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations?

5.17.4.1.5.1 Construction

Less than Significant Impact. No incompatible uses of public roads are proposed. No construction, or geometric alteration, of any public roads are proposed. Construction traffic would transit roadways along which pedestrians, cyclists, other motorists, and transit operations may be present, particularly in the City of Bishop and immediate surroundings. Construction vehicles would be operated according to applicable laws and regulations. To further reduce the potential for creating potentially hazardous conditions, SCE would implement APM TRA-1 during construction of the CSP Project. Therefore, construction of the CSP Project would not create a potentially significant hazardous condition for other users of public roads or associated infrastructure.

5.17.4.1.5.2 Operations

Less than Significant Impact. No incompatible uses of public roads are proposed. No construction, or geometric alteration, of any public roads are proposed. O&M-related vehicles would transit roadways along which pedestrians, cyclists, other motorists, and transit operations may be present, particularly in the City of Bishop and immediate surroundings; all vehicles would be operated according to applicable laws and regulations. To further reduce the potential for creating potentially hazardous conditions, SCE would implement traffic control measures during O&M activities that are similar to those detailed in APM TRA-1. Therefore, O&M of the CSP Project would not create a potentially significant hazardous condition for other users of public roads or associated infrastructure.

5.17.4.1.6 Would the project interfere with walking or bicycling accessibility?

5.17.4.1.6.1 Construction

No Impact. There are no extant bicycle lanes or developed pedestrian facilities crossed by the CSP Project alignment; therefore, the establishment and use of construction work areas under the CSP Project would not interfere with walking or bicycling accessibility. Construction traffic would transit roadways along which pedestrians and cyclists may be present, particularly in the City of Bishop and immediate surroundings. Construction vehicles would be operated according to applicable laws and regulations, and thus would not interfere with walking or bicycling accessibility.

5.17.4.1.6.2 Operations

No Impact. There are no extant bicycle lanes or developed pedestrian facilities crossed by the CSP Project alignment; further, no modifications to transportation infrastructure (roads, sidewalks, bicycle lanes, etc.) is included under the CSP Project. Therefore, infrastructure installed under the CSP Project would not interfere with walking or bicycling accessibility during operation of the infrastructure.

5.17.4.1.7 Would the project substantially delay public transit?

5.17.4.1.7.1 Construction

Less than Significant Impact. ESTA bus routes could be delayed during conductor removal or installation activities, as the roadways over which these routes are operated would be temporarily closed during these activities. Such closures would be short-term (less than an hour) and generally performed at times of day outside the operating hours of the routes.

5.17.4.1.7.2 Operations

Less than Significant Impact. ESTA bus routes could be delayed during routine or emergency O&M activities, including during conductor removal or installation activities, as the roadways over which these routes are operated would be temporarily closed during these activities. Such closures would be short-term (less than an hour) and generally performed at times of day outside the operating hours of the routes.

5.17.4.2 Vehicle Miles Traveled (VMT)

No portion of the CSP Project is located within 0.5 miles of a major transit stop or a high-quality transit corridor.

It is estimated that work described in Chapter 3—Project Description would generate approximately 140 daily vehicle trips roundtrips across the breadth of the CSP Project. The 140 daily vehicle roundtrips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning to a staging yard, and one trip in the reverse in the evening, for a total of 100 roundtrips per day). The remaining 40 daily vehicle roundtrips would account for heavy-duty vehicle movements associated with construction.

The VMT generated by the CSP Project during construction is shown in Table 5.17-4 below.

Table 5.17-4: Vehicle Miles Traveled, CSP Project Construction

	Vehicle Miles Travelled, Daily[1]	Vehicle Miles Travelled, Total
Worker vehicles	976	828,300
Construction vehicles	674	572,260

Notes:
1 Assumes 6 day construction week, and 33 month construction duration, totaling 849 work days.

No VMT will be generated by operation of the CSP Project; the VMT associated with operation of the replacement CSP Project infrastructures will be the same as the VMT associated with operation of the existing CSP Project infrastructure. VMT data are provided in Appendix L.

Comparison of the CSP Project-related VMT data presented in Table 5.17-4 with the existing VMT data for Inyo and Mono counties presented in Table 5.17-3 indicates that the CSP Project, during construction, would generate vehicle miles traveled that equate to less than one-tenth of 1 percent of the vehicle miles traveled presently in Inyo and Mono counties.

5.17.4.3 Traffic Impact Analysis

A traffic impact study will not be prepared for the CSP Project. The CSP Project would not result in any long-term or permanent increase in traffic, would not generally result in an increase in peak hour trips given the typical work hours of construction crews, is not a development project, and would not result in any land use changes.

5.17.4.4 Hazards

No permanent traffic hazards would result from construction and operation of the project.

Lane closures would occur along roadways listed in Table 5.17-1, Existing Roadways, with a distance to the closest project feature of ‘0’. SCE will institute the traffic management measures described in APM TRA-1 during construction of the CSP Project.

5.17.4.5 Accessibility

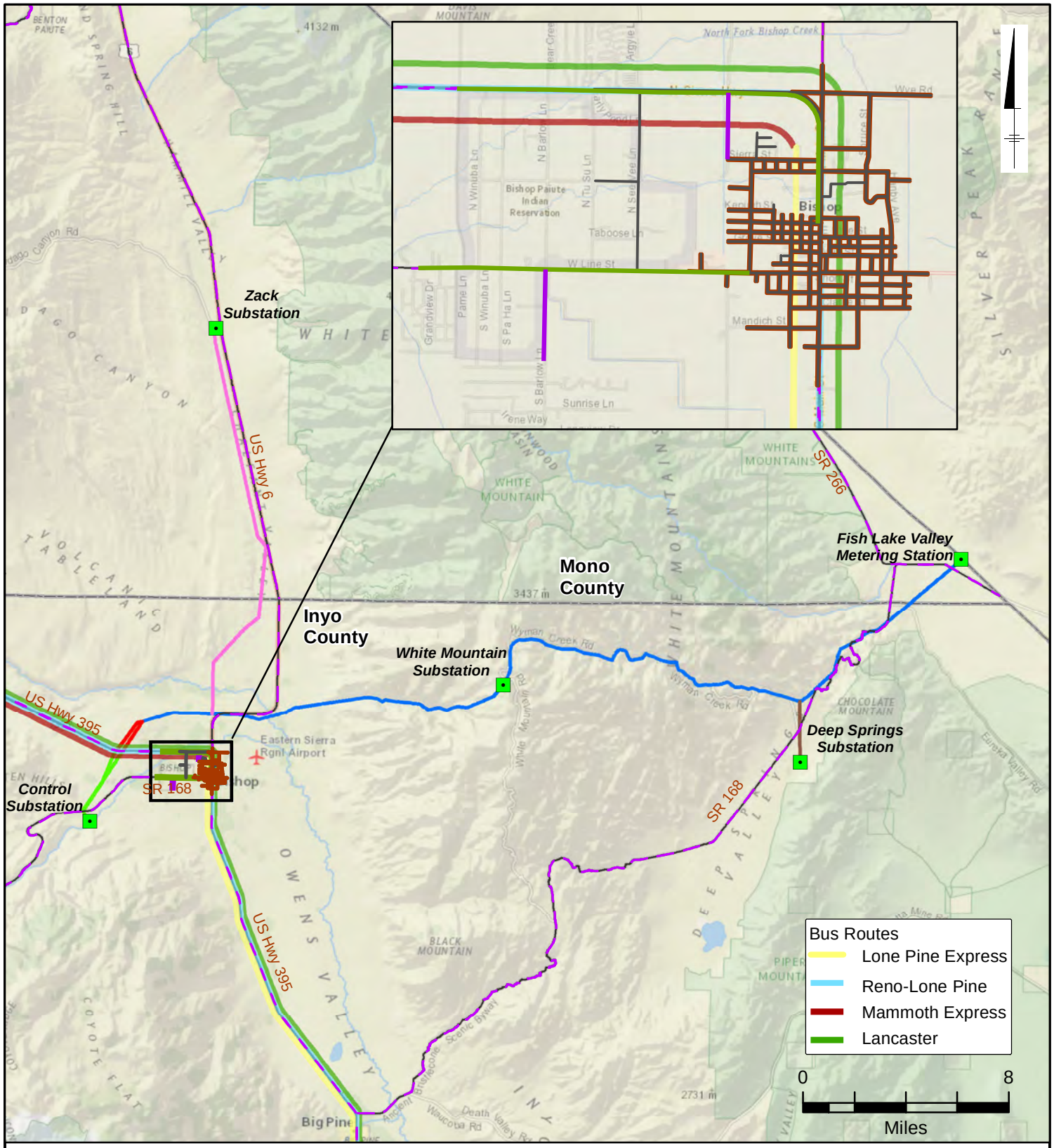
There are no extant bicycle lanes crossed by the CSP Project alignment; if proposed bicycle lanes come into existence that are crossed by the CSP Project alignment, portions of those bicycle lanes could be temporarily closed during construction. There are no developed pedestrian walkways or transit stops that could be closed during construction.

5.17.4.6 Transit Delay

No transit lines could be delayed by operation of the CSP Project. ESTA bus routes could be delayed during conductor removal or installation activities, as the roadways over which these routes are operated would be temporarily closed during these activities. Such closures would be short-term (less than an hour) and generally performed at times of day outside the operating hours of the routes.

5.17.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Transportation resource area.



Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties

Bicycle Access

- Not Prohibited

Bike/Pedestrain Facilities

- Class I
- Class II or III
- Sidewalks
- Streets

CONTROL-SILVER PEAK PROJECT

CIRCULATION SYSTEM

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.17-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.18 Tribal Cultural Resources

This section discusses tribal cultural resources or other resources potentially of importance to California Native American tribes in the CSP Project area, identifies applicable significance thresholds, assesses the CSP Project's impacts to these resources and their significance, and recommends measures to avoid or substantially reduce any effects found to be potentially significant.

Assembly Bill (AB) 52 (Gatto; Stats. 2014, ch. 532), which was enacted in September 2014, sets forth both procedural and substantive requirements for analysis of tribal cultural resources as defined in PRC section 21074, and consultation with California Native American tribes.

The environmental setting is based on information obtained from the CSP Project description, recent technical studies, and information gathered during outreach conducted by SCE.

5.18.1 Environmental Setting

5.18.1.1 Native American Consultation

California PRC Section 5097.91 established the NAHC, the duties of which include taking inventory of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC is notified of a discovery of Native American human remains from a county coroner.

The NAHC was contacted on September 10, 2019, requesting a search of its SLF for the CSP Project area. A search of the SLF was completed for the Project on October 1, 2019, with positive results. The NAHC also suggested contact with the following tribal representatives:

- James Rambeau, Senior Chairperson, Big Pine Tribe of the Owens Valley
- Sally Manning, Environmental Director, Big Pine Tribe of the Owens Valley
- Danelle Gutierrez, Tribal Historic Preservation Officer, Big Pine Tribe of the Owens Valley
- Allen Summers, Senior Chairperson, Bishop Paiute Tribe
- Monty Bengochia, Tribal Historic Preservation Officer, Bishop Paiute Tribe
- George Gholoson, Chairperson, Death Valley Timbi-sha Shoshone Tribe
- Carl Dahlberg, Chairman, Fort Independence Indian Community of Paiutes
- Mary Wuester, Chairwoman, Lone Pine Paiute-Shoshone Tribe
- Melanie McFalls, Chairperson, Walker River Reservation

On November 12, 2019, SCE sent letters of inquiry to the nine Native American individuals and organizations that were identified by the NAHC as contacts who may have knowledge of cultural resources within or adjacent to the proposed area. As of April 2, 2020, no responses have been received. Documentation of Native American correspondence are in Appendix D of Wilson and Gilbert 2021. Formal consultation under Section 106 of the NHPA will be conducted by the BLM, Bishop Field Office, serving as the lead federal agency for the Project. Consultation under AB 52 will be conducted by the CPUC, serving as the lead state agency.

5.18.1.2 Tribal Cultural Resources

EI's background research and intensive pedestrian field survey of the APE, there are potential TCRs within the CSP Project area. However, formal consultation has not yet confirmed nor identified these resources.

5.18.1.3 Ethnographic Study

The CSP Project crosses through a variety of environmental settings through the western extent of the Great Basin geomorphic province, in Inyo and Mono Counties, California. From Control Substation, the Project continues for 42 miles in an east/northeast direction, crossing the northern end of Owens Valley, the White Mountains, and Fish Lake Valley until reaching the Fish Lake Valley Metering Station, near the California-Nevada border. Shorter segments, including the Zack Tap (Segment 4), extend north from Bishop, along the southeastern extent of the Volcanic Tablelands and the western edge of Chalfant Valley. The Deep Springs Tap (Segment 5) extends south through a portion of Deep Springs Valley. These regions are discussed in detail in Section 5.5, Cultural Resources.

5.18.2 Regulatory Setting

The primary federal and state laws, regulations, and policies that pertain to the CSP Project are summarized in Section 5.5, Cultural Resources. Tribal cultural resources include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a tribe. A tribal cultural resource is one that is either: (1) listed on, or eligible for listing on the CRHR or local register of historical resources (see Section 5.5, for more information about the CRHR); or (2) a resource that the CEQA lead agency, at its discretion and supported by substantial evidence, determines is significant pursuant to the criteria in PRC Section 5024.1, subdivision (c) (see PRC Section 21074). Further, because tribes traditionally and culturally affiliated with a geographic area may have specific expertise concerning their tribal cultural resources, AB 52 sets forth requirements for notification and invitation to government-to-government consultation between the CEQA lead agency and geographically affiliated tribes (PRC Section 21080.3.1[a]). Under AB 52, lead agencies must avoid damaging effects to tribal cultural resources, when feasible, regardless of whether consultation occurred or is required.

Tribal cultural resources per PRC 21074 are defined as either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a. Included or determined to be eligible for inclusion in the CRHR.

b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

a. A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

b. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

5.18.3 Impact Questions

PRC Section 21084.2 states, "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." Lead agencies are directed to avoid damaging effects to tribal cultural resources when feasible. If measures are not otherwise identified in consultation with affected tribes to mitigate a

substantial adverse change to a tribal cultural resource, the examples of measures provided in PRC Section 21084.3 may be considered, if feasible.

The significance criteria for assessing the impacts to tribal cultural resources come from the CEQA Environmental Checklist, which notes that a project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    a) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Section 5020.1(k), or
    b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.18.4 Impact Analysis

5.18.4.1 Impact Analysis

5.18.4.1.1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Impact to be determined by CPUC. The CPUC will consult with eligible tribes under PRC Section 21080.3.1 once the application is complete. Impacts on TCRs are not addressed in this PEA because under AB 52, the CPUC must identify these resources during consultation.

5.18.4.1.2 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact to be determined by CPUC. The CPUC will consult with eligible tribes under PRC Section 21080.3.1 once the application is complete. Impacts on TCRs are not addressed in this PEA because under AB 52, the CPUC must identify these resources during consultation.

5.18.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for the Tribal Cultural Resources resource area.

5.19 Utilities and Service Systems

This section describes the utilities and service systems in the area of the CSP Project, as well as the potential impacts that may result from construction and operation of the CSP Project.

5.19.1 Environmental Setting

This discussion describes the existing utilities and service systems (water, sewage and wastewater treatment, landfills, and other utilities) in the vicinity of the CSP Project area.

5.19.1.1 Utility Providers

Electric service in the vicinity of the CSP Project is provided by SCE, LADWP, and NV Energy; service is generally provided via overhead lines. There is no distribution network for natural gas in the region. None of the lands crossed by the CSP Project alignment are served by a central sewage or wastewater treatment system. Water utilities are addressed blow.

5.19.1.2 Utility Lines

5.19.1.2.1 Water

No water lines are known to exist within the CSP Project ROW.

5.19.1.2.2 Gas

No natural gas lines are known to exist within the CSP Project ROW.

5.19.1.2.3 Sewer

No sewer lines are known to exist within the CSP Project ROW.

5.19.1.2.4 Electrical

In Segment 1, an SCE-operated 55 kV subtransmission line, two SCE-operated 115 kV subtransmission lines, an LADWP-operated 230 kV transmission line, and an LADWP-operated 500 kV transmission line are known to exist within the CSP Project ROW. In Segment 3, an SCE-operated 55 kV subtransmission line is known to exist within the CSP Project ROW. Lower-voltage distribution lines are known to exist within the CSP Project ROW in Segments 1, 3, 4, and 5.

5.19.1.2.5 Stormwater

No infrastructure designed to convey stormwater to a water treatment plant is known to exist within the CSP Project ROW.

5.19.1.2.6 Telecommunications

The Digital 395 fiber optic network route crosses the CSP Project ROW in Segment 3 in the community of Laws and in Segment 4 north of the Owens River. Overhead telecommunication infrastructure is known to exist within the CSP Project ROW in Segments 1 and 4.

5.19.1.3 Approved Utility Projects

SCE is not aware of any utility projects that have been approved for construction within the project ROW but that have not yet been constructed.

5.19.1.4 Water Supplies

The CSP Project alignment is located within the Inyo-Mono Integrated Regional Water Management (IRWM) Region. Multiple water districts, large and small, public and private, exist in the IRWM Region and in the vicinity of the CSP Project. The purpose of the IRWM is to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives (Inyo-Mono Regional Water Management Group [IMRWMG] 2014). Water demand along the CSP Project alignment is predominately for agricultural purposes, export to Los Angeles, and for environment mitigation; residential and industrial uses are a very small portion of the approximately 710,000 acre-feet used per year (IMRWMG 2014).

The LADWP is the primary consumer of groundwater in the area; LADWP's Laws and Bishop wellfields are located proximate to the CSP Project alignment. For the period encompassing the 2013/2014 to 2017/2018 runoff years, groundwater pumping by LADWP from the Laws and Bishop wellfields was more than 7,500 acre-feet less than the planned pumping volumes (Inyo County 2018).

None of the lands crossed by the CSP Project are served by a central water supply system with the exception of the area around Laws; State Water Resources Control Board data indicates this area is served by the Laws Town water service provider.

In the vicinity of Segment 1, Segment 2, and the western portion of Segment 3, the City of Bishop's water system produces and delivers water for consumption, irrigation, and fire suppression from three wells through almost 22 miles of water mains to about 1,100 service accounts, including some outside of the city limits. The water is groundwater produced through two production wells. A third well is held in standby (City of Bishop 2018). The Sierra Highlands Community Service District provides water to approximately 530 residential customers in the vicinity of Bishop. The water provided is ground water sourced from three wells (SWRCB 2018). A host of smaller mutual water companies and others provide water to smaller populations in the vicinity of Bishop. Outside the immediate vicinity of Laws, residential and other users along Segment 3 are served by private wells. There are no water service providers in Segment 4; residences along Segment 4 are served by private wells. The Deep Springs College serves as its own water service provider, and is the only water service provider in Segment 5. Other water providers in the Bishop area include the Bishop Paiute Tribe, Highland Mobile Home Park, Indian Creek / Westridge Community Services District (CSD), Meadowcreek Mutual Water Company, and Sierra Highlands Community Services District. A large section of west Bishop is served by individual wells (IMRWMG 2014).

5.19.1.5 Landfills and Recycling

Mono County, California operates seven disposal facilities; none are located proximate to the CSP Project. The nearest landfill in Mono County is as follows:

- Benton Crossing Landfill (Class III). Located northeast of the Mammoth-Yosemite airport, and more than 34 road-miles from the CSP Project alignment. The Benton Crossing Landfill has a permitted capacity of 2.6 million cubic yards, and a remaining capacity of less than 700,000 cubic yards (CalRecycle 2020).

The Inyo County Integrated Waste Management Department operates three landfills within Inyo County; one is proximate to the CSP Project:

- Bishop-Sunland Landfill (Class III). Located south of the City of Bishop, and approximately 4 miles from the CSP Project alignment. The Bishop-Sunland Landfill has a permitted capacity of 5.0 million cubic yards, and a remaining capacity of 3.3 million cubic yards (CalRecycle 2018a).

More than 40,000 tons of annual disposal capacity is available at landfills in Inyo County (CalRecycle 2018a). More than 500,000 tons of annual disposal capacity is available at landfills in Mono County (CalRecycle 2018b).

5.19.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project. Section 5.10, Hydrology and Water Quality, provides a detailed discussion of regulations related to water quality and stormwater discharge.

5.19.2.1 Regulatory Setting

5.19.2.1.1 Federal

5.19.2.1.1.1 Clean Water Act

The CWA was originally enacted in 1948 and has been amended numerous times, with significant expansions in 1972 and 1977. The CWA's main objectives are to maintain and restore the chemical, physical, and biological integrity of waters through the authorization of standards. Authority for the implementation and enforcement of the CWA lies primarily with the USEPA and its delegated state and local agencies, namely the SWRCB, and in the CSP Project area, the Lahontan RWQCB.

5.19.2.1.2 State

5.19.2.1.2.1 California Health and Safety Code § 25150.7(d)(1)

The California Health and Safety Code requires treated wood to be disposed of in either a Class I hazardous waste landfill or in a composite-lined portion of a solid waste landfill that meets RWQCB-specified requirements.

5.19.2.1.2.2 Integrated Waste Management Act of 1989

The Integrated Waste Management Act of 1989, also known as Assembly Bill (AB) 939, mandates that California's jurisdictions divert solid waste from landfills. CalRecycle is responsible for the implementation of AB 939.

5.19.2.1.2.3 California Code of Regulations (Title 27)

Title 27 (Environmental Protection) of the CCR defines regulations for the treatment, storage, processing, and disposal of solid waste. The SWRCB maintains and regulates compliance with Title 27 (Environmental Protection) of the CCR. The compliance of the Proposed Action would be enforced by the Lahontan (Region 6) RWQCB.

5.19.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the CSP Project. Pursuant to GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority is preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the CSP Project. Accordingly, the following discussions of local land use regulations is provided for informational purposes only.

5.19.2.1.3.1 Inyo County Code of Ordinances

Section 7.11.040 Diversion requirements, states:

> A. During the duration of the Covered Project, the applicant shall divert all materials from the solid waste stream that can reasonably be diverted for alternate uses and as may be required as a condition of the CSP Project's building permit, if local markets are available for the debris. To the maximum extent feasible, divertible materials shall be separated on-site if this practice leads to an increased diversion. This may include salvageable materials (e.g., appliances, dimensional lumber, concrete, brick, asphalt, cardboard, scrap metal, wood waste, vegetative waste and roofing material).

5.19.2.1.3.2 Inyo County General Plan, Public Services and Utilities Element

The Inyo County General Plan identifies goals, policies, and implementation measures designed to encourage and allow appropriate development with the adequate provision of public services and utilities. The Inyo County General Plan's Public Services and Utilities Element contains the following:

> GOALS: PUBLIC FACILITIES AND UTILITIES
>
> PSU-1. To ensure the timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents.
>
> PSU-3. To ensure that there will be a safe and reliable water supply sufficient to meet the future needs of the County.
>
> PSU-5. To ensure adequate wastewater collection, treatment, and disposal.
>
> PSU-5. To collect and dispose of stormwater in a matter that minimizes inconvenience to the public, minimizes potential water-related damage, and enhances the environment.
>
> PSU-6. To ensure the safe and efficient disposal or recycling of solid waste generated in Inyo County.
>
> PSU-10. To provide efficient and cost-effective utilities that serves the existing and future needs of people in the unincorporated areas of the County.

5.19.2.1.3.3 Mono County General Plan

The Mono County General Plan establishes policies to guide decisions on future growth, development, and conservation of natural resources in the unincorporated area of the county (Mono County 2015a). The plan reflects community-based planning and includes individual area plans for Mono County communities. The Mono County General Plan does not contain any goals or policies relevant to the CSP Project.

5.19.2.1.3.4 Mono County Integrated Waste Management Plan

Reduction of waste loads and hazardous waste loads are priorities of the State of California, and the State has made clear its emphasis on source reduction as the preferred method of waste management, since source reduction best protects public health and the environment and avoids the costs and liabilities associated with waste generation. These broad goals were first codified in the Integrated Waste Management Act of 1989, which established a requirement that 50 percent of solid wastes be diverted from municipal landfills by 2000. The 50 percent diversion rate has been achieved, and the State has now set a new goal of 75 percent recycling, composting or source reduction by the year 2020. The Mono County Integrated Waste Management Plan is intended to comply with these state and local initiatives. The Plan focuses on reduction of waste loads, tools to monitor landfill capacity, expansion of new nondisposal transfer facilities in accordance with siting criteria that emphasize minimum separation from

incompatible uses and use of pre-disturbed lands, all in accordance with statewide policy emphasis on waste reduction and recycling.

5.19.3 Impact Questions

5.19.3.1 Impact Questions

The significance criteria for assessing the impacts to public services are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project would cause a potentially significant impact if it:

- Requires or results in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects
- Does not have sufficient water supplies available to serve the CSP Project and reasonably foreseeable future development during normal, dry and multiple dry years
- Results in the determination by the wastewater treatment provider which serves or may serve the CSP Project that it does not have adequate capacity to serve the CSP Projected demand in addition to the provider's existing commitments
- Generates solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals
- Does not comply with federal, state, and local management and reduction statutes and regulations related to solid waste

5.19.3.2 Additional CEQA Impact Question

The CPUC has identified an additional CEQA significance criterion. According to this additional CEQA significance criterion, a project causes a potentially significant impact if it would:

- Increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts?

5.19.4 Impact Analysis

5.19.4.1 Impact Analysis

5.19.4.1.1 Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

5.19.4.1.1.1 Construction

No Impact. The CSP Project would not require or result in the relocation or construction of new or expanded water or wastewater treatment facilities. Only small volumes of domestic wastewater would be generated and disposed of at a wastewater treatment facility; wastewater would likely be disposed at either the City of Bishop or ESCSD's treatment plant. The City's plant has approximately 800,000 gallons per day of unused treatment capacity, and therefore the CSP Project's small volumes would be easily handled by the plant. The small volume of potable water required during construction would be obtained from existing public and private sources such as the City of Bishop or individual well owners.

The CSP Project would not require or result in the relocation of storm water drainage facilities; no such facilities are found along the CSP Project alignment. The CSP Project would not require or result in the

construction of new or expanded storm water drainage facilities The CSP Project would not increase the amount of stormwater discharge from the site that would require construction of new storm water drainage facilities or expansion of existing facilities. Further, existing stormwater management features such as access roadside ditches, waterbars, etc. would be re-established during access road maintenance activities; this would obviate the need for new stormwater management features.

The CSP Project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities beyond those described and evaluated elsewhere in this PEA document. Therefore, no impacts would occur under this criterion.

5.19.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.19.4.1.2 Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?

5.19.4.1.2.1 Construction

No Impact. There are no reasonably foreseeable future developments associated with the CSP Project. Water would be used during construction of the CSP Project to control dust on access roads and at work areas, in the construction of concrete foundations, and for washing equipment, among other uses. It is estimated that on the order of 1,200 acre-feet of water would be required during the construction period. This water would be supplied through existing entitlements and resources located along the CSP Project alignment. During recent dry and multiple dry years corresponding to the 2012-2016 drought period, the volumes of groundwater actually pumped by LADWP in the vicinity of the CSP Project was less than the planned pumping volume, with a surplus of more than 2,000 acre-feet over these years. Given the short construction schedule during which water would be required, and that supplies exceed current local demand along the CSP Project alignment, the CSP Project would have sufficient water supplies available, and therefore, no impacts would occur under this criterion.

5.19.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.19.4.1.3 Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

5.19.4.1.3.1 Construction

No Impact. As previously discussed, construction of the CSP Project would not generate significant amounts of wastewater. Portable toilets would be provided for on-site use by construction workers and would be maintained by a licensed sanitation contractor. Minimal wastewater would be generated, and construction of the CSP Project would not result in discharge of concentrated wastewater or large volumes of wastewater to a wastewater treatment provider. SCE would work with SCE-approved vendors

and subcontractors for the handling of wastewater. The City of Bishop wastewater treatment plant has more than 500,000 gallons per day of excess capacity; thus, because of the excess capacity available at existing wastewater treatment plants, and because of the small volumes of wastewater that would be transported for treatment, no wastewater treatment provider along the CSP Project alignment would be asked or would need to make a determination regarding adequate capacity, and therefore, no impact would occur under this criterion.

5.19.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.19.4.1.4 Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

5.19.4.1.4.1 Construction

No Impact. There are no State or local standards that establish numerical thresholds related to the generation of solid waste.

The landfill(s) at which the CSP Project's solid waste and excavated materials would be disposed are not known at this time. However, the Bishop-Sunland Landfill near Bishop has approximately 3.3 million cubic yards of permitted capacity remaining. Much of the material generated during the rebuilding of the subtransmission lines would be diverted from local landfill disposal through recycling of the conductor and other materials, and through the disposal of removed wood poles outside of Inyo County and Mono County (no landfills in either county are suitable for disposal of wood poles). Because of the large volume of material that would be recycled or disposed outside Inyo County and Mono County, and the large surplus capacity available at the Bishop-Sunland Landfill among other disposal facilities in Inyo and Mono counties, the CSP Project would not generate solid waste in excess of the capacity of local infrastructure.

Assembly Bill 341 established a policy goal for the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020; the Bill also notes that this goal shall remain at 50 percent for local jurisdictions. Inyo and Mono counties both have solid waste diversion plans. The very large majority of the mass and volume of solid waste generated by the CSP Project would be accounted for by removed wood poles and conductor. As stated in Chapter 3, the existing wood poles removed for the CSP Project would be either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, and/or disposed of in the lined portion of a RWQCB-certified municipal landfill. It is unlikely that these poles would be recycled or returned to the manufacturer given the age and condition of the poles, therefore they would not be diverted from the waste stream. In 2014, the last year for which data are available, 88 million tons of waste was generated in the State. Assuming 4,000 pounds per pole, the mass of poles to be removed and disposed equates to approximately 3,134 tons. Between 123 and 254 tons of metal (consisting of metals from existing conductor) would be removed as part of the CSP Project. Summed, these account for less than 0.00004 percent of all waste generated.

Given the very small percentage of the total waste generated in the State accounted for by the poles subject to disposal, the CSP Project would not impair solid waste reduction goals at the State level. At a local level, the mass of poles to be removed and disposed equates to approximately 137 percent of all waste disposed in Inyo and Mono counties in 2017 (CalRecycle 2019). Given that poles will not be

disposed in either county, and that the metal waste generated from the CSP Project would be recycled, the CSP Project would not impair the long-term attainment of local solid waste reduction goals.

5.19.4.1.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.19.4.1.5 Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

5.19.4.1.5.1 Construction

No Impact. As previously discussed, solid waste produced during construction would be disposed in one or more licensed landfill(s). Management and disposal of solid waste would comply with all applicable Federal, state, and local statutes and regulations. Thus, the CSP Project would not violate any solid waste statutes or regulations. Therefore, no impact is anticipated during construction of the CSP Project.

5.19.4.1.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.19.4.1.6 Would the project increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts?

5.19.4.1.6.1 Construction

No Impact. There are no adjacent utility lines of a type that could experience corrosion from the operation of the subtransmission lines included in the CSP Project; therefore, there would be no impact under this criterion.

5.19.4.1.6.2 Operations

No Impact. There are no adjacent utility lines of a type that could experience corrosion from the operation of the subtransmission lines included in the CSP Project; therefore, there would be no impact under this criterion.

5.19.4.2 Utility Relocation

No conflicts with existing non-Project utility lines are anticipated under the CSP Project; therefore, no utilities would require relocation.

5.19.4.3 Waste

The types of waste that would be generated under the CSP Project are addressed in Sections 3.5.14. The disposal of treated wood poles is addressed in Sections 3.5.13 and 3.5.14. The approximate volumes and masses of waste that would be generated under the CSP Project are addressed in Sections 3.5.14; these Sections also address the amount of waste materials that would be disposed of and recycled.

5.19.4.4 Water Supply

5.19.4.4.1 Estimate of the amount of water required for project construction and operation, and potential water supply source(s)

The estimated amount of water required for CSP Project construction is provided above in Section 5.19.4.1.2. No additional amounts of water above those currently consumed during extant O&M activities would be required during the O&M of the subtransmission lines included under the CSP Project.

The potential water supply sources include the water purveyors and utilities listed above in Section 5.19.1.4 as well as private owners of water. In addition, wastewater treatment plants may be a source of water supply (i.e., a source of reclaimed or recycled water) for the CSP Project. The water supply sources will be identified by SCE's construction contractor during the pre-construction planning process.

5.19.4.4.2 Evaluation of the ability of the water supplier to meet the project demand under a multiple dry year scenario

In the CSP Project area, Urban Water Management Planning requirements only pertain to the Indian Wells Valley Water District and the Mammoth Community Water District. Therefore, no data have been compiled to detail local water suppliers' abilities to "ensure reliability in its water service sufficient to meet customer needs during normal, dry, and multiple dry years."

However, during recent dry and multiple dry years corresponding to the 2012-2016 drought period, the volumes of groundwater actually pumped by LADWP in the vicinity of the CSP Project was less than the planned pumping volume, with a surplus of more than 2,000 acre-feet over these years. Further, according to LADWP's 2020 Annual Owens Valley Report, the groundwater levels in the Owens Valley rose by an average of 1.3 feet as a result of the wetter than normal runoff condition in the 2019 through 2020 season. (Inyo County 2021). This past pumping surplus, and subsequent groundwater recharge, indicates that water suppliers would be able to meet the CSP Project's demand.

5.19.4.4.3 Analysis of the CSP Project meeting the criteria for consideration as a project subject to Water Supply Assessment Requirements under Water Code Section 10912

The CSP Project does not meet the criteria for consideration as a project subject to Water Supply Assessment Requirements under Water Code Section 10912. Section 10912 states:

> For the purposes of this part, the following terms have the following meanings:
>
> (a) "Project" means any of the following:
>
> (1) A proposed residential development of more than 500 dwelling units.
>
> (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
>
> (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
>
> (4) A proposed hotel or motel, or both, having more than 500 rooms.
>
> (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project

No SCE project meets the definition of a "Project" per (1) through (6).

Regarding (7): Per the CDWR's *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning*

…it is generally acknowledged that one acre-foot of water can serve two to three households on an annual basis; therefore, one dwelling unit typically consumes .3 to .5 acre-feet of water per year, depending upon several factors, including the regional climate.

Water Code Section 10910(c)(3) states in relevant part:

[the] water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project…

By this measure, a 500 dwelling unit project would demand up to 250 acre-feet of water per year; over a 20-year project period, a 500 dwelling unit project would demand up to 5,000 acre-feet. As presented above, it is estimated that the CSP Project would demand approximately 1,200 acre-feet of water over the construction period, and would present no new water demand during operations. Therefore, the CSP Project would not demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project, and thus the CSP Project does not meet the criteria for consideration as a project subject to Water Supply Assessment Requirements under Water Code Section 10912. Accordingly, no Water Supply Assessment has been developed for the CSP Project.

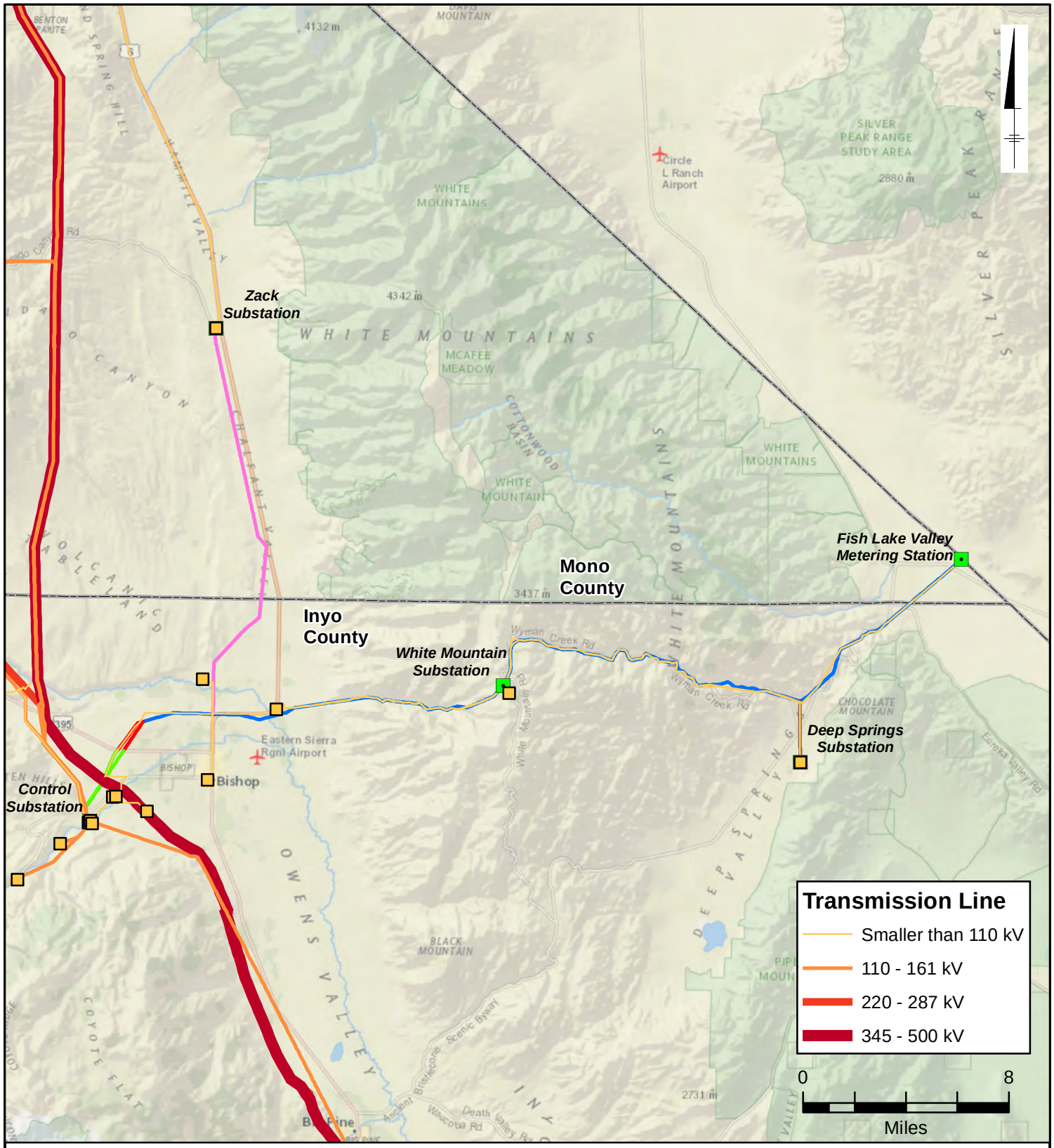
5.19.4.5 Cathodic Protection

There are no adjacent utility lines of a type that could experience corrosion from the construction or operation of the subtransmission lines included in the CSP Project. Accordingly, no cathodic protection measures are included under the CSP Project.

5.19.5 CPUC Draft Environmental Measures

SCE will, as directed by the CPUC, implement the following CPUC Draft Environment Measure during construction:

Notify Utilities with Facilities Above and Below Ground. The Applicant shall notify all utility companies with utilities located within or crossing the project ROW to locate and mark existing underground utilities along the entire length of the project at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- California Electric Substations
- Counties

CONTROL-SILVER PEAK PROJECT

UNCONNECTED UTILITIES AND OTHER INFRASTRUCTURE

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.19-1

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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5.20 Wildfire

This section of the PEA describes the wildfire-related attributes along the CSP Project, as well as an assessment of impacts that have the potential to occur during construction and operation of the CSP Project.

5.20.1 Environmental Setting

5.20.1.1 High Fire Risk Areas and State Responsibility Areas

Within California, fire hazard severity zones are designated by CAL FIRE. The California Department of Forestry and Fire Protection uses a five-tiered ranking system to assess the threat to people based on fuel hazard, wildland fire potential, and housing density. The tiers, from lowest to highest threat, are termed little or no threat, moderate threat, high threat, very high threat, and extreme threat. Fire hazard severity zones (FHSZ) are administered by the federal, State, or local government that is financially responsible for preventing and suppressing wildfires in a given area, and are categorized into the following three groups:

- Federal Responsibility Areas: The federal government is financially responsible for wildfire suppression.
- State Responsibility Areas: The State is financially responsible for wildfire suppression.
- Local Responsibility Areas: Cities or counties are financially responsible for wildfire suppression.

The existing subtransmission lines and substations associated with the CSP Project are located within all three responsibility areas.

The majority of the CSP Project alignment, including the central and eastern portions of Segment 3 and all areas where work would be performed in Segments 4 and 5, is located within the CAL FIRE moderate fire hazard severity zone. The majority of the remainder of the alignment, including the majority of Segment 1, the entirety of Segment 2, and the western portion of Segment 3, is located within the CAL FIRE high fire hazard severity zone. Small sections of the eastern portion of Segment 3 are located in undesignated areas. Tabular information on the miles of CSP Project alignment located within these zones is presented in Table 5.20-1 below, and shown graphically on Figure 5.20-1, Fire Hazard Severity Zones. Wildland-urban interface information is presented graphically in Figureset 5.20-2.

CPUC Fire-Threat Map data are presented in Figure 5.20-3; as seen in Figure 5.20-3, the entirety of Segment 1 is located in a CPUC-designated Fire Threat Area Tier 2 - Elevated. No other portion of the CSP Project is located in a CPUC-designated Fire Threat Area.

SCE has not independently identified any high fire hazard severity zone areas along the CSP Project alignment.

With the exception of Segment 5, portions of all Segments are identified as State Responsibility Areas; these are shown in Figure 5.20-4.

Table 5.20-1: Segment Miles of CSP Project Alignment within Designated Fire Hazard Severity Zones

Project Segment	Fire Hazard Severity Zone	Distance (miles)	SRA (miles)	LRA (miles)	FRA (miles)	CPUC FTA (miles)
1	High	2.55	2.53	0	0.02	3.3
1	Moderate	0.75	0	0	0.75	
2	High	1.5	1.5	0	0	--
3	High	6.6	6.6	0	0	--
3	Moderate	30.6	30.2	0.35	0	
3	Unzoned	0.8	0	0.73	0.03	
4	High	1.4	1.4	0	0	--
4	Moderate	15.8	7.6	0.5	6.7	
5	Moderate	2.4	0	1.2	1.2	--

Acronyms:
FRA: Federal Responsibility Area
FTA: Fire-Threat Area
LRA: Local Responsibility Area
SRA: State Responsibility Area

5.20.1.2 Fire Occurrence

SCE completed a query of its databases to determine whether any fires occurred along Segments 1, 2, 3, 4, or 5 of the CSP Project within the past ten years. SCE identified that three weather-related fires occurred along Segment 4, one each in 2011, 2012, and 2018. SCE identified that one weather-related fire occurred along Segment 5 in 2017. SCE identified no other fires along any of the remaining Segments of the CSP Project.

CAL FIRE has documented fires that have overlapped the CSP Project alignment; these are shown in Figure 5.20-5, and details of these fires are presented in Table 5.20-2 below.

Table 5.20-2: Wildfires Along the CSP Project Alignment

Name	Year	Location	Ignition Source/Location	Amount of Land Burned (Acres)
Pleasant	2018	Segment 3	Unknown	2,076
River	2005	Segment 3	Unknown	86
Cashbaugh	1987	Segment 3	Unknown	600

Source: California Department of Forestry and Fire Protection

5.20.1.3 Fire Risk

The CSP Project proposes, in part, to rebuild existing subtransmission lines in the same alignment as existing subtransmission lines; because the subtransmission lines proposed to be rebuilt are existing, they are an inherent component of the baseline fire risk in the area, and their rebuilding with modern infrastructure installed to current CPUC Rules will not negatively alter the baseline fire risk in the area. Scott and Burgan Fire Behavior Fuel Model data for the area along the CSP Project alignment are presented in Figure 5.20-6. Values of wind direction and speed, relative humidity, and temperature for the Bishop Airport for the previous 10 years, gathered hourly, are presented in Appendix M.

Table 5.20-3 below lists those vegetation types included in the USDA Fire Effects Information System that are found along the CSP Project alignment.

Table 5.20-3: USDA Fire Effects Information System Vegetation Types

Vegetation Type	Fire Interval (Years)	Fire Severity (Percent of Fires)			High Risk?
		Replacement	Mixed	Low	
Sparsely vegetated	NA	--	--	--	NA
California quaking aspen	31-37	24-46	15-54	0-61	Yes
California pinyon-juniper	97-203	22-33	36-47	20-38	No
Limber pine-Great Basin bristlecone pine	143-345	29-34	0-71	0-71	No
California subalpine mixed conifer	23-321	11-89	0-70	0-45	Yes
Mountain-mahogany	14-112	24-100	0-52	0-34	Yes
Mixed dwarf sagebrush	79-1,250	33-100	0-67	0	No
Saltbush shrublands	20-2,000	54-100	0-46	0	Yes
Blackbrush shrublands	270-833	100	0	0	No
Creosotebush shrublands	316-800	55-100	0-45	0	No
Basin big sagebrush and Wyoming big sagebrush	81-115	84-89	11	0-5	No
Mountain big sagebrush	49	100	0	0	Bo
Spiny hopsage-horsebrush shrublands	215-227	100	0	0	No
Greasewood shrublands	208-1,000	100	0	0	No
Intermountain riparian	20-370	66-100	0-34	0	Yes
Basin big sagebrush and Wyoming big sagebrush	123	84	11	5	No

Notes:
Replacement-severity fires cause >75% kill or top-kill of the upper canopy layer.
Mixed-severity fires cause 26%-75% kill or top-kill of the upper canopy layer.
Low-severity fires cause <26% kill or top-kill of the upper canopy layer
High Risk defined as those vegetation types with a fire interval of less than 35 years (equating to LANDFIRE regime groups I and II).

5.20.1.4 Values at Risk

Communities near the CSP Project alignment, which include structures and other improvements (including utility-owned infrastructure) at risk from wildfire, are identified in Section 5.14 and are shown on Figure 5.14-1; sensitive receptors, which are another proxy for structures, are shown in Figureset 5.13-1. The vulnerability of these structures and improvements is typical for the region, and is dependent on the age of the structures and improvements and their physical siting. There is no rare habitat along the CSP Project alignment that is at risk from wildfire.

5.20.1.5 Evacuation Routes

U.S. 395 and U.S. 6 are identified as primary evacuation routes that are crossed by the CSP Project alignment. There are no public roadways crossed by the CSP Project alignment that lack a secondary point of access or exit.

5.20.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the CSP Project.

5.20.2.1 Regulatory Setting

5.20.2.1.1 Federal

Please see Sections 5.9.2.1.1 and 5.10.2.1.1

5.20.2.1.2 State

5.20.2.1.2.1 Senate Bill 901

Senate Bill 901, enacted in 2018, adopted new provisions of Public Utilities Code Section 8386 requiring all electric utilities to prepare, submit and implement annual wildfire mitigation plans that describe the utilities' plans to construct, operate and maintain their electrical lines and equipment in a manner that will help minimize the risk of catastrophic wildfires associated with those electrical lines and equipment.

5.20.2.1.2.2 Red Flag Fire Warning and Weather Watches

Like PRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red flag warnings and fire weather watches and the CAL FIRE has provided safety recommendations for preventing fires, including clearing and removing vegetation, and ensuring the proper use of equipment.

5.20.2.1.3 Local

Please see Sections 5.7.2, 5.9.2 and 5.10.2.

5.20.2.2 CPUC Standards

In October 2007, devastating wildfires driven by strong Santa Ana winds burned hundreds of square miles in Southern California. Several of the worst wildfires were reportedly ignited by overhead utility power lines and aerial communication facilities in close proximity to power lines. In response to these wildfires, the CPUC initiated Rulemaking (R.) 08-11-005 to consider and adopt regulations to protect the public from potential fire hazards associated with overhead powerline facilities and nearby aerial communication facilities.

Beginning in 2009, the CPUC issued several decisions in R.08-11-005 that together adopted dozens of new fire-safety regulations. Most of the adopted fire-safety regulations consisted of new or revised rules in GO 95. Several of the adopted fire-safety regulations apply only to areas, referred to as "high fire-threat areas," where there is an elevated risk for power line fires igniting and spreading rapidly. These high fire-threat areas are designated by several maps that were adopted on an interim basis. Each of the interim maps covers a different part of the State and uses its own methodology for identifying high fire-threat areas, presenting consistency and potential enforcement issues. To address these issues, the CPUC also commenced the development of a single statewide fire-threat map to designate areas where (1) there is an elevated risk for destructive power line fires, and (2) where stricter fire-safety regulations should apply.

In May 2015, the CPUC closed R.08-11-005 and initiated successor rulemaking R.15-05-006 to complete the outstanding tasks in R.08-11-005. The general scope of R.15-05-006 was to address the following matters carried over from the scope of R.08-11-005: (1) develop and adopt a statewide fire-threat map that delineates the boundaries of a new HFTD where the previously adopted regulations will apply, (2) determine the need for additional fire-safety regulations in the HFTD, and (3) revise GO 95 to include a definition and maps of the HFTD, as well as any new fire-safety regulations. The scope and schedule for R.15-05-006 was divided into two parallel tracks. One track focused on the development and adoption of

a statewide fire-threat map. The second track focused on the identification, evaluation, and adoption of fire-safety regulations in the HFTD.

On December 21, 2017, the CPUC issued Decision (D.) 17-12-024 adopting regulations to enhance fire-safety in the HFTD, effectively completing the second track of R.15-05-006 described above. On January 19, 2018 the CPUC adopted, via Safety and Enforcement Division's (SED) disposition of a Tier 1 Advice Letter, the final CPUC Fire-Threat Map. The adopted CPUC Fire-Threat Map, together with the map of Tier 1 HHZs on the USFS-CAL FIRE joint map of tree mortality HHZs, comprise the HFTD Map where stricter fire-safety regulations apply.

5.20.2.2.1 Inspection and Maintenance Standards

Decisions 96-11-021 and 97-03-070 establish inspection cycles and record-keeping requirements for utility distribution equipment, which are contained in GO 165. In general, utilities must patrol (walk, drive, or fly by) their systems once a year (in urban areas) or once every two years (in rural areas). Utilities must conduct detailed inspections every 3-5 years, depending on the type of equipment. For detailed inspections, utilities' records must specify the condition of inspected equipment, any problems found, and a scheduled date for corrective action. The utility must submit an annual report summarizing inspections made, equipment condition observed, and repairs made. Utilities are required to make intrusive inspections of power poles; no pole should go over 25 years before its first intrusive inspection, and once passed, every 20 years thereafter. Currently GO 165 is being studied for revisions to optimize the Commission's ability to identify areas on noncompliance with its safety standards GO 95 Overhead and GO 128 Underground and its inspection, maintenance and repair standards GO 165.

5.20.2.2.2 Tree Trimming Standards

Decision 97-01-044 of Investigation 94-06-012 establishes standards for trimming trees near power lines, issued as a revision to Rule 35 of GO 95-A. For lines at voltages higher than 750 volts, in general, trees must be trimmed so as to provide no less than 18 inches of clearance from lines under normal annual weather variations. When trimmed, where practicable, trees must be 4 to 15 feet from power lines over 2,400 volts (clearances vary with voltage). Detailed rules are contained in Appendix A of the decision.

5.20.3 Impact Questions

5.20.3.1 Impact Questions

The significance criteria for assessing the impacts to public services are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones would cause a potentially significant impact if, the CSP Project would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

5.20.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.20.4 Impact Analysis

5.20.4.1 Impact Analysis

5.20.4.1.1 Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

5.20.4.1.1.1 Construction

Less than Significant Impact. As discussed in Section 5.17, the CSP Project would not be expected to significantly impact traffic circulation or increase demands on existing emergency response services during temporary construction activities, and would not significantly impact emergency access in the area or increase the demand for existing emergency response services. Although it is not anticipated that construction activities would result in the blockage of any roadways that could be used in the case of an emergency, in the event that any construction-related activity may result in such a blockage or closure, SCE would implement APM TRA-1, which calls for coordination with local authorities including emergency responders regarding appropriate procedures. As directed in APM TRA-1, construction activities completed within public street rights-of-way would require the use of a traffic control service, and all lane closures would be conducted in accordance with APM TRA-1. Therefore, the impacts associated with construction activities would be less than significant under this criterion.

5.20.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.20.4.1.2 Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

5.20.4.1.2.1 Construction

No Impact. No components of the CSP Project are designed for human occupancy, therefore no impacts would occur under this criterion.

5.20.4.1.2.2 Operations

No Impact. No components of the CSP Project are designed for human occupancy, therefore no impacts would occur under this criterion.

5.20.4.1.3 Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

5.20.4.1.3.1 Construction

No Impact. The CSP Project does not include or require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, non-Project power lines, or other utilities; the entirety of the CSP Project is described in Chapter 3. Therefore, because no such associated infrastructure would be installed under the CSP Project, the CSP Project would not have any impacts under this criterion.

Further, as described in Section 5.9.4.1.7, the CSP Project would not present a significant risk of loss, injury or death by exposing people or structures, either directly or indirectly, to wildland fires. As previously discussed, the majority of the CSP Project alignment is located within the CAL FIRE moderate fire hazard severity zone. Portions of the CSP Project are also located within identified CAL FIRE high fire hazard severity zones, and areas that are undesignated. The entirety of Segment 1 is located in a CPUC-designated Fire Threat Area Tier 2 - Elevated. No other portion of the CSP Project is located in a CPUC-designated Fire Threat Area.

High heat or sparks from vehicles or equipment have the potential to ignite dry vegetation and cause fires. However, CSP Project activities would generally be located within existing SCE owned and/or to-be-acquired ROWs where vegetation would be cleared or trimmed. Vehicles and equipment would primarily use existing roads, and would also use an overland travel method in temporary construction areas where and when such a method can be used safely. In addition, SCE would implement standard fire prevention protocols during construction activities and comply with applicable laws and regulations. In addition, SCE would develop and implement a Fire Prevention and Emergency Response Plan per APM HAZ-3.

In the event that the National Weather Service issues a Red Flag Warning during construction of the CSP Project, additional measures would be implemented to address smoking and fire rules, storage and parking areas, the use of gasoline-powered tools, the use of spark arresters on construction equipment, road closures, the use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. Construction areas would be grubbed/trimmed of vegetation and graded before the staging of equipment, and in such areas where overland travel may occur, dry vegetation would also be trimmed; such activities would minimize the potential for vehicles or equipment to start a fire.

Within California, SCE participates with CAL FIRE, the California Governor's OES, and various city and county fire agencies in the Red Flag Fire Prevention Program, and complies with California PRC Sections 4292 and 4293 related to vegetation management in subtransmission line corridors. The portions of the CSP Project located within moderate or high fire hazard severity zones and within CPUC-designated Tier 2-Elevated areas would generally be cleared of vegetation and graded prior to the staging of equipment, minimizing the risk of construction vehicles starting a fire.

5.20.4.1.3.2 Operations

No Impact. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project alignment. As currently performed, SCE would continue to implement its standard fire prevention protocols during O&M activities; comply with applicable laws and regulations; implement additional measures in the event of a Red Flag Warning during construction; and participate with CAL FIRE and other city and county fire agencies in the Red Flag Fire Prevention Program (in compliance with PRC Section 4292 and 4293 relating to vegetation management in subtransmission line corridors).

Among the O&M activities that would continue after construction of the CSP Project would be on-going implementation of SCE's 2019 Wildfire Mitigation Plan in Segment 1, which is located in an area designated by the CPUC as Fire Threat Area Tier 2–Elevated. The Plan describes strategies, programs and activities that are in place, being implemented or are under development by SCE to proactively address and mitigate the threat of electrical infrastructure-associated ignitions that could lead to wildfires. Therefore, no impacts would be realized under this criterion during O&M.

5.20.4.1.4 Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

5.20.4.1.4.1 Construction

Less than Significant Impact. As discussed in the Hydrology and Water Quality impact analyses in Section 5.10.4, the CSP Project SWPPPs would include measures to control stormwater runoff rates which would minimize the potential for significant alteration of drainage patterns that could result in downslope or downstream flooding. Further, improvements to existing access roads and spur roads would include design considerations to maintain or improve drainage patterns within the CSP Project alignment. Therefore, through drainage design and SWPPP implementation, the CSP Project would not substantially alter the existing drainage pattern of the site or area, or increase the rate or amount of surface runoff in a manner which would result in downstream or downslope flooding.

As discussed in the Geology and Soils impact analyses in Section 5.7.4 and displayed in Figure 5.7-5, the central portion of Segment 3 is located in areas of relatively steep slopes with localized landslide hazards. These localized areas may be susceptible to post-fire slope instability. However, these areas are not within CPUC-identified Tier 2—Elevated or Tier 3—Extreme fire-threat areas, and are located in a CALFIRE-designated Moderate Fire Hazard Severity Zone. This indicates that the vegetation in the area is less susceptible to fire or is sparser than in other areas, or that few structures susceptible to fire (and thus inhabitants) are present. The remaining segments—Segment 1, Segment 2, the western and eastern portions of Segment 3, and in Segments 4 and 5—are located in valley areas that would not be susceptible to post-fire slope instability. Therefore, impacts from post-fire slope instability would be less than significant.

5.20.4.1.4.2 Operations

No Impacts. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the subtransmission lines that would be rebuilt under the CSP Project. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the CSP Project, and therefore no impacts would be realized under this criterion during O&M.

5.20.4.2 Fire Behavior Modeling

The CSP Project does not include any new electrical lines and as discussed above in Chapter 3, a significant amount of the existing wood structures along the CSP project circuits would be replaced with fire resistant structures which would help harden the system in the area compared to what exists today; therefore, no fire behavior modeling has been performed.

5.20.4.3 Wildfire Management

During operation and maintenance of the subtransmission lines included in the CSP Project, SCE would implement its Wildfire Mitigation Plan (and successor plans) to manage wildfire risk in the area. SCE's Wildfire Mitigation Plan is available on the CPUC's Utility Wildfire Mitigation Plans website at https://www.cpuc.ca.gov/SB901/

5.20.5 CPUC Draft Environmental Measures

SCE will, at the direction of the CPUC, implement during construction of the CSP Project the following measures:

Construction Fire Prevention Plan

A project-specific Construction Fire Prevention Plan for both construction and operation of the project shall be submitted for review prior to initiation of construction. A draft copy of the Plan shall be provided to the CPUC and state and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall also include federal, state, or local agencies with jurisdiction over areas where the project is located. The final Plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The Plan shall be fully implemented throughout the construction period and include the following at a minimum:

- The purpose and applicability of the Plan
- Responsibilities and duties
- Preparedness training and drills
- Procedures for fire reporting, response, and prevention that include:
- Identification of daily site-specific risk conditions
- The tools and equipment needed on vehicles and to be on hand at sites
- Reiteration of fire prevention and safety considerations during tailboard meetings
- Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity
- Coordination procedures with federal and local fire officials
- Crew training, including fire safety practices and restrictions
- Method(s) for verifying that all Plan protocols and requirements are being followed

A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the Plan.

Fire Prevention Practices (Construction and Maintenance)

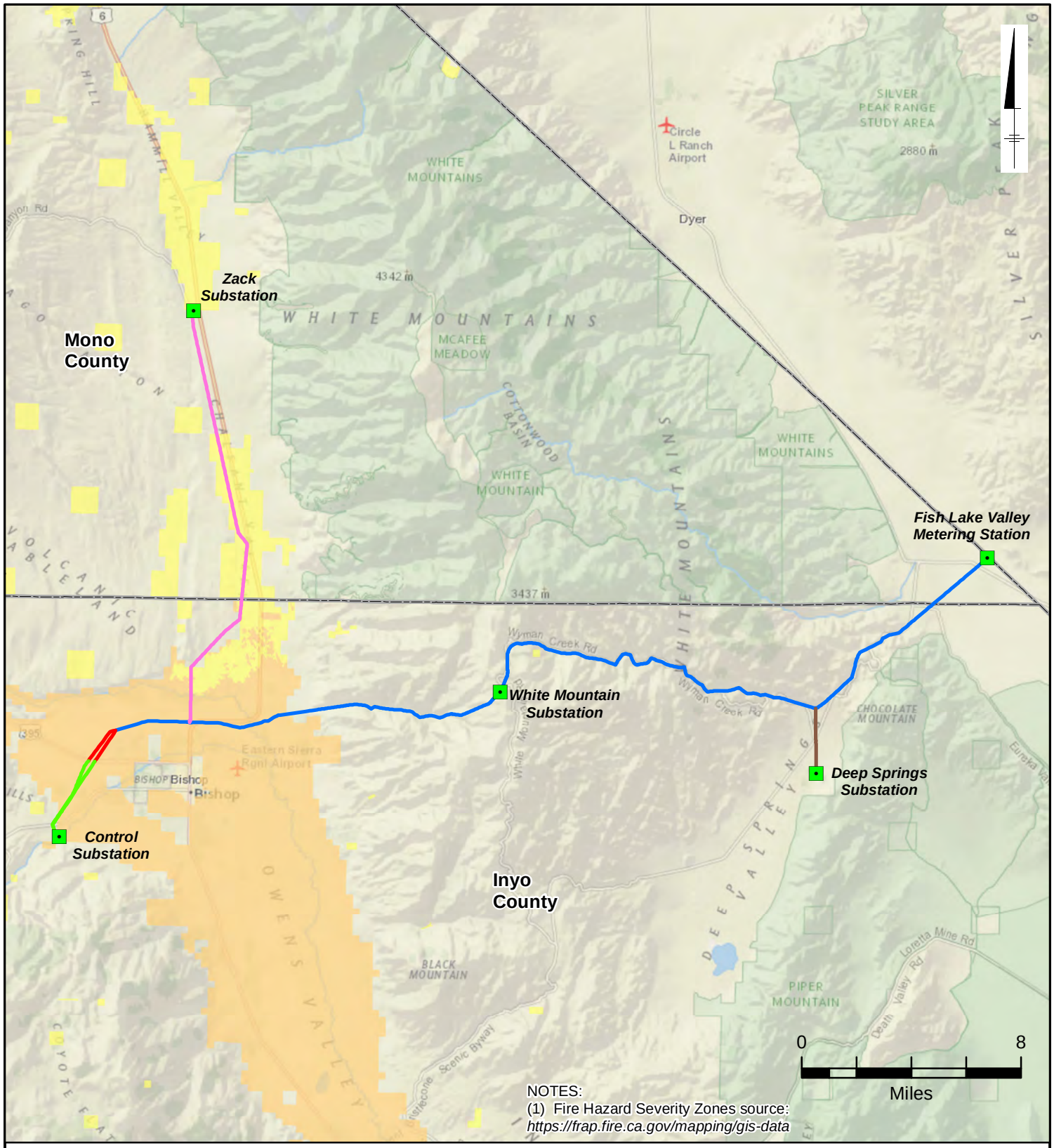
The Applicant shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state.

All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition.

All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance

personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.

Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.



NOTES:
(1) Fire Hazard Severity Zones source:
https://frap.fire.ca.gov/mapping/gis-data

Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- County

Fire Hazard Zones

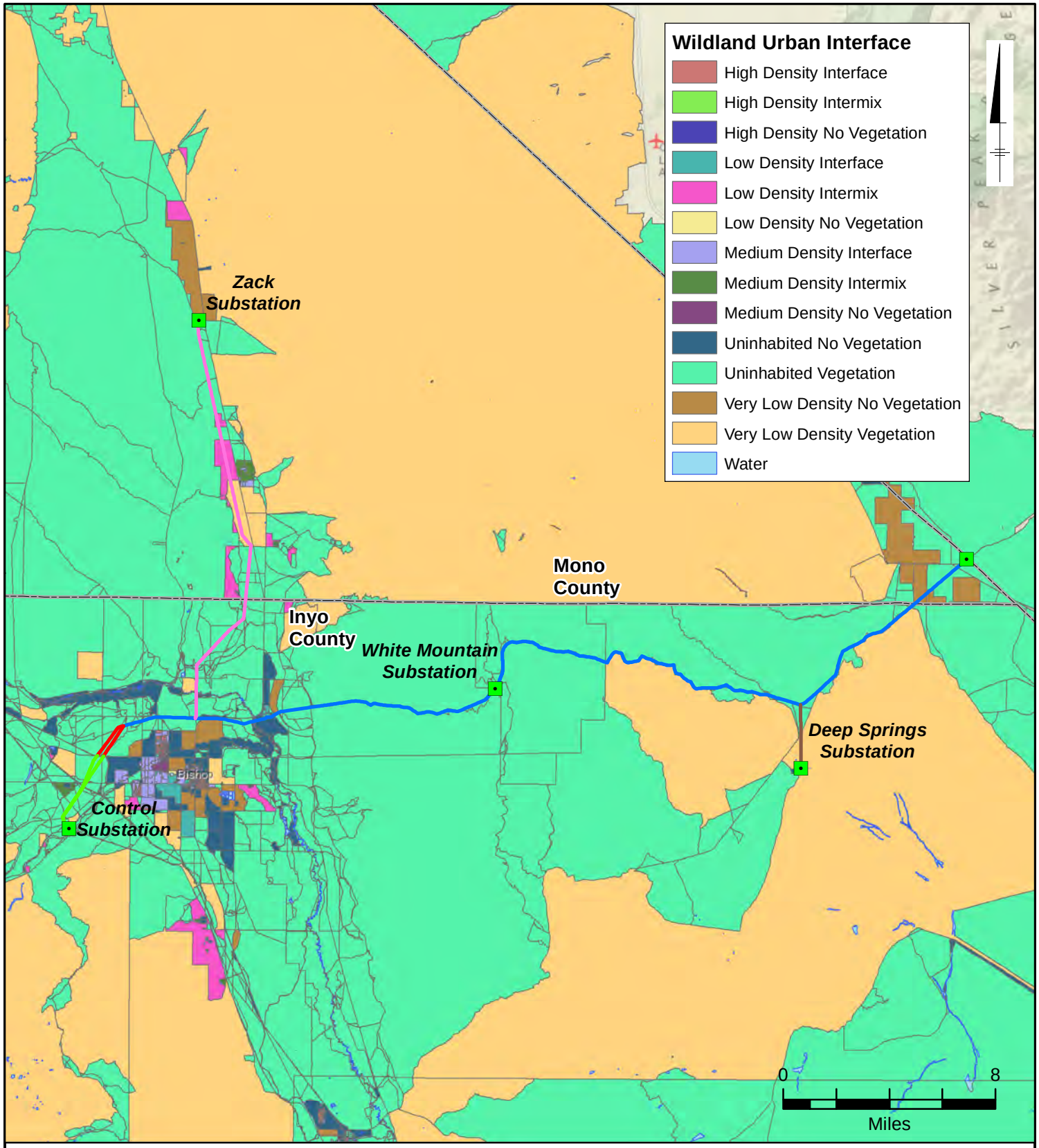
- Very High
- High
- Moderate

CONTROL-SILVER PEAK PROJECT

FIRE HAZARD SEVERITY ZONES

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURE 5.20-1



Legend

- Substation
- County
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

NOTES:
(1) Wildland Urban Interface source: USDA Forest Service
https://www.fs.usda.gov/rds/archive/Product/RDS-2015-0012-2

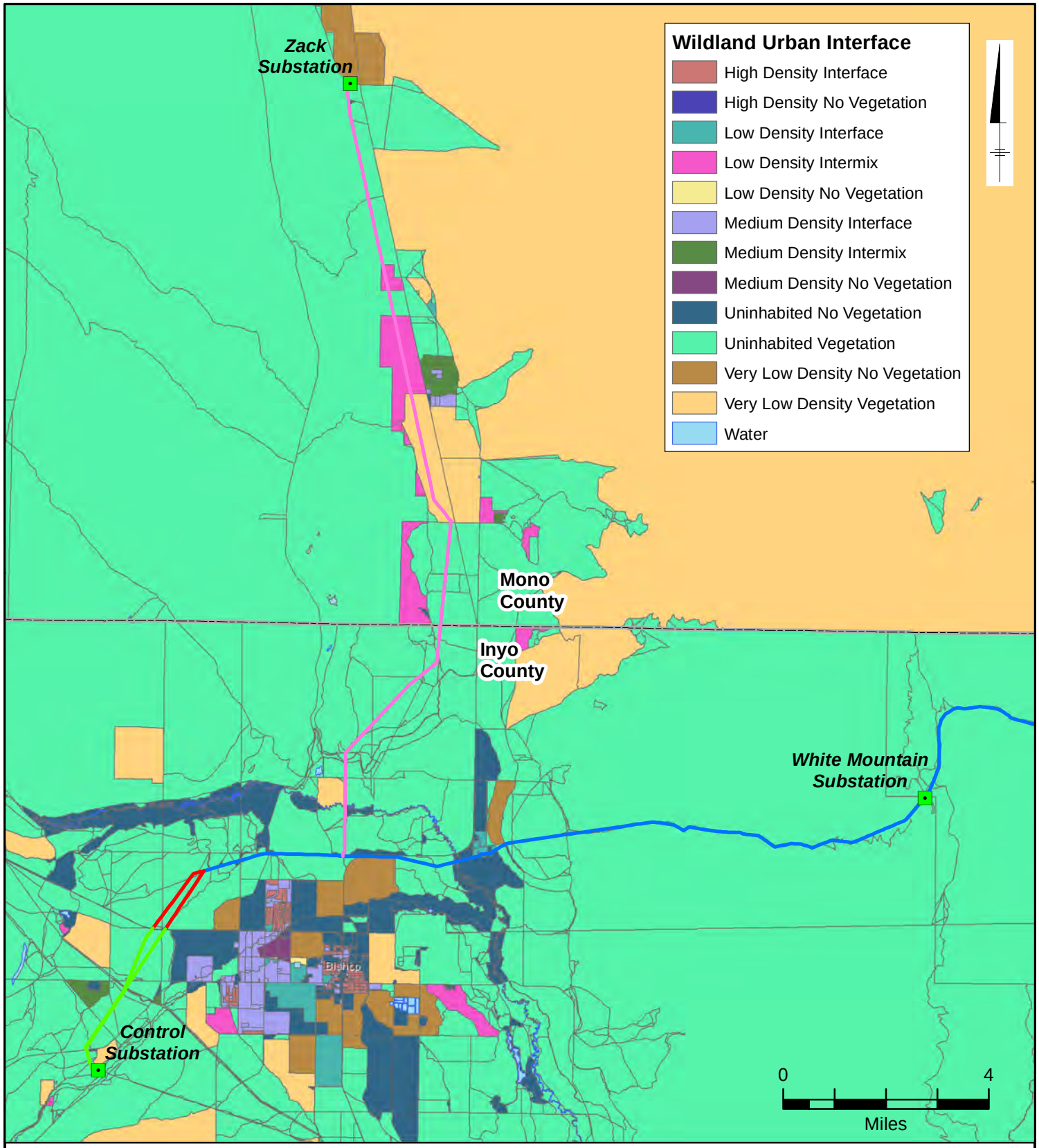
CONTROL-SILVER PEAK PROJECT

WILDLAND URBAN INTERFACE

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.20-2



Legend

- Substation
- County
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

NOTES:
(1) Wildland Urban Interface source: USDA Forest Service
https://www.fs.usda.gov/rds/archive/Product/RDS-2015-0012-2

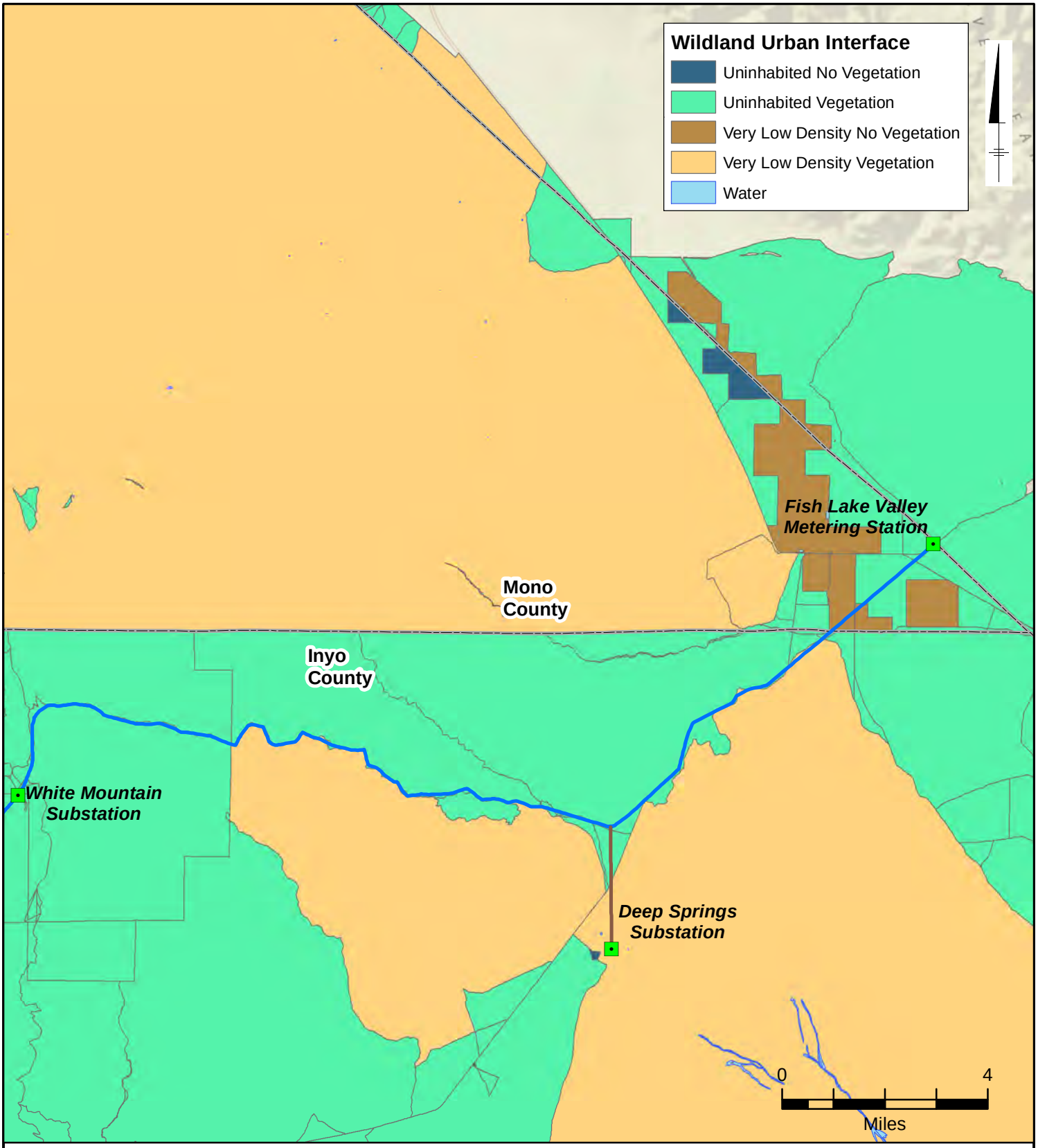
CONTROL-SILVER PEAK PROJECT

WILDLAND URBAN INTERFACE

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURESET
5.20-2



Legend

- Substation
- County
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)

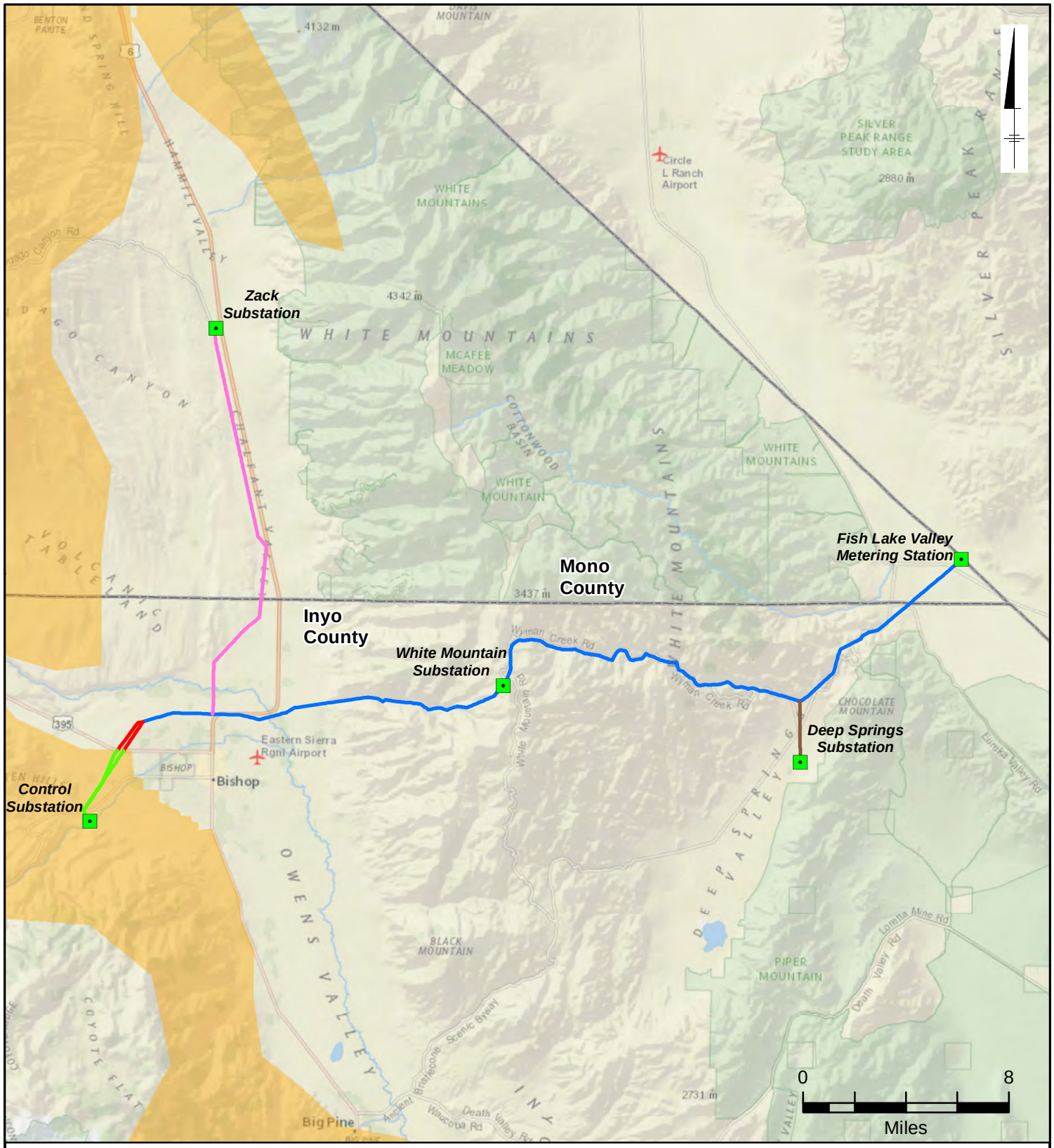
NOTES:
(1) Wildland Urban Interface source: USDA Forest Service
https://www.fs.usda.gov/rds/archive/Product/RDS-2015-0012-2

CONTROL-SILVER PEAK PROJECT

WILDLAND URBAN INTERFACE

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURESET
5.20-2



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Counties

CPUC Fire-Threat

- Tier 2

CONTROL-SILVER PEAK PROJECT

CPUC FIRE THREAT

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE
5.20-3

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties
- Local Responsibility Areas (LRA)
- State Responsibility Areas (SRA)
- Federal Responsibility Areas (FRA)

CONTROL-SILVER PEAK PROJECT

RESPONSIBILITY AREAS

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.20-4

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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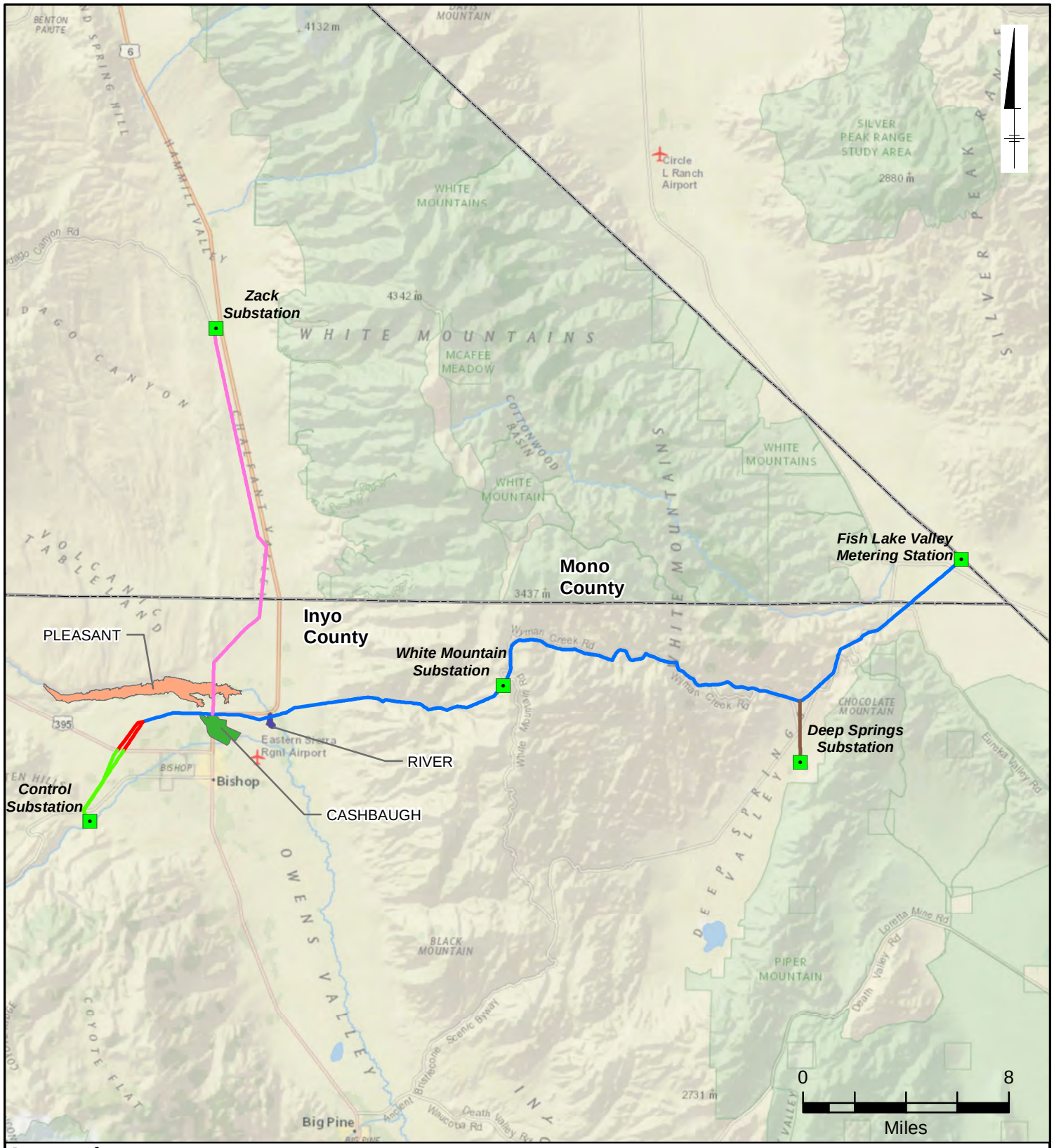

Legend

- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Counties

Small Fire Perimeters (<5000 acres)

- 2018
- 1987
- 2005

CONTROL-SILVER PEAK PROJECT

FIRE OCCURRENCE

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.20-5

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
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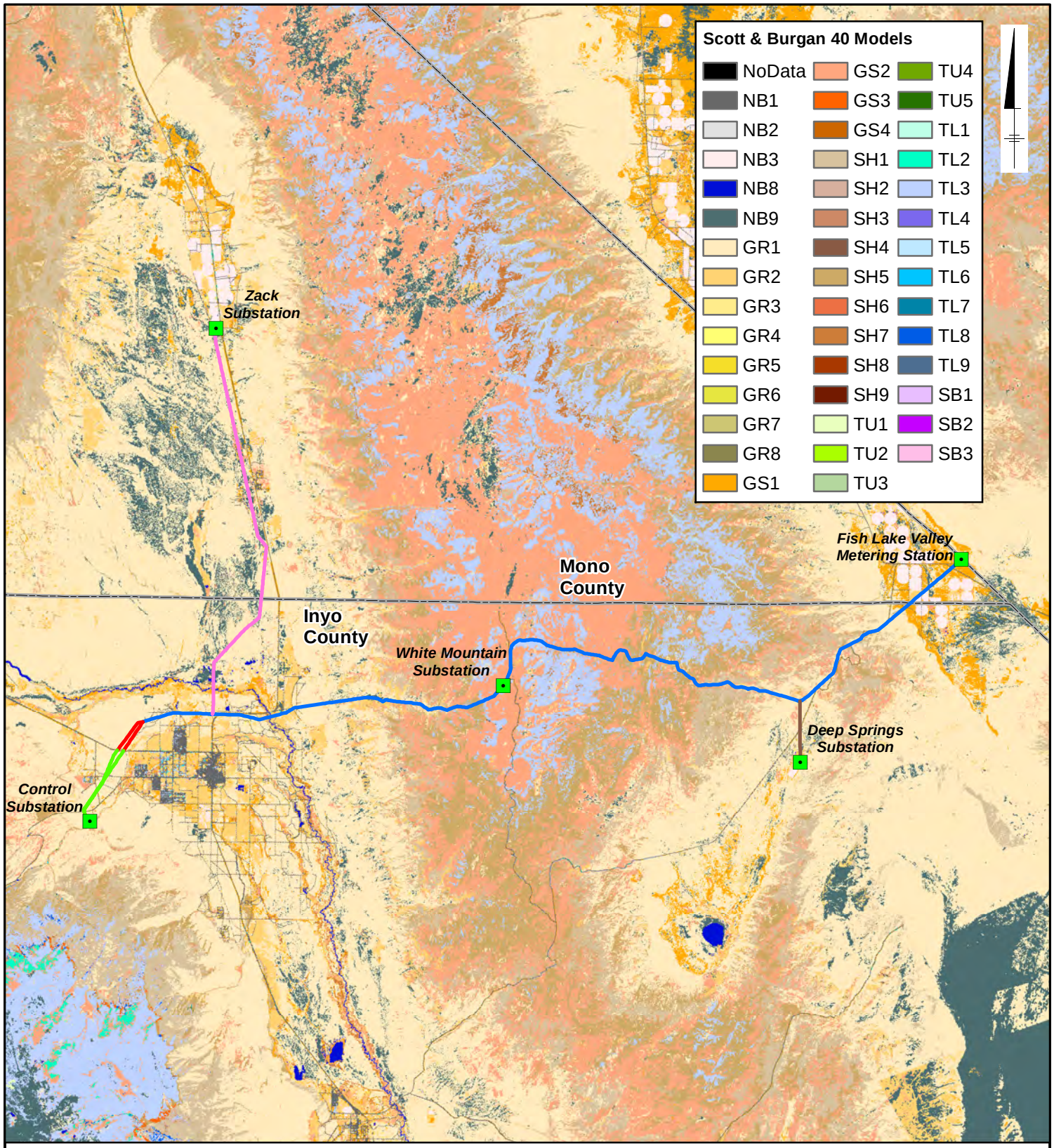

Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4 (Zack Tap)
- Segment 5 (Deep Springs Tap)
- Substation
- Counties

0 8

Miles

CONTROL-SILVER PEAK PROJECT

SCOTT AND BURGAN FIRE BEHAVIOR FUEL MODELING

ARCADIS

SOUTHERN CALIFORNIA EDISON

FIGURE 5.20-6

City: Div/Group: Created By: Last Saved By: mgi01044
Project (Project #)
T:_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\CSP\Figure5-20-6_ScottandBurganFireBehaviorFuelModeling.mxd 03/16/2021 5:25:36 PM

5.21 Mandatory Findings of Significance

This section of the PEA provides an analysis of the mandatory findings of significance associated with construction of the CSP Project. In accordance with the CEQA Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the CSP Project will result in significant environmental impacts.

5.21.1 Impact Assessment for Mandatory Findings of Significance

5.21.1.1 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project related impacts will be significant. Impacts resulting from the CSP Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the CSP Project:

- Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

5.21.1.2 Impact Analysis

5.21.1.2.1 Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigation. The CSP Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major period of California history or prehistory.

The CSP Project would involve short-term construction activities, consisting of replacing existing structures with replacement structures located proximate to the existing structures. With the implementation of APMs and compliance with applicable regulations designed to protect the environment, construction would not substantially degrade the quality of the environment. The CSP Project would result in less than significant impacts to existing habitats, wetlands, and waterways. Therefore, the CSP Project would not substantially reduce the habitat of a fish or wildlife species.

The CSP Project would not have substantial impacts on wildlife habitat or designated or proposed critical habitat and would have no impacts on wildlife refuges. It would not require substantial clearing of vegetation. Any placement of fill in waterways would comply with federal and state wetlands and

waterways regulations, and no discharges of domestic or industrial effluent would occur that could threaten the survival of a species. The CSP Project's impacts on biological resources would be less than significant with incorporation of APMs. Therefore, the CSP Project would not cause a fish or wildlife population to drop below self-sustaining level or threaten to eliminate a plant or animal community.

The CSP Project would have less than significant impacts on special-status plants and animals. It would not involve construction of a highway, levee, or other major infrastructure that could restrict the range of a species. Therefore, the CSP Project would not restrict the range of a rare or endangered plant or animal and any biological impacts would be less than significant.

The CSP Project would not eliminate important examples of the major periods of California history or prehistory. With incorporation of APMs, impacts to cultural resources would be less than significant.

Overall, the CSP Project would not substantially degrade the quality of the environment and all environmental impacts would be reduced to less than significant with the incorporation of APMs. Therefore, less than significant impacts would be realized under this criterion.

5.21.1.2.2 Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

No Impact. As discussed in Section 7.1.3, the CSP Project, with the incorporation of APMs, would not result in any cumulatively considerable impacts to any environmental resource category.

5.21.1.2.3 Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. The CSP Project would not result in environmental impacts that would have substantial direct or indirect effects on human beings, including noise, traffic, or potential for hazards from hazardous materials or accidents in close proximity to residential or recreational areas. As presented in Chapter 4, the direct and indirect impacts of the CSP Project's construction would be less than significant for all resource areas. Therefore, the CSP Project would not cause a substantial adverse direct or indirect effect on human beings, and impacts would be less than significant.

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