

## 4.4. BIOLOGICAL RESOURCES

### 4.4.1 INTRODUCTION

The Biological Resources chapter of the EIR evaluates the biological resources known to occur or potentially occur within the Centennial and Brunswick Industrial Sites and East Bennett Road pipeline alignment. The Biological Resources chapter describes potential impacts to special-status plant and wildlife species and sensitive natural communities and identifies measures to eliminate or substantially reduce those impacts to a less-than-significant level. The information contained in the analysis is primarily based on the following project-specific reports:

#### **Centennial Industrial Site**

- Greg Matuzak Environmental Consulting LLC. *Centennial Industrial Site Aquatic Resources Delineation of Waters of the United States and State of California*. October 2020 (Appendix F.1).
- Greg Matuzak Environmental Consulting LLC. *Centennial Industrial Site Biological Resources Assessment*. January 2021 (Appendix F.2).
- Greg Matuzak Environmental Consulting LLC. *Updated Technical Memorandum for Centennial Industrial Site: Idaho-Maryland Mine Project – Biological Resources Impact Assessment*. January 29, 2021 (Appendix F.3).
- Greg Matuzak Environmental Consulting LLC. *Centennial Industrial Site Habitat Management Plan for the Pine Hill Flannelbush (*Fremontodendron decumbens*)*. January 2021 (Appendix F.4). Referred to as “Centennial Pine Hill Flannelbush Habitat Management Plan” hereafter.
- Greg Matuzak Environmental Consulting LLC. *Centennial Industrial Site Idaho-Maryland Mine Project, Watercourse/Wetlands/Riparian Areas Management Plan*. January 2021 (Appendix F.5).
- Wendy Boes Botanical Consultant. *Centennial Industrial Site CNPS Ranked Plants and Special Status Plant Survey Report*. January 2021 (Appendix F.6).

#### **Brunswick Industrial Site and East Bennett Road**

- Greg Matuzak Environmental Consulting LLC. *Brunswick Industrial Site and East Bennett Road Right of Way (ROW) Aquatic Resources Delineation of Waters of the United States and State of California*. October 2020 (Appendix F.7).
- Greg Matuzak Environmental Consulting LLC. *Brunswick Industrial Site and East Bennett Road Right of Way (ROW), Watercourse/Wetlands/Riparian Areas Management Plan*. January 2021 (Appendix F.8).
- Greg Matuzak Environmental Consulting LLC. *Brunswick Industrial Site and East Bennett Road Right of Way (ROW) Biological Resources Assessment*. January 2021 (Appendix F.9).
- Greg Matuzak Environmental Consulting LLC. *Updated Technical Memorandum for the Idaho-Maryland Mine Project – South Fork Creek Discharge Biological Resources Assessment*. January 29, 2021 (Appendix F.10).
- Wendy Boes Botanical Consultant. *Brunswick Mine and East Bennett Road Right of Way Special Status Plant Survey Report*. January 2021 (Appendix F.11).

The above-listed reports reflect the versions of the reports that were updated, as necessary to address the comments included in the third-party independent peer review performed by Madrone Ecological Consulting, Inc. under contract with Raney.<sup>1</sup>

<sup>1</sup> Madrone Ecological Consulting. *Peer Review of the Biological Resources Reports Prepared for the Proposed Idaho-Maryland Mine – Rise Grass Valley Project, City of Grass Valley, Nevada County, California*. July 20, 2020.



#### **4.4.2 EXISTING ENVIRONMENTAL SETTING**

The following sections describe the environmental setting and biological resources occurring in the proposed project region, the Centennial and Brunswick Industrial Sites, and the East Bennett Road Right-of-Way (ROW).

##### **Regional Setting**

The Brunswick Area (defined as the Brunswick Industrial Site and East Bennett Road ROW) is located in Nevada County, CA in the northern-central Sierra Nevada foothills. The Sierra Nevada foothills lie between the western edge of the Sierra Nevada and the eastern border of the Central Valley. The foothills form a belt 10 to 30 miles wide that ranges from 500 to 5,000 feet in elevation in a series of northwest to north-northwest aligned ridges that decline in elevation from northeast to southwest. Many rapidly flowing rivers and streams run westerly in deeply incised canyons with bedrock channels to the Central Valley and eventually to the Pacific Ocean. Alluvial fans, floodplains, and terraces are not extensive; and all but the largest streams are generally dry during the summer. Dominant vegetation communities include grasslands, oak woodlands, and chaparral.

##### **General Characterization of Sites**

###### **Centennial Industrial Site**

As discussed in Section 1.3, “Approach To Centennial Industrial Site Baseline,” of this EIR, for the purposes of this biological resources analysis, the environmental baseline for the Centennial Industrial Site has been adjusted to be consistent with anticipated site conditions at the completion of the separate Centennial Industrial Site Clean-up Project.

It is estimated that approximately half of the Centennial Industrial Site will consist of graded and revegetated areas under the post-remediation condition. An engineered fill pad would be located along the eastern portion of the site. The remaining areas will consist of varying topography covered with natural vegetation communities and a limited amount of aquatic resources, the primary feature of which is Wolf Creek. Wolf Creek is a perennial feature that runs along the northern portion of the Centennial Industrial Site.

###### **Brunswick Industrial Site**

The approximately 119-acre Brunswick Industrial Site is characterized by both natural and disturbed areas. Disturbed areas are generally a result of prior mining and lumber mill practices, public access, and ongoing management for many years. Within the Brunswick Industrial Site, the dumping of soils, landscape materials, and other miscellaneous items has also occurred for many years. A large section of the Brunswick Industrial Site located in the eastern areas along Brunswick Road would be characterized as disturbed and/or developed given the amount of pavement and impervious surfaces in those areas, as well as the remaining infrastructure related to prior mining and mill operations. Areas not subject to this regular type of previous disturbance are dominated by native habitat and, therefore, are also the baseline condition within the Brunswick Industrial Site.

The Brunswick Area is located in an area containing South Fork Wolf Creek, a perennial stream. Several intermittent and ephemeral streams connect directly to South Fork Wolf Creek within the Brunswick Industrial Site. South Fork Wolf Creek also flows to the south of the East Bennett Road ROW within the Brunswick Area. South Fork Wolf Creek contains associated riparian woodland and scrub and large tracks of wet meadow wetlands dominant in the northwestern section of the Brunswick Industrial Site.



South Fork Wolf Creek begins at a 48-inch culvert fed by surface drainage and road runoff from both the east and west sides of Brunswick Road, which crosses Brunswick Road through the culvert within the Brunswick Industrial Site. The culvert is located south of a large manmade clay-lined pond and flows northwest across the Brunswick Area. The 48-inch diameter culvert is approximately 1,600 feet long (Regional Water Quality Control Board [RWQCB] Order No. 88-185, December 18th, 1990). Additionally, perennial surface drainage from the west side of Brunswick Road drains north to the 48-inch culvert inlet.

The Brunswick Industrial Site elevation ranges from approximately 2,675 to 2,950 feet above mean sea level (msl).

### **East Bennett Road ROW**

The approximately 10-acre East Bennett Road ROW contains a developed and paved public road and ROW that has been used for decades. In addition, the shoulders of East Bennett Road that are included as part of the East Bennett Road ROW are also developed given the grading and fill material associated with the development of the road.

### **Vegetation Communities**

This section will describe the vegetation community types within the Centennial and Brunswick Industrial Sites and the East Bennett Road ROW. Consistent with the approach taken in the Greg Matuzak Environmental Biological Resources Assessments, the acreages for the Brunswick Industrial Site and East Bennett Road ROW are addressed in the same section.

### **Centennial Industrial Site**

Vegetation communities within the Centennial Site include the following vegetation community types as described below, as shown in Figure 4.4-1.

The acreage of each vegetation community type at the Centennial Site is a good-faith estimate because it cannot be precisely established for the baseline condition given that the baseline has been adjusted to account for the separate remediation efforts that will be conducted under the California Department of Toxic Substances Control (DTSC) oversight pursuant to the Remedial Action Plan (RAP) prepared for DTSC approval. The vegetation community acreage estimates included in this analysis are conservative in the event that minor changes to the RAP are made prior to final approval by DTSC. DTSC, as the CEQA lead agency for approval of the RAP and its associated CEQA document, will separately require the applicant to mitigate impacts to sensitive habitats and species resulting from remediation activities.

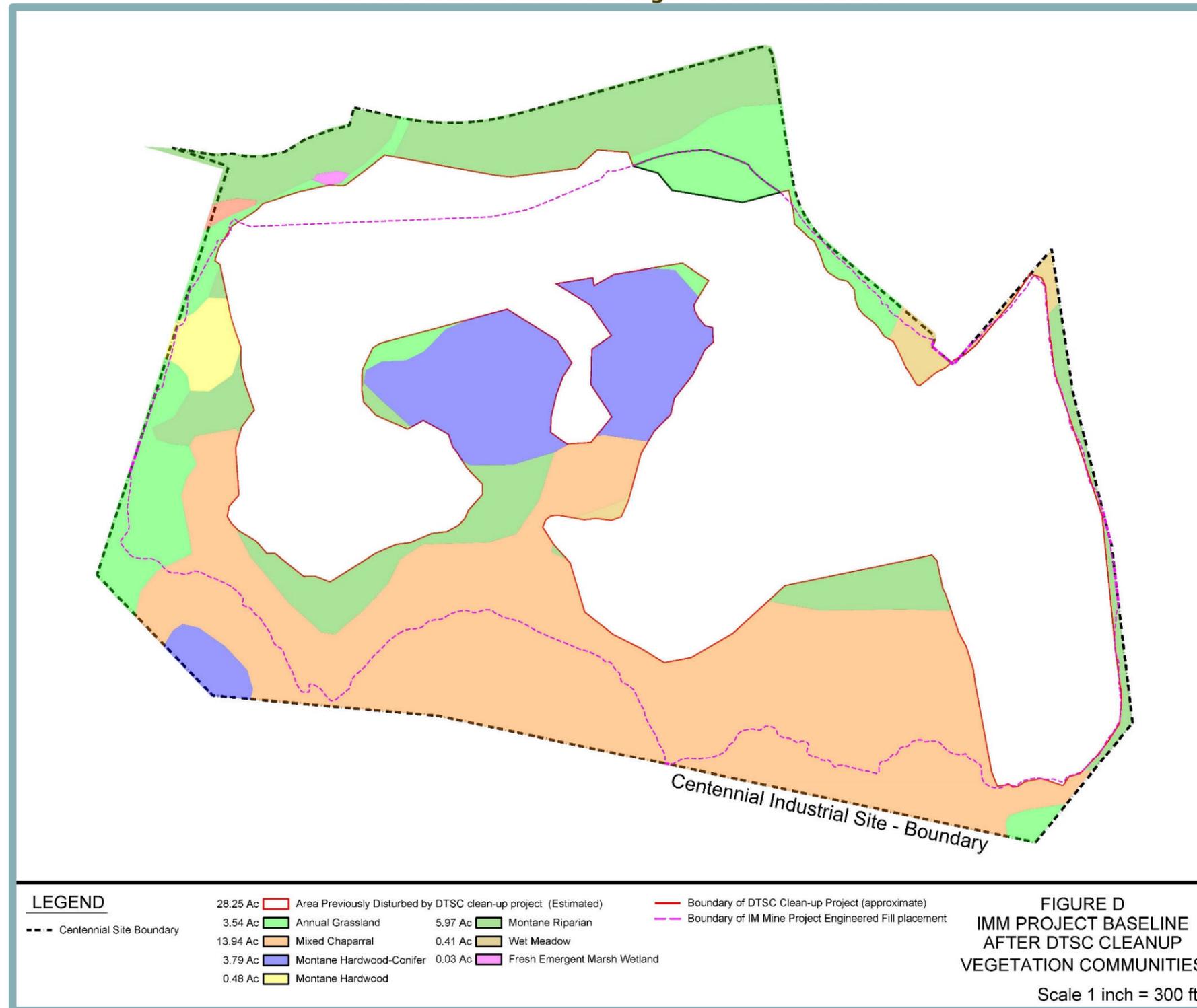
Approximate vegetation community acreages for the adjusted baseline condition of this EIR (i.e., post-remediation) are included below in Table 4.4-1.

### **Graded/Remediated Areas**

The areas identified for remediation within the RAP comprise approximately 28.25 acres, or roughly half of the Centennial Industrial Site. The excavation areas would be backfilled and regraded with clean fill to promote drainage, and erosion controls will be installed. The engineered fill pad along the eastern portion of the site would be graded so that runoff would drain away from the fill slope into surface and subsurface drainage controls. Following completion of excavation, stabilization, and placement activities, the disturbed areas would be hydroseeded or broadcast seeded with an erosion-control native seed mix to reduce erosion and maintain fill slope stability.



**Figure 4.4-1**  
**Centennial Industrial Site Vegetation Communities**



Source: Greg Matuzak Environmental Consulting, 2021.



**Table 4.4-1  
 Centennial Industrial Site Baseline Conditions Vegetation  
 Communities and Acreages (Post-Remediation Baseline)**

<b>Vegetation Community</b>	<b>Acres</b>
Graded/Remediated Areas	28.25
Montane Hardwood-Conifer	3.79
Montane Hardwood	0.48
Wolf Creek and Montane Riparian	5.97
Mixed Chaparral	13.94
Annual Grassland	3.54
Freshwater Emergent Marsh Wetland	0.03
Wet Meadow	0.41
<b>Total</b>	<b>Approximately 56 acres</b>

*Source: Greg Matuzak Environmental Consulting LLC, 2021.*

### Montane Hardwood

Montane hardwood habitat is identified within the Centennial Industrial Site in a small, localized stand along the western boundary. Montane hardwood is characterized by stands of an overstory of California black oak and occasionally canyon live oak (*Quercus chrysolepis*). There is often homogeneity in the canopy structure, and canopy closure is variable between seasons as the dominant overstories species is deciduous, ranging from 5-45 percent. Due to the prior disturbance, there is abundant Himalayan blackberry (*Rubus armenicus*) in the understory along with other nonnatives including bristly dogtail (*Cynosurus echinatus*) and hedgenettle (*Torilis arvensis*).

### Montane Hardwood-Conifer

Montane hardwood-conifer habitat in the Sierra Nevada occurs at elevations between 1,000 and 4,000 feet above msl and is comprised of a mosaic of hardwoods and conifers. The Centennial Industrial Site is likely a midpoint on the gradient between hardwood forest and conifer forest containing both hardwood and conifer tree species, often in a mosaic pattern with small pure stands of conifers interspersed with small stands of hardwoods. Species associated with montane hardwood-conifer include ponderosa pine, California black oak, canyon live oak, madrone and Douglas fir.

### Mixed Chaparral

Mixed chaparral is identified within the Centennial Industrial Site. Mixed chaparral is primarily associated with the gabbro soils of the Secca and Dubekella complexes that are known to occur within the southwestern section of the site. In the gabbro, this vegetation type is relatively intact and is characterized by whiteleaf manzanita, buck brush (*Ceanothus cuneatus*), Oregon white oak (*Quercus garryana* var. *semota*), chaparral pea (*Pickeringia montana*), and occasionally scattered foothill pine. McNab cypress (*Hesperocyparis macnabiana*) is occasional in the southwestern portions of the Centennial Industrial Site. With the exception of occasional natural and manmade openings within this habitat type, mixed chaparral forms almost continuous stands.

### Annual Grassland

Annual grasslands are open vegetation types that are dominated by annual plant species, often nonnative. These species can occur within the understory of other vegetation types like oak woodlands, but where annual grasslands are mapped there is little to no overstory or shrub cover.



This vegetation type is common within the Centennial Industrial Site where there has been prior disturbance and little to no water source other than rainfall. The fall rainfall will spark germination and plants will grow through the cool months and in spring will grow rapidly and flower, fruit and senesce. Common to the environmental setting of this habitat type are yellow star thistle (*Centaurea solstitialis*), garden burnett (*Poterium sanguisorba*), soft chess (*Bromus hordeaceus*), bisnaga (*Ammi visnaga*), and patches of Himalayan blackberry.

### Montane Riparian

A structural gradient generally occurs from neighboring vegetation into montane riparian, resulting in oaks or pines grading in with the more riparian species. The montane riparian vegetation along both sides of the main stem of Wolf Creek is dominated by white alder (*Alnus rhombifolia*) with other overstory species from adjacent vegetation types, including California black oak, pine and Douglas fir. The understory of montane riparian along the stream is dominated by Himalayan blackberry.

### Wet Meadow

Wet meadows generally contain a single vegetation stratum and are generally dominated by forbs and graminoids. Shrub and trees are sometimes present but generally make up a small portion of this vegetation type. This is typically a diverse plant community driven by hydrologic influences. The wet meadows in the Centennial Industrial Site are typically created where extreme disturbance has occurred in the past or the presence of placer diggings. These wet meadows are characterized by bentgrass (*Agrostis*) and various rush (*Juncus*) species.

### Freshwater Emergent Marsh Wetlands

Freshwater emergent marsh wetlands are characterized by hydrophyllic plants and generally standing water. All emergent wetlands have soils that are saturated to the extent that the soils are always anaerobic. There is a limited amount of fresh emergent wetlands identified within the Centennial Industrial Site. This habitat type within the Centennial Industrial Site is dominated by cattails (*Typha* spp.), arroyo willow, and pacific rush (*Juncus effuses* ssp. *pacificus*).

## **Brunswick Industrial Site and East Bennett Road ROW**

Vegetation community types within the Brunswick Area are described below, identified in Table 4.4-2 and illustrated in Figure 4.4-2.<sup>2</sup>

### Developed

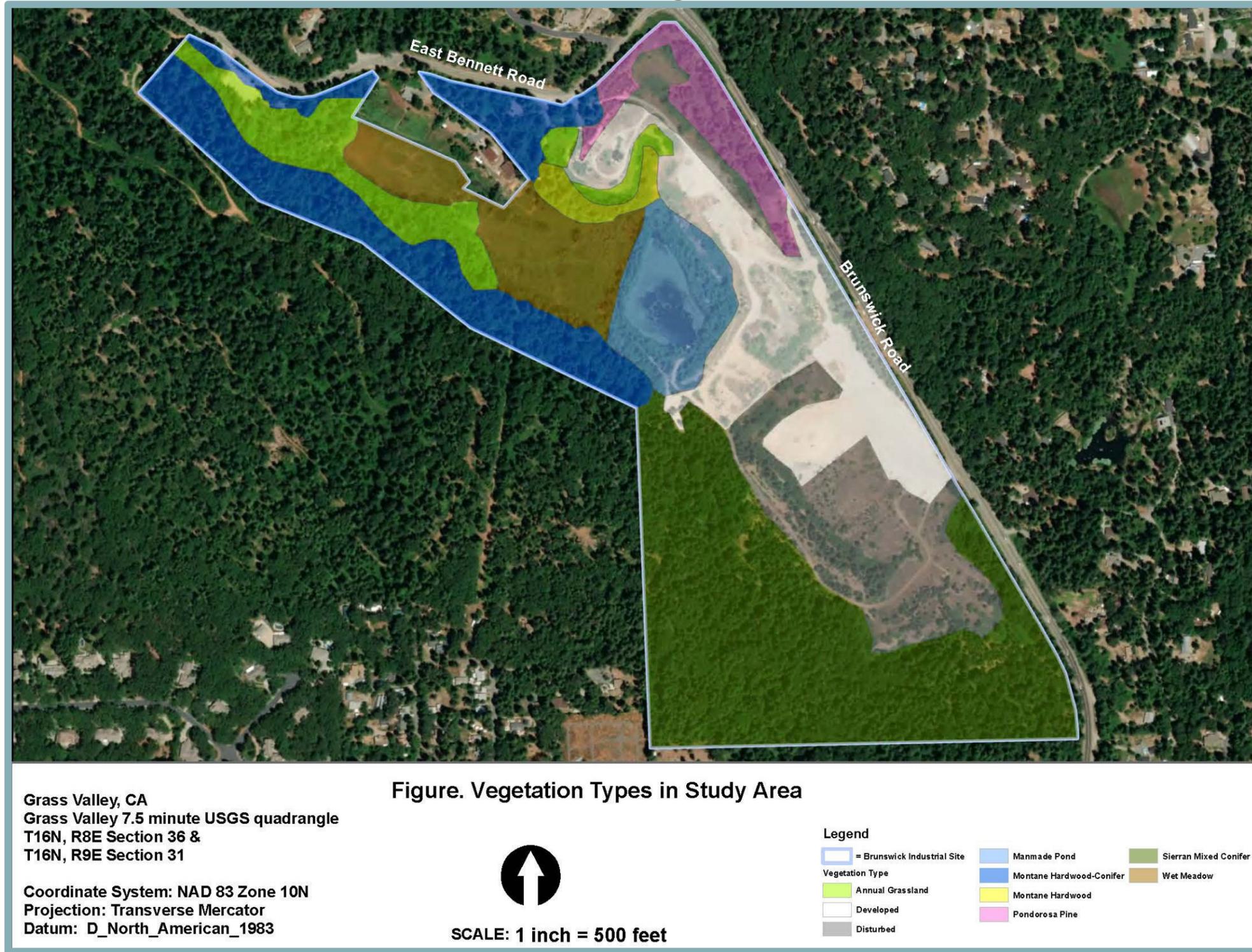
The entirety of the East Bennett Road ROW is considered developed given it contains pavement and shoulders that include fill material used as part of the construction of the road. In addition, the area connecting the northwestern end of East Bennett Road with the Centennial Industrial Site is also considered developed given the paved and gravel access as well as the prior industrial uses within that area.

---

<sup>2</sup> Figure 4.4-2 does not include East Bennett Road ROW because the only habitat within that portion of the study area is Developed.



**Figure 4.4-2  
 Brunswick Industrial Site Vegetation Communities**



Source: Greg Matuzak Environmental Consulting, 2021.



**Table 4.4-2  
 Brunswick Area Existing Conditions Vegetation Communities and  
 Acreages**

<b>Vegetation Community</b>	<b>Acres</b>
Montane Hardwood-Conifer	15.63
Montane Hardwood	1.65
Ponderosa Pine	4.85
Sierran Mixed Conifer	35.98
Annual Grassland	8.15
Manmade Pond	7.28
Wet Meadow	9.36
Developed	29.49
Disturbed	16.84
<b>Total</b>	<b>129.23</b>

*Source: Greg Matuzak Environmental Consulting LLC, 2021.*

Within the Brunswick Industrial Site, a large portion of the eastern section of the site is mapped as developed as it contains asphalt, gravel, and pavement. The areas within the Brunswick Industrial Site mapped as developed contain little to no vegetation and the sparse vegetation present is considered ruderal and dominated by non-native and mostly invasive grassland species. The central area of the mapped developed section of the Brunswick Industrial Site contains artificial depressions that include some wetland and riparian species from the ponding of water that occurs within those artificial topographical low areas.

### Disturbed

A small area within the northeast corner of the Brunswick Industrial Site and a large area within the southern/southeastern section of the site is mapped as disturbed. Those areas contain a mix of fill material, asphalt, and gravel that have created a mix of non-native ruderal grassland vegetation and areas of barren ground. The southern disturbed area also contains some artificial depressions from prior uses that include some wetland and riparian species given the ponding of water that occurs within those artificial topographical low areas, but those areas are dominated mostly by invasive Himalayan blackberry shrubs (*Rubus armenicus*).

### Montane Hardwood

Montane hardwood habitat is identified on the Brunswick Industrial Site within and adjacent to a drainage area within the northeastern section of the site. Montane hardwood is characterized here by stands of an overstory of native oak trees mixed with some riparian species (*Salix* sp.). There is often homogeneity in the canopy structure, and canopy closure is variable between seasons as the dominant overstories species is deciduous, ranging from 5-45 percent. Due to prior disturbance, there is abundant Himalayan blackberry in the understory along with other nonnatives including bristly dogtail (*Cynosurus echinatus*) and hedgenettle (*Torilis arvensis*).

### Montane Hardwood-Conifer

Montane hardwood-conifer habitat in the Sierra Nevada occurs at elevations between 1,000 and 4,000 feet above msl and is comprised of a mosaic of hardwoods and conifers. The Brunswick Industrial Site is likely a midpoint on the gradient between hardwood forest and conifer forest containing both hardwood and conifer tree species, often in a mosaic pattern with small pure stands of conifers interspersed with small stands of hardwoods. Species associated with montane hardwood-conifer include ponderosa pine, California black oak, canyon live oak, madrone and



Douglas fir. This vegetation community has been mapped within the northwestern section of the Brunswick Industrial Site along the South Fork Wolf Creek corridor and in two smaller areas along the southern side of East Bennett Road.

### Annual Grassland

Annual grasslands are open vegetation types that are dominated by annual plant species, often nonnative. These species can occur within the understory of other vegetation types like oak woodlands, but where annual grasslands are mapped there is little to no overstory or shrub cover. This vegetation type is common within the northwestern section of the Brunswick Industrial Site where there has been prior disturbance and little to no water source other than rainfall. The fall rainfall will spark germination and plants will grow through the cool months and in spring will grow rapidly and flower, fruit and senesce. Common to the environmental setting of this habitat type are yellow star thistle (*Centaurea solstitialis*), garden burnett (*Poterium sanguisorba*), soft chess (*Bromus hordeaceus*), bisnaga (*Ammi visnaga*), and patches of Himalayan blackberry.

### Ponderosa Pine

Ponderosa pine (*Pinus ponderosa*) habitat is found within the northeastern corner of the Brunswick Industrial Site. The structure and composition of the ponderosa pine forest varies widely according to the amount of soil moisture available during the summer. The canopy closure tends to be low in the Brunswick Area ranging from 5-35 percent. In the Brunswick Industrial Site, California black oak (*Quercus kelloggii*), madrone (*Arbutus menziesii*), foothill pine (*Pinus sabieniana*), and incense cedar (*Calocedrus decurrens*) are common associates of ponderosa pine. A variety of understory shrub species occur throughout the ponderosa pine forest. In the Brunswick Areas the more common understory shrubs are white leaf manzanita (*Arctostaphylos viscida* ssp. *viscida*), poison oak (*Toxicodendron diversilobum*), and honeysuckle (*Lonicera hispidula*). These understory shrubs often form dense, impenetrable stands, especially on open rocky slopes, and in areas of recent disturbance.

### Sierran Mixed Conifer

The Sierran mixed conifer forest is generally a multi strata forest dominated by conifers with hardwood as a component of the understory. This vegetation type is found along the hillslope on the western and southern portions of the Brunswick Industrial Site. The forest here is more mesic, occurring on mostly east facing slopes. The forest is dominated by Douglas fir, incense cedar, and black oak, has high canopy closure, and often has a midstory strata of madrone, hazelnut (*Corylus cornuta* ssp. *californica*) and younger black oak. The understory has high litter cover and Himalayan blackberry and honeysuckle area common in the understory.

### Montane Riparian

A structural gradient generally occurs from neighboring vegetation into montane riparian, resulting in oaks or pines grading in with the more riparian species. This vegetation type is characterized by two different ecological conditions, (1) placer diggings where small depressions within the disturbed and developed mapped areas of the Brunswick Industrial Site pond water long enough for riparian species such as willows (*Salix* sp.) to occur, and (2) along a narrow stretch of the South Fork Wolf Creek.

The montane riparian in the placer diggings and areas created from earth movement are characterized by black cottonwood (*Populus tremuloides*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), and occasionally ponderosa pine in the overstory. Dense thickets are



often resultant with Himalayan blackberry and Baltic rush (*Juncus balticus* ssp. *atar*) in the herbaceous layer.

The montane riparian vegetation along both sides of the South Fork Wolf Creek is dominated by white alder (*Alnus rhombifolia*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis*), with other overstory species from adjacent vegetation types, including California black oak, pine and Douglas fir. The understory of montane riparian along the stream is dominated by Himalayan blackberry. This vegetation type forms a very narrow band along both sides of the creek between the mapped montane conifer-hardwood and annual grassland and wet meadow vegetation communities.

### Wet Meadow

Wet meadows generally contain a single vegetation stratum and are generally dominated by forbs and graminoids. Shrub and trees are sometimes present but generally make up a small portion of this vegetation type. This is typically a diverse plant community driven by hydrologic influences. The wet meadows in the northwestern section of the Brunswick Industrial Site are within areas mapped as alluvial, clayey soil types. These wet meadows are characterized by bentgrass (*Agrostis*), various rush (*Juncus*) species, and common velvet grass (*Holcus lanatus*).

A very large wet meadow (WM-4) exists within the Brunswick Area adjacent to South Fork Wolf Creek that is likely a natural meadow and is dominated by reed canarygrass (*Phalaris arundinacea*). The other wetland meadows are much smaller in size and are located in small depressional areas along disturbed roadways within the eastern and northern sections of the Brunswick Area.

### Freshwater Emergent Marsh Wetlands

Freshwater emergent marsh wetlands are characterized by hydrophyllic plants and generally standing water. All emergent wetlands have soils that are saturated to the extent that the soils are always anaerobic. Freshwater emergent marsh wetlands are mapped in small depressional areas mostly within developed or disturbed areas of the Brunswick Industrial Site; these are not historic features but appear to have been created by prior disturbance coupled with the presence of some water source. Within the Brunswick Industrial Site, this habitat type is dominated by arroyo willow, red willow, and pacific rush (*Juncus effuses* ssp. *pacificus*).

### **Aquatic Resources**

This section describes and identifies the aquatic resources present within the Centennial and Brunswick Industrial Sites, and the East Bennett Road ROW.

#### **Centennial Industrial Site**

Similar to vegetation community types, the exact acreages of each aquatic resource type cannot be precisely established for the baseline condition given that the baseline has been adjusted to account for the planned remediation efforts that will be conducted under DTSC oversight pursuant to the RAP that has been prepared and publicly reviewed for DTSC approval. Final disturbance acreages to aquatic resources as a result of remediation activities may vary from current estimates. As a result, the disturbance acreages identified herein are conservatively estimated. DTSC, as the CEQA lead agency for approval of the RAP and its associated CEQA document, will separately require the applicant to mitigate impacts to aquatic resources.



Approximate aquatic resources acreages and descriptions for the adjusted baseline condition of this EIR (i.e., post-remediation), are as follows, based upon the RAP currently under review by DTSC:

- 0.377-acre of perennial stream comprised of Wolf Creek;
- 0.033-acre of ephemeral stream comprised of small features in southwestern corner of the Site; and
- 0.05-acre of wetlands within northwestern and southeastern corners of the Site.

The above-listed aquatic features are shown in Figure 4.4-3.

### **Brunswick Industrial Site and East Bennett Road ROW**

Aquatic resources within the Brunswick Industrial Site and East Bennett Road ROW are described below and illustrated in Figure 4.4-4 and Figure 4.4-5.

#### Brunswick Industrial Site

South Fork Wolf Creek, a perennial stream, emerges from a 48-inch culvert within the Brunswick Industrial Site south of the large, on-site man-made clay lined pond (PD-1) and flows northwest across the Brunswick Area. South Fork Wolf Creek daylights from an existing 48-inch diameter culvert, which is approximately 1,600 feet long (RWQCB Order No. 88-185, December 18<sup>th</sup>, 1990). The 48-inch culvert appears to be fed by surface drainage and a potential perennial spring on the east side of Brunswick Road, which crosses Brunswick Road through a culvert and creates a perennial drainage (P-1) that flows north along the western side of Brunswick Road before entering the 48-inch culvert inlet that crosses the Brunswick Industrial Site and empties south of the clay lined pond, which is the beginning of South Fork Wolf Creek. The 48-inch culvert was flowing with water in December 2018, as well as during the July and August 2019 site surveys.

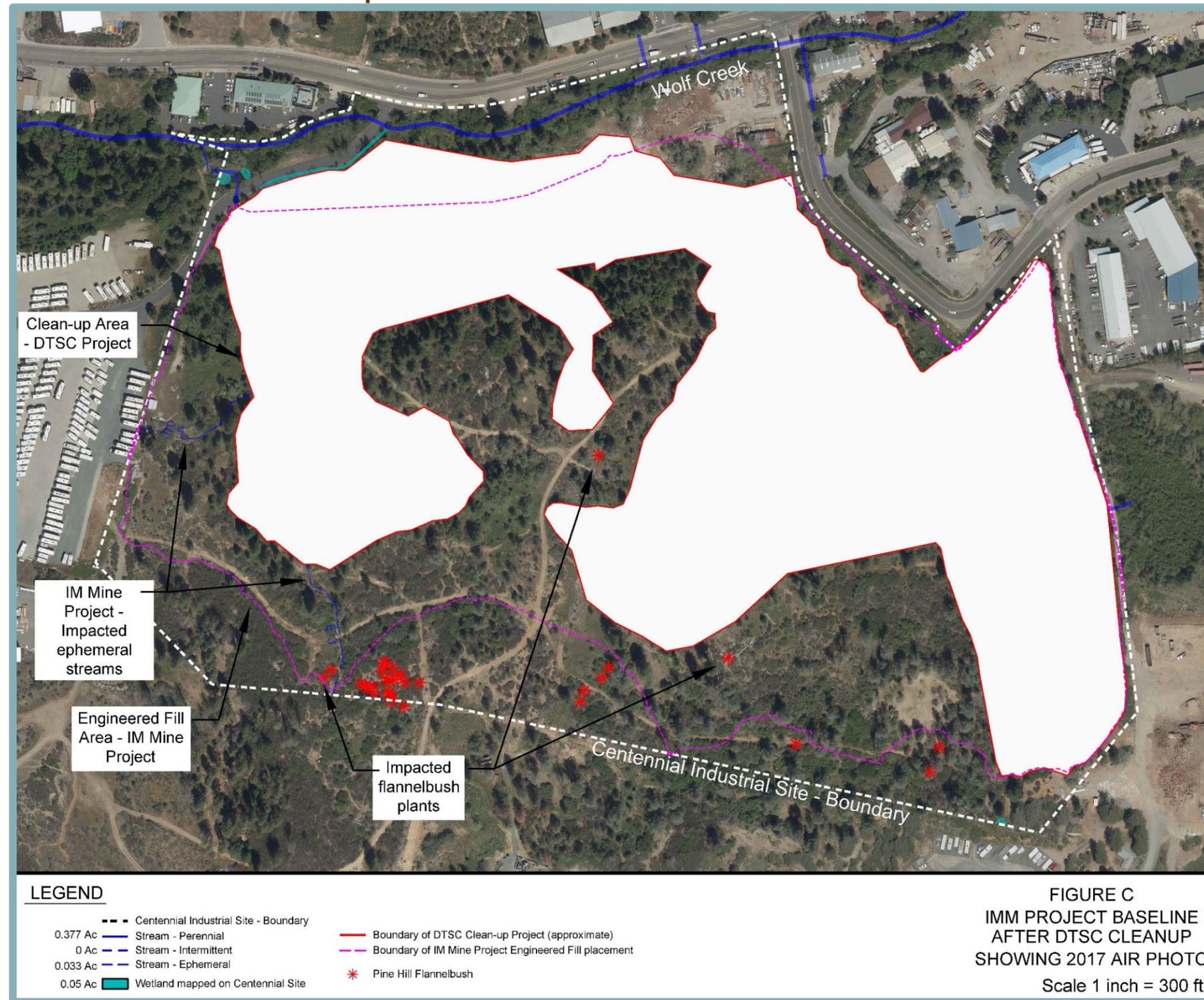
Drainage patterns within the western section of the Brunswick Industrial Site run from the hills to the west and drain east and northeast, eventually ponding in the southern section of the Brunswick Industrial Site or connecting with the South Fork Wolf Creek. Within the eastern section of Brunswick Industrial Site, drainage originates from off the property to the east and northeast. Areas to the east and northeast drain west and southwest, mostly entering the Brunswick Industrial Site through four intermittent streams, sheet flow, and the 48-inch culvert that connects the western edge of Brunswick Road with South Fork Wolf Creek. The wetlands in the eastern portion of the Brunswick Industrial Site drain to the northwest through the existing intermittent streams or sheet flow. Most of the wetlands within the eastern and southern sections of the Brunswick Industrial Site are due to disturbance in those areas where ponding of sheet flow and drainage occurs.

The following drainage features were identified within the Brunswick Industrial Site, as shown on Figure 4.4-4:

- Perennial drainage (P-1) runs along the western edge of Brunswick Road in a northerly direction before entering a culvert that crosses through the central section of the Brunswick Industrial Site before exiting the large culvert and creating South Fork Wolf Creek. The perennial drainage appears to cross Brunswick Road from the east and may be fed by a perennial spring coming from the hillsides east of the property before entering the perennial drainage along the western side of Brunswick Road, adjacent to the property.



**Figure 4.4-3  
 Aquatic Resources on Centennial Industrial Site**



Source: Greg Matuzak Environmental Consulting, 2021.



**Figure 4.4-4  
 Aquatic Resources on the Brunswick Industrial Site**



Source: Greg Matuzak Environmental Consulting, 2021



**Figure 4.4-5  
Aquatic Resources along East Bennet Road ROW**



Source: Greg Matuzak Environmental Consulting, 2021.



- South Fork Wolf Creek, a perennial stream, runs along the western and northwestern sections of the Brunswick Area and originates from the outlet of a 48-inch diameter culvert.
- A man-made clay lined pond (PD-1) associated with previous saw milling operations does not have a direct outlet or connection to the South Fork Wolf Creek. PD-1 receives its water mainly from surface runoff and precipitation. PD-1 was used previously as a recycling pond for site runoff containment and log watering during mill operations. PD-1 is non-jurisdictional pursuant to federal Clean Water Act (CWA) regulations given it receives water from sheet flow within the Brunswick Industrial Site and does not connect directly or indirectly with South Fork Wolf Creek or any other “waters of the U.S.”.
- A small, unnamed ephemeral drainage (E-1) flows into the Brunswick Industrial Site from the surrounding hills to the west of South Fork Wolf Creek. Another small, unnamed ephemeral drainage (E-2) connects to the culvert outlet of South Fork Wolf Creek.
- Four small intermittent streams flow into the northeastern section of the Brunswick Industrial Site from offsite, while a single small intermittent stream enters South Fork Wolf Creek from the west just downstream from where the perennial stream daylight.
- Wet meadow wetland (WM-4) is located within a large area in the northwestern section of the Brunswick Industrial Site and dominates the non-woodland habitat within that area.

Each of the mapped wetlands and stream features within the Brunswick Industrial Site have a connection to the South Fork Wolf Creek.

### East Bennett Road ROW

In general, South Fork Wolf Creek runs parallel to and on the south side of East Bennett Road. Drainage along the East Bennett Road ROW generally flows from the north to the south with several culverts and storm drains crossing the ROW. Roadside drainages have formed which convey some water along the edges of the ROW; however, the roadside drainages do not contain a defined bed and bank or ordinary high water mark (OHWM). Several roadside drainages were observed; however, these drainages do not connect to South Fork Wolf Creek. Other drainage features were located outside of the ROW, including a large wet area located on the northern side of the ROW near the Brunswick Industrial Site. Therefore, along the ROW no jurisdictional drainages were mapped.

A roadside wetland was delineated along the south side of the East Bennett Road ROW near the Centennial Industrial Site and was mapped as a potentially regulated wetland (see Figure 4.4-5).

### Aquatic Resources Delineation Results

A total of 9.60 acres of “waters of the U.S.”, including wetlands, and “waters of the State of California”, were identified and mapped within the Brunswick Area. The 9.60 acres of wetland-waters include 8.72 acres of mapped wetlands and 0.88-acre of mapped “other waters of the U.S.,” including South Fork Wolf Creek, as well as several intermittent and ephemeral streams.

The 8.72 acres of wetlands identified and mapped within the Brunswick Industrial Site include:

- 6.97 acres of wet meadow wetlands (4 features mapped);
- 0.50-acre of freshwater emergent marsh wetlands (6 features mapped);
- 1.16 acres of riparian wetlands (3 features mapped); and
- 0.09-acre of roadside wetlands along the East Bennett Road ROW (1 feature mapped).



Table 4.4-3 includes the list of wetlands delineated and mapped within the Brunswick Area, including the wetland type, wetland identification number which corresponds to the delineation exhibits shown in Figure 4.4-4 and Figure 4.4-5.

<b>Table 4.4-3 Wetlands Delineated Within Brunswick Industrial Site and along the East Bennett Road ROW</b>			
<b>No.</b>	<b>Wetland Type</b>	<b>Wetland ID Number</b>	<b>Size (Acres)</b>
1	Meadow wetland	WM-1	0.02
2	Meadow wetland	WM-2	0.01
3	Meadow wetland	WM-3	0.01
4	Meadow wetland	WM-4	6.93
5	Marsh	MA-1	0.1
6	Marsh	MA-2	0.3
7	Marsh	MA-3	0.02
8	Marsh	MA-4	0.007
9	Marsh	MA-5	0.05
10	Marsh	MA-6	0.02
11	Riparian	RI-1	0.03
12	Riparian	RI-2	0.76
13	Riparian	RI-3	0.37
14	Roadside Wetland	RW-1	0.09
<b>Total</b>			<b>8.72</b>
<i>Source: Greg Matuzak Environmental Consulting, 2021.</i>			

The 0.88-acre (4,392 linear feet) of streams identified and mapped within the Brunswick Industrial Site includes:

- One perennial stream, the South Fork Wolf Creek, totaling 0.59-acre, over 2,563 linear feet;
- One perennial drainage along the western edge of Brunswick Road, totaling 0.16-acre, over 701 linear feet;
- Five intermittent streams totaling 0.07-acre, over 745 linear feet; and
- Two ephemeral streams that only flow during and immediately after precipitation events totaling 0.06-acre, over 383 linear feet.

Table 4.4-4 includes the list of streams delineated and mapped within the Brunswick Area, including the stream type, stream identification number which corresponds to the delineation exhibits shown in Figure 4.4-4 and Figure 4.4-5.



**Table 4.4-4  
 Streams Delineated within Brunswick Industrial Site**

No.	Stream Type	Wetland ID Number	Size (Acres)
1	Perennial Stream	South Fork Wolf Creek – 1	0.59
2	Perennial Drainage	P – 1	0.16
3	Intermittent Stream	I – 1	0.05
4	Intermittent Stream	I – 2	0.002
5	Intermittent Stream	I – 3	0.006
6	Intermittent Stream	I – 4	0.003
7	Intermittent Stream	I – 5	0.004
8	Ephemeral Stream	E – 1	0.01
9	Ephemeral Stream	E – 2	0.05
<b>Total</b>			<b>0.88</b>
<i>Source: Greg Matuzak Environmental Consulting, 2021.</i>			

### **Special-Status Species**

Special-status species are species that have been listed as “threatened” or “endangered” under the Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or are of special concern to federal resource agencies, the State, or private conservation organizations. A species may be considered special-status due to declining populations, vulnerability to habitat change, or restricted distributions. A description of the criteria and laws pertaining to special-status classifications is described in the Regulatory Context.

Special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by California Department of Fish and Wildlife (CDFW);
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the Western Bat Working Group; and
- plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS) and CDFW [California Rare Plant Rank (CRPR) 1 and 2]:
  - CRPR 1A: Plants presumed extinct.
  - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
  - CRPR 2A: Plants extirpated in California, but common elsewhere.
  - CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.

Several species of plants and animals within the State of California have low populations, limited distributions, or both. Such species may be considered “rare” and are vulnerable to extirpation as the State’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described below, State and federal laws have provided the CDFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to the State. A number of native plants and animals have been formally designated as threatened or endangered under State and federal endangered species legislation. Others have been designated as “candidates” for such listing. Still others have been designated as



“species of special concern” by the CDFW. In addition, the CNPS has developed a set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as “special-status species.”

To determine potentially occurring special-status species, the standard databases from the USFWS, CDFW (the California Natural Diversity Database [CNDDDB]),<sup>3</sup> and the CNPS were queried and reviewed. The searches provided a comprehensive list of regionally-occurring special-status species and were used to determine which species have some potential to occur within or near the project site. In addition to the database searches, field surveys were conducted of the project sites by Greg Matuzak Environmental Consulting (see Method of Analysis section for a more detailed discussion of surveys).

### Special-Status Plants

Based on the results of the searches, 23 CNPS ranked plants and special-status plant species were identified as occurring within the nine Quad search. Ten of these plant species were dismissed from further consideration due to a lack of suitable habitat in the analysis area, the Centennial and Brunswick Sites being substantially outside of the known range and distribution for the plant species, or both. The plant species dropped from further consideration include the following:

- Jepson’s onion (*Allium jepsonii*)
- Mosquin’s clarkia (*Clarkia mosquinii*)
- Ahart’s buckwheat (*Eriogonum umbellatum* var. *ahartii*)
- Jepson’s coyote thistle (*Eryngium jepsonii*)
- Minute pocket moss (*Fissidens pauperculus*)
- Yosemite tarplant (*Jensia yosemitana*)
- Inundated bog club-moss (*Lycopodiella inundata*)
- Follett’s monardella (*Monardella follettii*)
- Sticky pyrrocoma (*Pyrrocoma lucida*)
- Oval-leaved viburnum (*Viburnum ellipticum*)

The special-status plant species with at least a low potential to occur within the Centennial Industrial Site and Brunswick Area according to the results of the nine Quad search and CNDDDB 5-mile buffer search are evaluated in Table 4.4-5. As discussed further in the Method of Analysis section of this chapter, the special-status plant species field surveys were conducted at a time when the majority of potentially occurring special-status plant species could be identified if they were present.

The following section uses “Brunswick Area” to describe both the Brunswick Industrial Site and the East Bennett Road ROW.

---

<sup>3</sup> CDFW’s California Natural Diversity Database Biogeographic Information and Observation System (BIOS) 9 Quad search included the Grass Valley, Nevada City, North Bloomfield, Chicago Park, Colfax, Rough and Ready, Lake Combie, French Corral and Wolf 7.5-minute USGS quadrangles (CDFW, 2019).



**Table 4.4-5  
Special-Status Plant Species with Potential to Occur in the Vicinity of the Centennial  
Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Association	Identification Period	Potential for Species/Habitat Presence
	Federal/State/CNPS			
<b>Stebbins' morning-glory</b> <i>Calystegia stebbinsii</i>	FE/CE/1B.2	Gabbroic or serpentinite soils. Openings in chaparral, cismontane woodland, lower montane coniferous forest, from 980-4,330 feet.	Apr-Jul	<b>Centennial Industrial Site</b> <b>Low.</b> Potential for occurrence in openings and under chaparral in gabbroic soils. Known 4 miles to east on gabbroic chaparral on Oceola Ridge. Was not observed during targeted 2019 protocol level field surveys.  <b>Brunswick Area</b> <b>Low.</b> Known 4 miles to east on gabbroic chaparral on Oceola Ridge. Gabbroic soils not present in study area. Was not observed during 2019 protocol level field surveys.
<b>Sierra arching sedge</b> <i>Carex cyrtostachya</i>	--/--/1B.2	Lower montane mesic coniferous forest, meadows and seeps, marshes and swamps, Riparian forests (margin), from 2,000- 4,460 feet.	May-Aug	<b>Centennial Industrial Site and Brunswick Area</b> <b>Low.</b> Potential for occurrence in mesic forests. Within the known distributional and elevational range for this species, though nearest known occurrence 16 miles to the north. This species was recently described so the full extent of its range and distribution are unlikely yet known. Marginal habitat present in study area, and it was not observed during 2019 field surveys.
<b>Chaparral sedge</b> <i>Carex xerophila</i>	--/--/1B.2	Chaparral, cismontane woodland, lower montane coniferous forests on serpentinite and gabbroic substrates, from 1,400 – 2,525 feet.	Mar-Jun	<b>Centennial Industrial Site</b> <b>Low.</b> Potential for occurrence in openings and under chaparral in gabbroic soils. Known 4 miles away on Oceola Ridge in gabbroic chaparral. Was not observed during 2019 protocol level field surveys.  <b>Brunswick Area</b> <b>Low.</b> Known 4 miles away on Oceola Ridge in gabbroic chaparral. Gabbroic soils not present in

(Continued on next page)



**Table 4.4-5  
Special-Status Plant Species with Potential to Occur in the Vicinity of the Centennial Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Association	Identification Period	Potential for Species/Habitat Presence
	Federal/State/CNPS			
				study area. Was not observed during 2019 protocol level field surveys.
<b>Red Hills soaproot</b> <i>Chlorogalum grandiflorum</i>	--/--/1B.2	Chaparral, cismontane woodland, lower montane coniferous forests on serpentinite and gabbroic substrates, from 800 – 5,545 feet.	May-Jun	<b>Centennial Industrial Site</b> <b>Low.</b> Potential for occurrence in openings and under chaparral in gabbroic soils. Known over 10 miles south in Bunch Canyon south of Colfax, with no known occurrences to north. Was not observed during 2019 protocol level field surveys. <b>Brunswick Area</b> <b>Low.</b> Known over 10 miles south in Bunch Canyon south of Colfax, with no known occurrences to north. Gabbroic soils not present in study area. Was not observed during 2019 protocol level field surveys.
<b>Pine Hill flannelbush</b> <i>Fremontodendron decumbens</i>	FE/CR/1B.2	Chaparral, cismontane woodland on serpentinite and gabbroic substrates, from 1,390 – 2,495 feet.	Apr-July	<b>Centennial Industrial Site</b> <b>High.</b> Potential for occurrence in openings and under chaparral in gabbroic soils in Idaho Maryland study area. Known from CNDDB Occurrence #14. Protocol level field surveys in 2019 expanded boundaries of known occurrence. <b>Brunswick Area</b> <b>Low.</b> Known from two miles to the north. Gabbroic soils not present in study area. Was not observed during 2019 protocol level field surveys.
<b>Finger rush</b> <i>Juncus digitatus</i>	--/--/1B.1	Seasonal wet areas, cismontane woodland openings, openings in lower montane coniferous	Apr-Jun	<b>Centennial Industrial Site and Brunswick Area</b> <b>Low.</b> Potential for the occurrence in gravelly, seasonally moist openings. Known less than one mile to the north near the intersection of Idaho

(Continued on next page)



**Table 4.4-5  
Special-Status Plant Species with Potential to Occur in the Vicinity of the Centennial  
Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Association	Identification Period	Potential for Species/Habitat Presence
	Federal/State/CNPS			
		forest, xeric vernal pools, from 2,165-2,590 feet.		Maryland and Brunswick. Was not observed during 2019 protocol level field surveys.
<b>Cantelow's lewisia</b> <i>Lewisia cantelovii</i>	--/--/1B.2	Moist, granitic areas in broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest mesic, sometimes serpentinite seeps, from 1,080-4,495 feet.	May-Oct	<b>Centennial Industrial Site and Brunswick Area</b> <b>Low.</b> Potential for occurrence in any rocky outcrops with seeps on the parcel. There are records for this species in the Middle Yuba and South Yuba river canyons within 7 miles of the study area. The preferred habitat for this species in the study area has been disturbed and is of reduced quality. Was not observed during 2019 protocol level field surveys.
<b>Sierra blue grass</b> <i>Poa sierrae</i>	--/--/1B.3	Openings in lower montane coniferous forest, 1,195-4,920 feet.	Apr-Jul	<b>Centennial Industrial Site</b> <b>Low.</b> There is only marginal suitable habitat for this species in the study area, primarily in the ponderosa pine forest, and in the forested areas along Wolf Creek. Known from Steephollow Creek from a collection from 1964. Was not observed during 2019 protocol level field surveys. <b>Brunswick Area</b> <b>Moderate.</b> There is only marginal suitable habitat for this species in the study area, primarily in the Sierran mixed conifer, ponderosa pine forest, and in the forested areas along South Fork of Wolf Creek. Known 7 miles to the east of the study area at Steephollow Creek from a collection from 1964. Was not observed during 2019 protocol level field surveys.
<b>Brownish beaked-rush</b>	--/--/2B.2	Wet areas (marshes, swamps, meadows, and seeps) in montane	Jul-Aug	<b>Centennial Industrial Site</b> <b>Low.</b> Suitable habitat for this species in the perennial marsh wetlands. It is known 3 miles to

(Continued on next page)



**Table 4.4-5  
 Special-Status Plant Species with Potential to Occur in the Vicinity of the Centennial  
 Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Association	Identification Period	Potential for Species/Habitat Presence
	Federal/State/CNPS			
<i>Rhynchospora capitellata</i>		coniferous forest, from 145-6,560 feet.		the west near the Nevada County Fairgrounds from a report in 1973. Was not observed during 2019 protocol level field surveys.  <b>Brunswick Area</b> <b>Moderate.</b> Suitable habitat for this species in the perennial marsh wetlands. It is known 3 miles to the west near the Nevada County Fairgrounds from a report in 1973. Was not observed during 2019 protocol level field surveys.
<b>Scadden Flat checkerbloom</b> <i>Sidalcea stipularis</i>	--/CE/1B.1	Marshes and swamps (montane freshwater), from 2,295-2,395 feet.	Jul-Aug	<b>Centennial Industrial Site</b> <b>Low.</b> Suitable habitat for this species in the perennial marsh wetlands. It is known 3 miles to the west near the Nevada County Fairgrounds from a report in 1973. Was not observed during 2019 protocol level field surveys.  <b>Brunswick Area</b> <b>Moderate.</b> Suitable habitat for this species in the perennial marsh wetlands. It is known 3 miles to the west near the Nevada County Fairgrounds from a report in 1973. Was not observed during 2019 protocol level field surveys.

<sup>1</sup> FE = Federally Endangered  
 CR = State Rare  
 CE = State Endangered  
 -- = no listing.  
 California Native Plant Society Rare Plant Rank (formerly known as CNPS lists)  
 1B = Rank 1B species: rare, threatened, or endangered in California and elsewhere.  
 2B = Rank 2B species: rare, threatened, or endangered in California but more common elsewhere.  
 3 = Rank 3 species are taxonomically problematic and lack the necessary information to assign them to one of the other ranks.  
 4 = Rank 4 plants are of limited distribution or infrequent throughout a broader area in California; should be monitored regularly.

Source: CNPS 2019; CNDDDB 2019; USFWS 2019, and Calflora 2019.



Stebbins' morning glory (*Calystegia stebbinsii*) – CA State and Federally Endangered and CNPS 1B.1

Stebbins' morning glory inhabits chaparral and cismontane woodland. It is found in red clay soils of the pine hill formation on gabbro or serpentine soils in open areas, normally between 980 and 4,330 feet above msl. The species is known from a location approximately 4.5 miles to west of the Brunswick Area on gabbroic chaparral on Oceola Ridge. This species was not identified during field surveys conducted in December 2018 or July and August 2019.

Potential for occurrence of this species in the Centennial Industrial Site and Brunswick Area is considered low given the lack of (Brunswick), or limited nature of (Centennial Industrial Site), openings and mixed chaparral vegetation in gabbroic soils.

Sierra arching sedge (*Carex cyrtostachya*) – CNPS List 1B.2

Sierra arching sedge inhabits lower montane mesic coniferous forest, meadows and seeps, marshes and swamps, riparian forests (margin), from 2,000 to 4,460 feet above msl. The Brunswick Area is within the known distributional and elevational range for this species, though the nearest known occurrence 16 miles to the north. This species was recently described<sup>4</sup> so the full extent of its range and distribution are unlikely yet known. Suitable marginal habitat is present within the mesic forests located in the Centennial and Brunswick Industrial Sites; however, the species was not identified within the Sites during botanical surveys. Therefore, the potential for this species to occur within the Sites is considered low.

Chaparral sedge (*Carex xerophila*) – CNPS List 1B.2

Chaparral sedge inhabits openings within chaparral habitat, cismontane woodland, and lower montane coniferous forests. This species is found in areas containing serpentine and gabbroic microhabitats between 1,400 and 2,525 feet above msl. This species has been identified within approximately four miles of the Centennial Industrial Site and Brunswick Area on Oceola Ridge in gabbroic chaparral. The blooming period for this species is March to June. The surveys were not conducted during the blooming period for this species. This species was not identified during field surveys conducted in December 2018 or July and August 2019 surveys.

Potential for occurrence of this species in the Centennial Industrial Site and Brunswick Area is considered low given the lack of (Brunswick), or limited nature of (Centennial Industrial Site), openings and mixed chaparral vegetation in gabbroic soils.

Red Hills soaproot (*Chlorogalum grandiflorum*) – CNPS List 1B.2

Red Hills soaproot is found in chaparral, cismontane woodland, lower montane coniferous forests on serpentinite and gabbroic substrates, between 800 and 5,545 feet above msl and blooms between May and June. The species was not documented within five miles of the Centennial Industrial Site and Brunswick Area (CNDDDB 2019); however, it is known over 10 miles south in Bunch Canyon south of Colfax, with no known occurrences to north. This species was not identified during field surveys conducted in December 2018 or July and August 2019 surveys; however, the blooming period for this species is May to June. The surveys were not conducted during the blooming period for this species.

<sup>4</sup> A "species description" is a formal description of a newly discovered species.



Potential for occurrence of this species in the Centennial Industrial Site and Brunswick Area is considered low given the lack of (Brunswick), or limited nature of (Centennial Industrial Site), openings and mixed chaparral vegetation in gabbroic soils.

Pine Hill flannelbush (*Fremontodendron decumbens*) – Federally Endangered, CA State Rare, and CNPS List 1B.2

Pine Hill flannelbush gets its name from the Pine Hill formation in western El Dorado County, where the known occurrences are found. The Pine Hill formation is dominated by chaparral underlain by gabbro-derived soils. Pine Hill flannelbush occurs on scattered rocky outcrops in chaparral on and in the vicinity of Pine Hill and in the black oak woodland on Pine Hill. Gabbro soils are derived from mafic rocks (high in magnesium and iron) and are composed of the minerals plagioclase, olivine, clinopyroxene, iron oxides, and hornblende. Gabbro, a dark large-crystalline rock, is formed when liquid magma cools slowly underground. A red soil is formed when the rock is exposed and weathers at the earth's surface. Gabbro soils are well-drained and are underlain by gabbrodiorite (granular igneous) rocks at a depth of more than one meter (3.3 feet).

Reports of occurrences of Pine Hill flannelbush in Yuba and Nevada counties have been questioned. According to the USFWS Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills (2002),<sup>5</sup>

Although there are some reports of *F. californicum* ssp. *decumbens* occurring in some small scattered populations in Yuba or Nevada County, other reports describe these individuals as aberrant *F. californicum* ssp. *californicum* (California flannelbush). Most occurrences of *Fremontodendron californicum* ssp. *decumbens* are on private land (California Natural Diversity Data Base 1998). One occurrence is on Bureau of Land Management land and one occurrence is on California Department of Fish and Game and California Department of Forestry and Fire Protection lands (California Natural Diversity Data Base 1998). Presently, the majority of the *F. californicum* ssp. *decumbens* individuals are located on the parcel managed by the California Department of Forestry and Fire Protection on Pine Hill, and on a nearby private parcel (L. Eng *in litt.* 1999).

The Pine Hill flannelbush is listed within the CNDDB (CDFW, 2019) as potentially occurring within the southern section of the Centennial Industrial Site and within adjacent private lands to the south. While initially identified and mapped as Pine Hill flannelbush in 1999, 2008, and 2009, since the species was mapped by the CDDDB within the Centennial Industrial Site as the Pine Hill flannelbush, the identity of the plants has been questioned. The Centennial Industrial Site does contain the appropriate soils and vegetation community types required for the Pine Hill flannelbush. CDFW assumes that the plants mapped within the Centennial Industrial Site are either a distinct population of Pine Hill flannelbush or a hybrid with the more common *Fremontodendron californicum* (CDFW, 2019). However, the USFWS Recovery Plan Amendment for Gabbro Soil Plants of the Central Sierra Nevada Foothills: El Dorado Bedstraw (*Galium californicum* ssp. *sierrae*) and Pine Hill flannelbush (*Fremontodendron californicum* ssp. *decumbens*) states that “Results of subsequent genetic work by a University of California, Davis researcher, to determine if Nevada and Yuba County flannelbushes are Pine Hill flannelbush,

<sup>5</sup> United State Fish and Wildlife Service. *Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills* [pg. II-13]. August 30, 2002.



were inconclusive; therefore, we [the USFWS] continue under the assumption that these plants are not the listed entity.<sup>6</sup>

According to the botanical study prepared for the Centennial Industrial Site, the recent genetic work conducted by Dr. Shannon Still from U.C. Davis has confirmed that Pine Hill flannelbush is known to occur in Nevada County, but this work is still in press (Bill Wilson, personal communication 2019).<sup>7</sup> During protocol-level field surveys implemented in 2019 for the Pine Hill flannelbush, the plants in the population were confirmed to have morphological characteristics, the floral and habit, of the Pine Hill flannelbush. Based on the unpublished genetic results and the supporting morphological characteristics, Matuzak Environmental is conservatively assuming the identification of Pine Hill flannelbush within the Centennial Industrial Site with it to be confirmed prior to the implementation of any disturbance. Similarly, for the purposes of this EIR, it is assumed that the individual plants identified within the Centennial Industrial Site may be the FESA listed Pine Hill flannelbush. This is a conservative approach to analysis.

Centennial Industrial Site: The Centennial Industrial Site has suitable habitat for the Pine Hill flannelbush in the Dubekella and Secca-Rock Outcrop complex soil series, a soil derived from gabbrodiorite parent material. The known occurrence of the previously mapped Pine Hill flannelbush population within and directly adjacent to the Centennial Industrial Site (CDFW, 2019) was initially located within the Centennial Industrial Site in December 2018 and tentatively identified due to it being a perennial shrubby plant with characteristics (leaf morphology, plant habit, seeds, fruits) that allowed it to be fairly confidently identified at that time of year. The identification was verified during its blooming period when species-specific surveys for Pine Hill flannelbush were implemented, and the whole of the population that occurs within the Centennial Industrial Site was mapped in July of 2019 (see Figure 4.4-6). Sixty individuals were counted within the Centennial Industrial Site, all mature, flowering plants. No seedling or juvenile individuals were encountered. They occupied an absolute area of 0.22-acre over approximately 4.5 acres in the southern portion of the Centennial Industrial Site, with one plant occurring disjunct from the main population, in the center of the study area. The population extends beyond the Centennial Industrial Site towards the south into adjacent private properties (previously mapped by CDFW 2019). The population was not mapped or documented beyond the edge of the Centennial Industrial Site.

Brunswick Area: Potential for occurrence of this species within the Brunswick Area is considered low given the lack of openings and mixed chaparral vegetation in gabbroic soils within the Brunswick Area. The Pine Hill flannelbush was not found within the Brunswick Area during any of the field surveys conducted in December 2018 or in July and August 2019 within the Brunswick Area.

<sup>6</sup> United States Fish and Wildlife Service. *Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills: El Dorado bedstraw (Galium californicum ssp. sierrae) and Pine Hill Flannelbush (Fremontodendron californicum ssp. decumbens)* [pg. 3]. September 2019. See also United States Fish and Wildlife Service. *5-Year Review Stebbin's morning-glory (Calystegia stebbinsii), Pine Hill ceanothus (Ceanothus roderickii), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens), El Dorado bedstraw (Galium californicum ssp. sierrae), Layne's butterweed (Packera layneae), Summary and Evaluation* [pg. 11]. May 2019.

<sup>7</sup> Wendy Boes. *Centennial Industrial Site CNPS Ranked Plants and Special Status Plant Survey Report*. January 2021.



**Figure 4.4-6  
 Centennial Industrial Site – Pine Hill Flannelbush Occurrences**



Source: Greg Matuzak Environmental Consulting, 2021.



### Finger rush (*Juncus digitatus*) – CNPS List 1B.1

Finger rush inhabits open chaparral habitat surrounded by mixed oak/conifer woodland on low gradient, north-facing, and vernal moist slopes. This species also associates with sandy clay loam soil within substrates underlain by granitic bedrock. This species is found between 2,165 and 2,590 feet above msl. A low potential for the occurrence of this species exists in gravelly, seasonally moist openings within the Centennial and Brunswick Industrial Sites.

The species is known less than one mile to the north of the Sites, near the intersection of Idaho-Maryland Road and Brunswick Road (species identified in 2011). This species was not identified on either Site during the December 2018 or July and August 2019 surveys; however, the blooming period for this species is April to June. The species has a low potential to occur within the Centennial Industrial Site and the Brunswick Area.

### Cantelow's lewisia (*Lewisia cantelovii*) – CNPS List 1B.2

Cantelow's lewisia is found in moist, granitic areas in broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest mesic, sometimes serpentinite seeps between 1,080 and 4,495 feet above msl. The species blooms between May and October. A low potential for occurrence of this species exists within the rocky outcrops with seeps within the Centennial and Brunswick Industrial Sites, though habitat for this species is very limited. Records for this species occurs in the Middle Yuba and South Yuba river canyons within seven miles of the Brunswick Area. The species was not documented within five miles of the Centennial Industrial Site and Brunswick Area (CNDDDB, 2019). The species was not observed during 2019 field surveys.

### Sierra blue grass (*Poa sierra*) – CNPS List 1B.3

Sierra blue grass is found in openings in lower montane coniferous forest, between 1,195 and 4,920 feet above msl and blooms between April and July. The species was not documented within five miles of the Centennial Industrial Site and Brunswick Area (CNDDDB 2019); however, it has been documented at Steephollow Creek in a collection from 1964. The species was not observed during the 2019 field surveys.

The potential for occurrence of this species is considered moderate for the Brunswick Industrial Site (Sierran mixed conifer, ponderosa pine forest, and in the forested areas along South Fork of Wolf Creek) and low for the Centennial Industrial Site (ponderosa pine forest, and in the forested areas along Wolf Creek).

### Brownish beaked-rush (*Rhynchospora capitellata*) – CNPS List 2B.2

Brownish beaked-rush inhabits meadows and seeps, marshes and swamps, and it is found in upper and lower montane coniferous forests, normally between 145 and 6,560 feet above msl. This species is normally identified on mesic sites and has been identified within three miles west of the Centennial and Brunswick Industrial Sites in a marshy area along the northwest corner of the Nevada County Fairgrounds along State Route (SR) 20 in 1973. The species was not identified during field surveys conducted in December 2018 or July and August 2019. However, suitable habitat for this species occurs within the perennial marsh wetlands within the Centennial and Brunswick Industrial Sites, but the species has not been identified within five miles of the Brunswick Area since 1973.

The likelihood of this species occurring within the Brunswick Area is considered moderate, and low for occurring within the Centennial Industrial Site.



### Scadden Flat checkerbloom (*Sidalcea stipularis*) – CA State Endangered and CNPS List 1B.1

Scadden Flat checkerbloom inhabits marshes and swamps between July and August. It is found in wet montane marshes fed by springs, normally between 2,295 and 2,395 feet above msl. Suitable habitat for this species occurs within the perennial marsh wetlands in the Centennial and Brunswick Industrial Sites. The species has been documented over three miles to the west near the Nevada County Fairgrounds from a report in 1973. Additionally, this species was not documented during the field surveys conducted in December 2018 or in July and August 2019.

The likelihood of this species occurring within the Brunswick Area is considered moderate, and low for occurring within the Centennial Industrial Site.

### **Non-Special-Status Plants (CNPS Lists 3)**

While not considered special-status species under the above-listed categories, for disclosure purposes, the following CNPS Lists 3 and 4 plant species are addressed.

#### CNPS List 3

Describing the plants included in Rank 3 on its website, CNPS states “we lack the necessary information to assign them to one of the other ranks or to reject them.”<sup>8</sup> Accordingly, Rank 3 plants are plants that CNPS knows exist, but has insufficient evidence to prove their rarity or endangerment. CNPS states on its website that many of the plants assigned to Rank 3 meet the definitions of the California Endangered Species Act of the California Fish and Game Code (FGC), and are eligible for state listing. Specifically, CNPS’s website provides the following statement regarding Rank 3 plants:

*Many of the plants constituting California Rare Plant Rank 3 meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and are eligible for state listing. Impacts to these species or their habitat should be analyzed during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, as they may meet the definition of Rare or Endangered under CEQA Guidelines §15125 (c) and/or §15380.*

The CEQA Guidelines, Section 15380, broadly define “endangered” and “rare” species as follows:

(b) A species of animal or plant is:

(1) “Endangered” when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or

(2) “Rare” when either:

(A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

<sup>8</sup> California Native Plant Society. *CNPS Rare Plant Ranks*. Available at <https://www.cnps.org/rare-plants/cnps-rare-plant-ranks>. Accessed December 2020.



(B) *The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the Federal Endangered Species Act.*<sup>9</sup>

CDFW, as the trustee agency under CEQA,<sup>10</sup> has stated that *some* CNPS Rank 3 plants need to be considered under CEQA, but only if sufficient information is available to adequately assess potential impacts to such plants (See, e.g., *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*, p. 3, footnote 6 (March 20, 2018) [“Impacts to [Rank] 3 plants may warrant consideration under CEQA if sufficient information is available to assess potential impacts to such plants.”].) As Rank 3 plants definitionally are those without sufficient evidence for a specific ranking, analysis under CEQA is only therefore required in the unusual case when some new evidence is uncovered that was not reflected in the CNPS’s Rank 3 designation.

None of the three CNPS List 3 species that have at least a low potential to occur within the project area (see below descriptions) meet the CEQA Guidelines Section 15380 as either “endangered” “threatened” or “rare” under the CEQA guidelines species definitions given their survival and reproduction in the wild are not in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or are any of the species existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or any of the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.<sup>11</sup> None of these three species have been previously identified within the project area and none of these species were identified during the focused botanical resources surveys conducted for the project.

### *Butte County fritillary (Fritillaria eastwoodiae) – CNPS List 3.2*

Butte County fritillary is found in openings in chaparral, cismontane woodland, and lower montane coniferous forest, sometimes serpentinite between 160 and 4,920 feet above msl. The species blooms between March and June and there is potential for occurrence in open areas in the Brunswick Industrial Site. A 1979 record for this species has been documented on the south side of the South Yuba River canyon, approximately seven miles north of the Centennial and Brunswick Industrial Sites, and other occurrences on the Washington Ridge; however, the species has not been documented within five miles of the Centennial Industrial Site and Brunswick Area. The species was not documented during the botanical surveys, and the potential for the species to occur within the Centennial Industrial Site and Brunswick Area is considered low.

### *Dubious pea (Lathyrus sulphureus var. argillaceus) – CNPS List 3*

Dubious pea inhabits lower and upper montane coniferous forest and cismontane woodlands, normally between 490 and 3,050 feet above msl. The species has been previously identified within five miles of the Brunswick Area. This species has a low potential to occur in forested areas of the Centennial and Brunswick Industrial Sites. This species was not identified during the

<sup>9</sup> The federal Endangered Species Act defines “threatened species” to mean “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” (16 USC § 1532, subd. (20).)

<sup>10</sup> See Fish & G. Code § 1802, 14 CCR §§ 1802, 15386.

<sup>11</sup> Greg Matuzak Environmental Consulting, LLC. *Idaho Maryland Mine Evaluation of California Native Plant Society (CNPS) List 3 Species Under CEQA*. December 6, 2020.



December 2018 or July and August 2019 surveys; however, the blooming period for this species is April to May.

*Cedar Crest popcorn flower (Plagiobothrys glyptocarpus var. modestus) – California Native Plant Society List 3*

The species is known to occur within cismontane woodland as well as valley and foothill grasslands (mesic), from 2,850 to 2,855 feet above msl. This species is known from previous collections in 1919 and 1937 from nearby Cedar Ridge, less than a mile south of the Brunswick Industrial Site and from previous collections in Nevada City. Suitable habitat for this species is present within the woodland areas within the Centennial and Brunswick Industrial Sites. This species was not identified during field surveys conducted in December 2018 or July and August 2019 surveys, and given the species has not been documented within five miles of the Sites since 1937, the potential for this species to occur within the Centennial and Brunswick Industrial Sites is considered moderate.

CNPS List 4

CRPR 4 plant taxa are of limited distribution or infrequent throughout a broader area in California, so that their vulnerability or susceptibility to threat appears low at this time, from a statewide perspective. Taxa on the CRPR lists are evaluated by panels of taxon experts and are assigned a CRPR based primarily on number of occurrences, distribution, and level of threat. CNPS and CDFW maintain that all CRPR 1 and 2 taxa meet the definition of endangered, rare, or threatened under CEQA Section 15380 and must be evaluated during CEQA review. According to CNPS, “CRPR 4 taxa do not clearly meet CEQA standards and thresholds for impact considerations”.<sup>12</sup> However, CNPS and CDFW strongly recommend that these taxa be evaluated in CEQA documents. Reasons for considering List 4 species in CEQA documents, according to CNPS, include among others, areas where the taxon is especially uncommon and areas where the taxon has sustained heavy losses (declining).

Two CNPS List 4 species are known to occur on the Centennial Industrial Site and one of the species occurs within the Brunswick Area. Similar to the above-discussed List 3 species, these two List 4 species do not meet the criteria for endangered, rare, or threatened under 15380.

*Humboldt lily (Lilium humboldtii ssp. humboldtii) - CNPS List 4.2*

Humboldt lily is known to occur in openings in chaparral, cismontane woodland and lower montane coniferous forests. It is known from Amador, Butte, Calaveras, El Dorado, Fresno, Mariposa, Nevada, Placer, Tehama, Tuolumne, and Yuba counties at elevations ranging between 295 and 4,200 feet above msl. Humboldt lily is a perennial bulb that blooms May through August. The Brunswick Industrial Site has suitable habitat for the species and a single occurrence consisting of 10 individuals, within an area less than 110 square feet, was documented within a disturbed area of the Brunswick Industrial Site, and a single occurrence consisting of a few individuals was documented within the East Bennett Road ROW. Additionally, 10 individual Humboldt lily plants were observed in an area less than 10 square meters on the northern portion of the Centennial Industrial Site.

<sup>12</sup> California Native Plant Society. *Technical Memorandum: Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis*. January 2020.



### *Sierra brodiaea (Brodiaea sierra) - CNPS Status List 4.3*

Sierra brodiaea is known to occur on serpentinite or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forests. It is known from Butte, Nevada and Yuba counties at elevations ranging between 164 and 3,215 feet above msl. Sierra brodiaea is a perennial bulb that blooms May through August. It is an herbaceous plant, with a broad umbel of purple, fluted flowers. The Centennial Industrial Site has highly suitable habitat in the Secca-Rock Outcrop complex soil series, a soil derived from gabbro-diorite parent material. A large population with thousands of individuals covering almost a quarter of the Centennial Industrial Site was mapped during 2019 field surveys.

### **Special-Status Wildlife**

The CNDDDB database five-mile buffer search revealed five special-status wildlife species that have previously been identified and mapped within five miles of the Centennial Industrial Site and Brunswick Area (see Table 4.4-6). The species previously identified within five miles of the Sites include:

- California black rail
- Coast horned lizard
- Western bumble bee
- Foothill yellow-legged frog
- Townsend's big-eared bat

None of these species were identified within the Centennial Industrial Site, nor Brunswick Area, during biological resources surveys conducted in December 2018 and July 2019. In addition, no USFWS Designated Critical Habitat (DCH) has been mapped by USFWS for any federally-listed species within the vicinity of the Sites.

Given the presence of a large manmade pond and perennial freshwater marsh wetlands within the Brunswick Industrial Site and the presence of the South Fork Wolf Creek within the western section of the Brunswick Industrial Site, western pond turtle and California red-legged frog are also included as special-status aquatic wildlife species with the potential to occur within the Brunswick Area, though neither of these species was identified during the surveys conducted within the Brunswick Area.

Similarly, given the presence of the main stem of Wolf Creek along the northern boundary of the Centennial Industrial Site, and the potential presence of the perennial freshwater marsh wetlands within the eastern portion of the Centennial Industrial Site, depending upon the final remediation limits, western pond turtle and California red-legged frog are also included as special-status aquatic wildlife species with the potential to occur within the Centennial Industrial Site.

Additionally, two species of bat, the hoary bat (*Lasiurus cinereus*) and the pallid bat (*Antrozous pallidus*) are included in the assessment below given they have a low potential to occur within the Centennial Industrial Site and Brunswick Area; however, neither bat species has been previously identified within five miles of the Sites (CDFW 2019a).



**Table 4.4-6  
Special-Status Wildlife Species with Potential to Occur in the Vicinity of the Centennial Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Requirements	Potential for Species/Habitat Presence
	Federal/State/CNPS		
<b>Amphibians</b>			
<b>California red-legged frog</b> <i>Rana draytonii</i>	FT/SSC	Found in permanent and semi-permanent aquatic habitats, such as creeks and ponds, with emergent and submergent vegetation. May aestivate in rodent burrows or cracks during dry periods. Along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County.	<b>Centennial Industrial Site</b> <b>Very Low.</b> However, should perennial aquatic resources, such as the freshwater emergent marsh habitats within the eastern section of the Centennial Site, remain after remediation, these resources contain marginal suitable habitat for the species.  <b>Brunswick Area</b> <b>Very Low.</b> However, the perennial aquatic resources such as the freshwater emergent marsh habitats and a large manmade pond within the Brunswick Industrial Site contain marginal suitable habitat for the species.
<b>Foothill yellow-legged frog</b> <i>Rana boylei</i>	SCT/SCC	Perennial rocky (pebble or cobble) streams with cool, clear water in a variety of habitats from valley and foothill oak woodland, riparian forest, ponderosa pine, mixed conifer, coastal scrub, and mixed chaparral at elevations ranging from 0 to 6,370 feet. Occurs in the Klamath, Cascade, north Coast, south Coast, and Transverse Ranges; through the Sierra Nevada foothills up to approximately 6,000 feet south to Kern County.	<b>Centennial Industrial Site</b> <b>Very Low.</b> However, the main stem of Wolf Creek within the northern section of the Centennial Industrial Site contains marginal suitable habitat for the species.  <b>Brunswick Area</b> <b>Very Low.</b> However, the South Fork Wolf Creek within the western section of the Brunswick Industrial Site contains marginal suitable habitat for the species.
<b>Reptiles</b>			
<b>Western pond turtle</b> <i>Emys marmorata</i>	--/SSC	Thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, below 6,000 feet in elevation. Populations extend throughout the coast and central valley of California.	<b>Centennial Industrial Site</b> <b>High.</b> Potential for occurrence in areas near water, including Wolf Creek and perennial aquatic resources, such as the freshwater emergent marsh habitats within the eastern section of the Centennial

(Continued on next page)



**Table 4.4-6  
Special-Status Wildlife Species with Potential to Occur in the Vicinity of the Centennial Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Requirements	Potential for Species/Habitat Presence
	Federal/State/CNPS		
			Industrial Site, should some portion remain after remediation.  <b>Brunswick Area</b> <b>High.</b> Potential for occurrence in areas near water, including South Fork Wolf Creek and perennial aquatic resources such as the freshwater emergent marsh habitats and manmade pond within the Brunswick Industrial Site.
<b>Coast horned lizard</b> <i>Phrynosoma blainvillii</i>	--/SSC	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	<b>Centennial Industrial Site</b> <b>Moderate.</b> Potential for occurrence in areas with appropriate habitat within the Centennial Site, including open chaparral habitats.  <b>Brunswick Area</b> <b>Moderate.</b> Potential for occurrence in areas with appropriate habitat within the Brunswick Industrial Site, including open disturbed areas.
<b>Mammals</b>			
<b>Townsend's big-eared bat</b> <i>Corynorhinus townsendii</i>	--/SSC	Associated with lower montane coniferous and mixed conifer forest habitats where abandoned buildings and structures occur for roosting.	<b>Centennial Industrial Site</b> <b>Low.</b> Potential for occurrence in areas containing abandoned structures, including the existing decant structure in the northwestern section of the Centennial Industrial Site.  <b>Brunswick Area</b> <b>Low.</b> Potential for occurrence in areas containing abandoned structures, including the existing mill structure in the Brunswick Industrial Site.

(Continued on next page)



**Table 4.4-6  
 Special-Status Wildlife Species with Potential to Occur in the Vicinity of the Centennial Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Requirements	Potential for Species/Habitat Presence
	Federal/State/CNPS		
<b>Birds</b>			
<b>California black rail</b> <i>Laterallus jamaicensis coturiculus</i>	--/CT	California black rail inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. The species requires water depths of approximately 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	<b>Centennial Industrial Site</b> <b>Very Low.</b> However, the perennial aquatic resources, such as the freshwater emergent marsh habitats within the eastern section of the Centennial Industrial Site, should some portion remain after remediation, contain marginal suitable habitat for the species.  <b>Brunswick Area</b> <b>Very Low.</b> However, the perennial aquatic resources such as the freshwater emergent marsh habitats within the Brunswick Industrial Site contain marginal suitable habitat for the species.
<b>Invertebrates</b>			
<b>Western bumble bee</b> <i>Bombus occidentalis</i>	--/SCT	Western bumble bee was documented approximately 3 miles northeast of Nevada City (4+ miles from the Centennial Industrial Site) in 1968. It is known from a single collection on May 20th of that year. This species is of conservation concern and is listed as S1, Critically Imperiled, by NatureServe and is listed on the CNDDDB.	<b>Centennial Industrial Site and Brunswick Area</b> <b>Very Low.</b> The species is unlikely to occur in the Centennial Industrial Site, Brunswick Industrial Site, or surrounding region.
<sup>1</sup> Status explanations: -- = no listing. <i>Federal</i> BCC = federal Bird of Conservation Concern FPT = federal proposed threatened under the federal Endangered Species FT = listed as threatened under the federal Endangered Species Act. <i>State</i> FP = state fully protected SCT = state candidate for listing as threatened under the California Endangered Species			

(Continued on next page)



**Table 4.4-6  
 Special-Status Wildlife Species with Potential to Occur in the Vicinity of the Centennial Industrial Site and Brunswick Area**

Common and Scientific Name	Legal Status <sup>1</sup>	Habitat Requirements	Potential for Species/Habitat Presence
	Federal/State/CNPS		
SE = listed as endangered under the California Endangered Species Act. SSC = state species of special concern ST = listed as threatened under the California Endangered Species Act.			
<b>Source: CNDDDB 2019 and USFWS 2019.</b>			



### Townsend's big-eared bat (*Corynorhinus townsendii*) – CA State Species of Concern

The Townsend's big-eared bat species inhabits lower montane coniferous and mixed conifer forest habitats where abandoned buildings and structures occur for roosting. This species has been identified within three miles, generally south, of the Centennial Industrial Site and Brunswick Area, within an abandoned building at the Empire Mine State Historic Park.

Limited suitable roosting sites for this species occurs within the Centennial Industrial Site given the lack of abandoned structures. The existing decant tower, which is located in the northwest portion of the Centennial Industrial Site, may contain suitable roosting habitat for this species.

Limited suitable roosting sites for this species occurs within the Brunswick Area given the presence of only one abandoned structure.

Therefore, the potential for this species to occur within the Centennial Industrial Site and Brunswick Area is considered low.

### Coast horned lizard (*Phrynosoma blainvillii*) – CA State Species of Concern

The coast horned lizard occurs in open sandy areas, scattered low bushes, chaparral, manzanita, and oak woodland habitats. It is found in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast. Coast horned lizards forage on the ground in open areas, usually between shrubs and often near ant nests. The species relies on camouflage for protections. Predators and extreme heat are avoided by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed in the soil under surface objects such as logs or rocks, in mammal burrows, or in crevices (Zeiner et al., 2000). They inhabit mostly open country, especially sandy areas, washes, flood plains and wind-blown deposits in a wide variety of habitats and can be found at elevations up to 8,000 feet (2,438 meters) (CaliforniaHerps, 2014).

This species has been documented between three and five miles of the Centennial Industrial Site and Brunswick Area to the west, northwest, and southwest. Potential suitable habitat within the sandy and rocky locations exists within the Centennial Industrial Site, and the open disturbed and developed locations within the Brunswick Industrial Site. As both Sites include the required open areas of exposed, sandy soils for this species, this species has the potential to occur within the Sites. Coast horned lizards were not observed during the December 2018 or early January 2019 site visits or during reconnaissance-level biological surveys conducted in July 2019. The potential for this species to occur within the Centennial and Brunswick Industrial Sites is considered moderate.

### Western pond turtle (*Emys marmorata*) – CA State Species of Concern

Western pond turtles associate with permanent ponds, lakes, streams, irrigation ditches, and permanent pools along intermittent streams. They are most commonly associated with permanent or nearly permanent water in a wide variety of habitats. This species requires basking sites such as partial submerged logs, rocks, mats of floating vegetation, or open mud banks. During the spring or early summer, females move overland up to 325 feet to find suitable sites for egg laying.

Centennial Industrial Site: The main stem of Wolf Creek, a perennial stream, and the large marsh wetlands in the eastern section of the Centennial Industrial Site containing perennial water/ponding are considered suitable habitat for this species. It is important to reiterate that the



large marsh wetlands in the eastern portion of the Centennial Industrial Site are currently proposed to be removed during remediation activities under DTSC oversight, pursuant to the RAP, and this action has already been analyzed in an independent CEQA document with DTSC as the lead agency. However, out of an abundance of caution, if the currently proposed remediation boundary limits were modified by DTSC prior to commencement of remediation, this EIR addresses the possibility that some amount of freshwater emergent marsh wetland habitat may remain on the Centennial Industrial Site post-remediation.

The western pond turtle has not been previously identified within five miles of the Centennial Industrial Site and was not identified during the December 2018 or early January 2019 site visits, or during reconnaissance-level biological surveys conducted in July 2019. The potential for this species to occur within the Centennial Industrial Site is considered high.

**Brunswick Area:** The South Fork Wolf Creek, a perennial stream, large manmade pond, and the perennial freshwater marsh wetlands within the Brunswick Industrial Site are considered suitable habitat for the western pond turtle.

This species has not been previously identified within five miles of the Brunswick Area and was not identified during the December 2018 or early January 2019 site visits, or during reconnaissance-level biological surveys conducted in July 2019. The potential for this species to occur within the Brunswick Industrial Site is considered high.

#### Foothill yellow-legged frog (*Rana boylei*) – Candidate as Threatened under CESA

Foothill yellow-legged frogs inhabit partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. The species requires at least some cobble-sized substrate for egg laying. The species requires at least 15 weeks to attain metamorphosis. This species has been identified within five miles of the Centennial Industrial Site and approximately 3.9 miles southeast of the Brunswick Area, within Greenhorn Creek.

**Centennial Industrial Site:** The main stem of Wolf Creek within the Centennial Industrial Site is considered suitable habitat for this species. This species was not identified during the December 2018 or early January 2019 site visits or during reconnaissance-level biological surveys conducted in July 2019 within the Centennial Site for special-status wildlife species. Protocol-level surveys (Visual Encounter Surveys [VES method surveys] pursuant to the CDFW protocol) for this species were not implemented within the Centennial Industrial Site as part of this reporting. The potential for this species to occur within the Centennial Industrial Site is considered very low.

**Brunswick Area:** The species was not identified during focused VES method surveys for this species conducted on August 29, 2019, within South Fork Wolf Creek within the Brunswick Area, as well as within the portions of the creek that flow through public property downstream within the Empire Mine State Historic Park.

The stretches of South Fork Wolf Creek within the Brunswick Industrial Site from the large 48-inch culvert creating the stream, and downstream 700 feet from the culvert, does not contain suitable habitat for the species given the silty nature of the bed of the stream and lack of rocky stream habitat in that area. However, from approximately 700 feet downstream of the 48-inch culvert to the northwestern boundary of the Brunswick Industrial Site (approximately 2,000 feet of South Fork Wolf Creek) there is marginal suitable habitat for the species. Given the species has



not been previously identified within the South Fork Wolf Creek watershed and only marginal suitable habitat occurs within the Brunswick Industrial Site for the species, there is a very low likelihood this species occurs within the South Fork Wolf Creek.

### CA Red-legged Frog (*Rana aurora draytonii*) – Federal Threatened and CA State Species of Concern

CA red-legged frog (CRLF) is known in Nevada County in the North Bloomfield U.S. Geological Survey (USGS) Quadrangle within the Rock Creek watershed. CRLF has not been identified within five miles of the Centennial Industrial Site or Brunswick Area, and designated critical habitat for this federally threatened species has not been mapped for this species within the vicinity.

Centennial Industrial Site: Potential suitable reproductive habitat for this species may occur within the large marsh wetlands with perennial water/ponding in the eastern section of the Centennial Industrial Site. It is important to reiterate that the large marsh wetlands in the eastern portion of the Centennial Industrial Site are currently proposed to be removed during remediation activities under DTSC oversight, pursuant to the RAP. However, in the event that the currently proposed remediation boundary limits are modified by DTSC prior to commencement of remediation, this EIR addresses the possibility that some amount of freshwater emergent marsh wetland habitat may remain on the Centennial Industrial Site post-remediation.

If suitable breeding locations are located within 1.25 miles of the Centennial Industrial Site and connected by barrier-free dispersal habitat that is at least 300 feet in width, then suitable dispersal habitat could be located within the Centennial Industrial Site. This species has not been previously identified within five miles of the Centennial Industrial Site and was not identified during the December 2018 or early January 2019 site visits, or during reconnaissance-level biological surveys conducted in July 2019.

Given that CRLF was not identified during any of the site surveys, and have not been identified in the Grass Valley USGS Quadrangle, the watershed associated with the Centennial Industrial Site, or within five miles of the Centennial Industrial Site, the potential for this species to occur is considered extremely low.

Brunswick Area: Potential suitable reproductive habitat for this species may occur within the larger marsh wetlands with perennial water/ponding and the large manmade pond within the Brunswick Industrial Site. Additionally, if suitable breeding locations are located within 1.25 miles of the Brunswick Area and connected by barrier-free dispersal habitat that is at least 300 feet in width, then suitable dispersal habitat could be located within the Brunswick Area. It is unknown whether suitable breeding locations are located within 1.25 miles of the Brunswick Area. However, given that CRLF have not been identified in the Grass Valley USGS Quadrangle, the watershed associated with the Brunswick Area, or within five miles of the Brunswick Area, the potential for this species to occur is considered extremely low.

### California black rail (*Laterallus jamaicensis coturiculus*) – CA State Threatened

California black rail inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. The species requires water depths of approximately one inch that does not fluctuate during the year and dense vegetation for nesting habitat.

Centennial Industrial Site: The species has been identified within five miles to the southeast and southwest of the Centennial Industrial Site. Suitable habitat for this species occurs within the large



marsh wetlands within the eastern section of the Centennial Industrial Site, though these are anticipated to be removed during remediation activities. Nevertheless, as previously discussed, this action has already been analyzed in an independent CEQA document with DTSC as the lead agency. However, out of an abundance of caution, in the event that the currently proposed remediation boundary limits were somehow modified by DTSC prior to commencement of remediation, this EIR addresses the possibility that some amount of freshwater emergent marsh wetland habitat may remain on the Centennial Industrial Site post-remediation.

The California black rail was not identified during the December 2018 or early January 2019 site visits or during reconnaissance-level biological surveys conducted in July 2019. The potential for this species to occur within the Centennial Site is considered very low.

Brunswick Area: The California black rail has been identified within three miles to the southeast and the southwest of the Brunswick Area. The species was not identified during field surveys. Suitable habitat for this species occurs within the larger marsh wetlands within the southwestern section of the Brunswick Industrial Site where there is permanent ponding of water and dense vegetation along the edges of those wetland features. The potential for this species to occur within the Brunswick Area is considered very low given the developed nature of the Brunswick Industrial Site where suitable habitat for the species is located.

#### Western bumble bee (*Bombus occidentalis occidentalis*) – Candidate for CESA Listing as Endangered

The western bumble bee is a CESA Candidate for listing as Endangered and is under review by the USFWS; however, the species was last documented within five miles of the Centennial Industrial Site and Brunswick Area in 1968 (considered its historical distribution) and is currently only known (current distribution defined by CDFW as known locations where the species has been identified between 2003 – 2017) from a few locations in the Sierra Nevada, none of which are within western Nevada County where the study area is located (CDFW 2019b). Therefore, it is unlikely the species would occur within the Centennial Industrial Site and Brunswick Area.

#### Hoary bat (*Lasiurus cinereus*) and Pallid bat (*Antrozous pallidus*)

The hoary bat is considered a Medium Risk species by the Western Bat Working Group and the pallid bat is a CDFW species of special concern. Neither species has been previously identified within five miles of the Centennial Industrial Site and Brunswick Area (CDFW 2019a) and is not thought to inhabit the sites. However, the Centennial and Brunswick Industrial Sites provide potential roosting habitat for both species within the riparian and woodlands. Therefore, if either species is present during the proposed disturbance, bat day roosts could be impacted.

### **4.4.3 REGULATORY CONTEXT**

A number of Federal, State, and local policies provide the regulatory framework that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological resources in the vicinity of the project site.

#### **Federal Regulations**

The following are the Federal environmental laws and policies relevant to biological resources.

#### **Federal Endangered Species Act**

Under the FESA, the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as threatened or endangered (16 United States Code [USC] § 1533(c)). Two



federal agencies oversee the FESA: the USFWS has jurisdiction over plants, wildlife, and resident fish, while the National Marine Fisheries Service (NMFS) has jurisdiction over anadromous fish and marine fish and mammals. Section 7 of the FESA mandates that federal agencies consult with the USFWS and NMFS to ensure that federal agency actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species.

Section 10 requires the issuance of an “incidental take” permit before any public or private action may be taken that could take an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP) that would offset the take of individuals that may occur, incidental to implementation of a proposed project, by providing for the protection of the affected species.

Pursuant to the requirements of the FESA, a federal agency reviewing a project within the jurisdiction of the agency must determine whether any federally listed threatened or endangered species may be present in the project area and whether the proposed project will have a potentially significant impact on such species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC § 1536(3), (4)).

### **Migratory Bird Treaty Act**

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the intentional killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California FGC states, “It is unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the code or any regulation adopted pursuant thereto.”

### **Clean Water Act**

The U.S. Army Corps of Engineers (“Corps”) and the Environmental Protection Agency (“EPA”) regulate the discharge of dredge or fill material into “waters of the U.S.” under Section 404 of the CWA. “Waters of the U.S.” include wetlands and lakes, rivers, streams, and their tributaries. Wetlands are defined for regulatory purposes as areas “...inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated solid conditions” as specified in 33 Code of Federal Regulations (CFR) 328.3, 40 CFR 230.3.

Generally, wetlands include swamps, marshes, bogs, and similar areas. Lakes, rivers, and streams are defined as “other waters of the U.S.” Jurisdictional limits of these features are typically noted by the OHWM. The OHWM is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as mark a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328 and 33 CFR 329).

Isolated ponds or seasonal depressions had been previously regulated as waters of the U.S. However, in *Solid Waste Agency of Northwestern Cook County (SWANCC) v. USACE et al.* (January 8, 2001), the U.S. Supreme Court ruled that certain “isolated” wetlands (e.g., non-



navigable, isolated, and intrastate) do not fall under the jurisdiction of the CWA and are no longer under the jurisdiction of the Corps. Some circuit courts (e.g., *U.S. v. Deaton*, 2003; *U.S. Rapanos*, 2003; *Northern California River Watch v. City of Healdsburg*, 2006), though, have ruled that SWANCC does not prevent CWA jurisdiction if a “significant nexus” such as a hydrologic connection exists, whether it be man-made (e.g., roadside ditch) or natural tributary to navigable waters, or direct seepage from the wetland to the navigable water, a surface or underground hydraulic connection, an ecological connection (e.g., the same bird, mammal, and fish populations are supported by both the wetland and the navigable water), and changes to chemical concentrations in the navigable water is present due to water from the wetland.

Areas considered to be non-jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions with no outlet for drainage (33 CFR, Part 328).

The *Clean Water Rule* is a 2015 regulation published by the EPA and Corps to clarify water resources management in the United States under a provision of the CWA. The regulation defined the scope of federal water protection in a more consistent manner, particularly over streams and wetlands, which have a significant hydrological and ecological connection to traditional navigable waters, interstate waters, and territorial seas. It is also referred to as the *Waters of the United States* rule, which defines all bodies of water that fall under U.S. federal jurisdiction. The rule has been contested in litigation and in 2017 the Trump administration announced its intent to review and rescind or revise the rule. Following a Supreme Court ruling on January 22, 2018 that lifted a nationwide stay on the rule, the Trump administration formally suspended the rule until February 6, 2020, thereby giving the EPA time to issue a draft proposal of replacement water regulatory requirements.

On October 22, 2019, the EPA and the Corps published a final rule to repeal the 2015 Clean Water Rule: Definition of “Waters of the United States” (“2015 Rule”), which amended portions of the CFR, and to restore the regulatory text that existed prior to the 2015 Rule. The final rule became effective on December 23, 2019. However, on April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define “Waters of the United States” in the *Federal Register*. For the first time, the agencies have streamlined the definition so that it includes four simple categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. Congress, in the CWA, explicitly directed the Agencies to protect “navigable waters.” The Navigable Waters Protection Rule regulates traditional navigable waters and the core tributary systems that provide perennial or intermittent flow into them.

Under the final rule, four clear categories of waters are federally regulated:

- The territorial seas and traditional navigable waters,
- Perennial and intermittent tributaries to those waters,
- Certain lakes, ponds, and impoundments, and
- Wetlands adjacent to jurisdictional waters

Therefore, as of June 22, 2020, the final rule details 12 categories of exclusions, features that are not “waters of the United States,” such as features that only contain water in direct response to rainfall (e.g., ephemeral features); groundwater; many ditches; prior converted cropland; and



waste treatment systems. The final rule clarifies key elements related to the scope of federal CWA jurisdiction, including:

- Providing clarity and consistency by removing the proposed separate categories for jurisdictional ditches and impoundments.
- Refining the proposed definition of “typical year,” which provides important regional and temporal flexibility and ensures jurisdiction is being accurately determined in times that are not too wet and not too dry.
- Defining “adjacent wetlands” as wetlands that are meaningfully connected to other jurisdictional waters, for example, by directly abutting or having regular surface water communication with jurisdictional waters.

The Navigable Waters Protection Rule is the second step in a two-step process to review and revise the definition of “waters of the United States” consistent with the February 2017 Presidential Executive Order entitled “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the ‘Waters of the United States.’” This final rule became effective on June 22, 2020 and replaces the Step One Rule published in October 2019 as outlined above.

On January 20, 2021, President Joe Biden issued Executive Order 13, 990, expressing the policy of the new administration. Executive Order 13, 990 directed federal agencies to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last 4 years. Consistent with Executive Order 13, 990, the EPA and Corps of Engineers have provided notice of their intent to restore the pre-2015 regulatory definition of “waters of the United States” while working to develop a new regulatory definition.

On August 30, 2021, Arizona Federal District Court Judge, Rosemary Marquez, struck down the Navigable Waters Protection Rule in *Pasqua Yaqui Tribe, et al. v. United States Environmental Protection Agency*, CV-20-00266-TUC-RM, United States District Court for the District of Arizona.

### **Pine Hill Flannelbush Recovery Plan**

Pine Hill flannelbush (*Fremontodendron decumbens*) inhabits rocky ridges on gabbro and serpentine soils within chaparral and cismontane woodlands within the central Sierra Nevada foothills. This species is endemic to these soil types and is normally documented between 1,390 and 2,495 feet above msl. It is listed as endangered by the USFWS under the FESA and is listed as Rare by the CDFW. Pine Hill flannelbush also has a CRPR 1B.2 status on the CNPS *Inventory of Rare and Endangered Plants* (CNPS, 2019).

In 2002, USFWS published a Recovery Plan for five federally listed plant species and one additional species of concern that primarily occur on gabbroic substrates in the central Sierra Nevada foothills (USFWS, 2002). In 2019, the USFWS published their 5-year review of the species covered under the recovery plan, including the Pine Hill flannelbush (USFWS, 2019). Of the species covered under the Recovery Plan, only the Pine Hill flannelbush occurs within the Centennial Industrial Site (“Centennial Site”). Another FESA listed species covered under the Recovery Plan, Stebbins’ morning-glory (*Calystegia stebbinsi*), was not documented within the Centennial Site and therefore, is not covered under this Habitat Management Plan (“HMP”). Federal recovery plans delineate reasonable actions that are believed to be required to recover and/or protect listed species. Recovery plans have no legal authority, but provide guidelines to



federal, state, local, and private entities for management actions that will assist in preventing extinction of listed species and facilitating those species towards achieving recovery.

The Recovery Plan presents a community-level strategy for recovery and conservation of the six species as all six species co-occur in the same natural chaparral community within the Pine Hill formation in western El Dorado County, as well as where any of the species occur within their range. Therefore, the likelihood of successful recovery for these species is increased by protecting the entire community in which these species occur for the Pine Hill formation in western El Dorado County given the species almost exclusively occurs at that location. The federal Recovery Plan also considers the requirements of each individual species and presents individual recovery criteria for each species (USFWS, 2002).

The Recovery Plan identifies habitat loss, habitat fragmentation, alteration of natural fire regime, and suppression of disturbance necessary for reproduction, all ultimately tied to increasing urbanization within the species' range, as the primary reasons for the decline of, and ongoing threats, to all six species, including the Pine Hill flannelbush. Lesser threats to these species identified by the Recovery Plan include road widening and maintenance, off-road vehicle use, garbage dumping, horse paddocking, and competition with invasive non-native vegetation. The Recovery Plan notes that activities often associated with rural residential areas, such as clearing chaparral for fire protection around houses, bulldozing land (grading for houses or barns), planting fruit trees, and irrigation sometimes adversely modify habitat, rendering it unsuitable for Pine Hill flannelbush and the other five species.

Interim goals of the Recovery Plan include stabilizing and protecting populations, conducting research necessary to refine reclassification and recovery criteria, and reclassifying (i.e., downlisting) Pine Hill flannelbush from endangered to threatened. The Recovery Plan's ultimate goals include:

1. protect and restore sufficient habitat and numbers of populations; and
2. ameliorate both the threats that caused five of the gabbro soil plants to be listed and any other newly identified threats to warrant delisting of Stebbins' morning-glory and two of the other listed species and downlisting of Pine Hill flannelbush and one of the other listed species (USFWS, 2002).

Criteria used to evaluate when listed species are "recovered" include number and distribution of populations, population sizes, and probabilities of persistence over specific time periods. The Recovery Plan emphasizes the following recovery and long-term conservation tasks:

1. habitat protection and management;
2. surveying and monitoring;
3. research; and
4. public participation, outreach, and education.

The Recovery Plan specifically recommends that management plans be prepared for all populations recommended for protection and any adjacent areas identified as necessary for continued survival and recovery (USFWS, 2002). However, the 5-year review of the species covered under the Recovery Plan concluded for the Pine Hill flannelbush that results of subsequent genetic work by a University of California, Davis researcher, to determine if Nevada and Yuba County flannelbushes are Pine Hill flannelbush, were inconclusive; therefore, the USFWS continue under the assumption that these plants are not the listed entity (USFWS, 2019).



## **State Regulations**

The following are the State environmental laws and policies relevant to biological resources.

### **California Department of Fish and Wildlife**

CDFW administers a number of laws and programs designed to protect fish and wildlife resources under the California FGC, such as CESA (FGC Section 2050, et seq.), Fully Protected Species (FGC Section 3511) and the Lake or Streambed Alteration Agreement Program (FGC Sections 1600 to 1616). Such regulations are summarized in the following sections.

#### **California Endangered Species Act**

The State of California enacted CESA in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that “overriding considerations” exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

CESA prohibits the taking of State-listed endangered or threatened plant and wildlife species without first seeking proper authorization. CDFW exercises authority over mitigation projects involving State-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

#### **Fish and Game Code Section 3505**

Birds of prey are protected in California under provisions of the California FGC, Section 3503.5, (1992), which states, “it is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by CDFW.

#### **Lake or Streambed Alteration Program**

The CDFW is responsible for conserving, protecting, and managing California’s fish, wildlife, and native plant resources. To meet this responsibility, the FGC, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify the bed or bank of a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.



For the purposes of Section 1602, rivers, streams and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, the CDFW will require that the parties enter into a Lake or Streambed Alteration Agreement.

### CDFW Species of Special Concern

In addition to formal listings under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern” developed by CDFW. Species whose numbers, reproductive success, or habitat may be threatened are tracked by CDFW in California.

### **Regional Water Quality Control Board**

Pursuant to Section 401 of the CWA and EPA 404(b)(1) guidelines, in order for a Corps federal permit applicant to conduct any activity which may result in discharge into navigable waters, they must provide a certification from the RWQCB that such discharge will comply with the State water quality standards. The RWQCB has a policy of no-net-loss of wetlands in effect and typically requires mitigation for all impacts to wetlands before the RWQCB will issue water quality certification.

The State Water Resources Control Board (SWRCB) adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California (April 2019) (23 CCR 3013).

The Procedures consist of four major elements: 1) a wetland definition; 2) wetland delineation procedures; 3) a wetland jurisdictional framework; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Procedures will apply to all applications for discharges of dredged or fill material to waters of the state beginning May 28, 2020.

The Procedures strengthen the protection of waters of the state that are no longer protected under the federal CWA due to U.S. Supreme Court decisions and changes to regulatory definitions. The State Water Code defines “waters of the state” broadly to include “any surface water or groundwater, including saline waters, within the boundaries of the state.” “Waters of the state” includes all “waters of the U.S.” The Procedures define three categories of wetlands that are waters of the state: natural wetlands, wetlands created by modification of a surface water of the state, and artificial wetlands that meet certain criteria.

### **State Oak Woodland Regulations**

State laws that regulate protection of oak woodlands include Professional Forester’s Law (PFL) and CEQA according to PRC Section 21083.4. Oak woodlands are defined as areas having 10 percent oak canopy cover or greater. “Oaks” are defined in PRC Section 21083.4 as a native tree species in the genus *Quercus*, that is five inches diameter at breast height (DBH) or greater. The Oak Woodlands Conservation Act (Senate Bill [SB] 1334) provides funding for the conservation and protection of oak woodlands in California. Oak trees and oak woodland habitats are protected under both the State and the Nevada County landmark groves and landmark oak tree regulations as discussed below.



## **Local Regulations**

The following are the local environmental laws and policies relevant to biological resources.

### **Nevada County General Plan**

The Nevada County General Plan biological resource policies that are applicable to the proposed project are presented below:

#### **Water Element**

- Goal 11.1 Identify, protect and manage for sustainable water resources and riparian habitats.
- Policy 11.7 Through the development and application of Comprehensive Site Development Standards, and project environmental review, establish and enforce minimum building setback lines from perennial streams and significant wetlands that are adequate to protect stream and wetland resource values.
- Policy 11.8 Utilize voluntary clustering of development to preserve stream corridors, riparian habitat, wetlands, and floodplains.
- Policy 11.10 Cooperate with State and Federal agencies and public and quasi-public organizations and agencies in the acquisition, restoration, and maintenance of habitat lands.
- Policy 11.11 Cooperate with and encourage the USFS and BLM to restore/maintain habitat areas on existing owned lands.

#### **Wildlife and Vegetation Element**

- Goal 13.1 Identify and manage significant areas to achieve sustainable habitat.
- Policy 13.1 Where significant environmental features, as defined in Policy 1.17, are identified during review of projects, the County shall require all portions of the project site that contain or influence said areas to be retained as non-disturbance open space through clustered development on suitable portions of the project site, or other means where mandatory clustering cannot be achieved. The intent and emphasis of such open space designation and non-disturbance is to promote continued viability of contiguous or inter-dependent habitats by avoiding fragmentation of existing habitat areas and preserving movement corridors between related habitats. Vegetation management for the benefit of habitat preservation or restoration shall be considered consistent with the intent of this policy.
- Policy 13.2 As part of the Comprehensive Site Development Standards, include standards to minimize removal of existing vegetation and require installation and long-term maintenance of landscaping in setbacks and buffer areas. These standards shall be applicable to all discretionary projects and to all ministerial projects other than a single-family residence located on an individual lot. Tree removal



may be allowed where necessary to comply with public right-of-way development or dedication, or development of required site access and public utilities. Individual trees or groups of trees shall be protected during construction to prevent damage to the trees and their root systems. Vegetation in proximity to structures shall conform to applicable fire protection standards.

- Policy 13.2A Project review standards shall include a requirement to conduct a site-specific biological inventory to determine the presence of special status species or habitat for such species that may be affected by a proposed project. The results of the biological inventory shall be used as the basis for establishing land use siting and design tools required to achieve the objective of no net loss of habitat function or value for special status species.

Where a Habitat Management Plan is deemed appropriate, the Plan shall be prepared to comply with the requirements of the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). The plan shall provide the background data, impact analysis, and mitigation programs necessary to obtain a FESA Section 10(a) and CESA Section 2081 permit authorizing incidental take of federal and state listed threatened and endangered species that occur in areas proposed for future development. Prior to implementation of an adopted Habitat management Plan, project applicants proposing the development of a project that would impact a federal or state listed species, or a species that is proposed for listing, shall be individually responsible for obtaining federal and state incidental take permits on a project-by-project basis.

- Policy 13.2B Development projects which have the potential to remove natural riparian or wetland habitat of 1 acre or more shall not be permitted unless:
- a. No suitable alternative site or design exists for the land use;
  - b. There is no degradation of the habitat or reduction in the numbers of any rare, threatened, or endangered plant or animal species as a result of the project;
  - c. Habitat of superior quantity and superior or comparable quality will be created or restored to compensate for the loss; and
  - d. The project conforms with regulations and guidelines of the U.S. Fish and Wildlife Service

- Policy 13.3 As part of the Comprehensive Site Development Standards, require the maximum feasible use of drought tolerant native plant species for landscaping of all new multi-family residential, commercial, industrial, and public projects. Invasive, non-native plants, as determined by a landscape architect or other similar expert, that may displace native vegetation on adjoining undeveloped lands



shall not be used. Landscaping with native trees and shrubs shall be encouraged to provide suitable habitat for native wildlife, particularly in proposed open space uses of future development.

- Policy 13.4A No net loss of habitat functions or values shall be caused by development where rare and endangered species and wetlands of over 1 acre, in aggregate, are identified during the review of proposed projects. No net loss shall be achieved through avoidance of the resource, or through creation or restoration of habitat of superior or comparable quality, in accordance with guidelines of the U.S. Fish and Wildlife Service and the California Department of Fish and Game.
- Policy 13.4B Habitat that is required to be protected, restored, or created as mitigation for a project's impacts shall be monitored and maintained in accord with a County-approved Habitat Management Plan.
- Policy 13.4D The County shall prepare and implement a Habitat Management Plan for rare and endangered species and wetlands habitat while allowing the preparation of individual project habitat management plans as an alternative, including an offsite ecological reserve.
- Policy 13.4G To minimize the loss or disturbance of deer habitat, clustering shall be required on parcels of 40 acres in size or larger in critical migratory deer winter ranges in Rural Regions within the western portion of the County, when such parcels are located in areas where the existing parcelization in the immediate vicinity is currently 40 acres or more.
- Policy 13.4H Non-development buffers shall be maintained adjacent to perennial stream corridors through the use of clustering, the designation of a Planned Development, or the implementation of other siting and design tools. Buffers shall be sufficient in size to protect the stream corridor for movement, as well as provide some adjacent upland habitat for foraging.
- Policy 13.8 As part of the Comprehensive Site Development Standards, include measures applicable to all discretionary and ministerial projects to minimize disturbance of heritage and landmark trees and groves. These measures shall include, but are not limited to, requirements for on-site vegetation inventories and mandatory clustering of development in areas likely to support such vegetation or habitat.
- Policy 13.9 Development in the vicinity of significant oak groves of all oak species shall be designed and sited to maximize the long-term preservation of the trees and the integrity of their natural setting. The County shall adopt a regulation to protect native heritage oak trees and significant oak groves. All native oak tree species with a trunk diameter of 36 inches or greater shall be protected.



## **Nevada County Land Use and Development Code**

The Nevada County Land Use and Development Code (LUDC) (Title 3) includes Resource Standards within Article 4. The primary purpose of site development resource standards is to avoid the impact of development projects on sensitive environmental resources and natural site constraints. Where avoidance is not possible, development should minimize impacts in a reasonable fashion that strikes a balance between allowing development of the project site and protecting the resource or avoiding the constraint.

According to Section L-II 4.3.3, General Provisions, Subdivision B, Standard,

The intent of these site development standards is to avoid resource impacts and natural constraints to the maximum possible. To that end, such standards will be applied successively as follows (an applicant cannot descend to the succeeding methods until he or she has shown to the satisfaction of the County that the preceding methods are infeasible):

1. Avoiding the impact by designing or re-designing the project so that the resource or constraint is fully protected and not disturbed. Avoidance is the preferred standard unless the Planning Agency determines that implementation of this standard effectively removes the potential for the reasonable development of the parcel. Avoidance may be attained through clustering, transfer of development rights, buffering, screening, identification of building envelopes, the provision of open space, or other techniques that permanently protect the resource or avoid the constraint. Permanence shall be ensured through dedication, easements, irrevocable trusts, deed restrictions, covenants, or similar techniques running with the land. In addition, zoning techniques (i.e., "Open Space" District, setbacks, etc.) may also be used to ensure permanence. Provisions to avoid the resource or constraint shall become conditions of approval or mitigation measures of the project.
2. Minimizing the impact through preparation and implementation of a County-approved Management Plan prepared by an independent consultant approved by, or under the direction of, County staff, that limits the degree of impact to the maximum extent possible. Where the Planning Agency determines that avoidance is not acceptable or adversely affects another environmentally-sensitive resource, minimization shall be the preferred standard unless the County determines that the standard will not effectively protect the resource or avoid the constraint to an acceptable level. In such instances the County shall deny the project. Minimization may be attained through clustering, buffering, screening, identification of building envelopes, the provision of open space, or other techniques that permanently protect the resource or avoid the constraint. Permanence shall be ensured through dedication, easements, irrevocable trusts, deed restrictions, covenants, or similar techniques running with the land. In addition, zoning techniques (i.e., "Open Space" District, setbacks, etc.) may also be used to ensure permanence. Management Plan provisions to minimize impacts shall become conditions of approval or mitigation measures of the project.
3. Compensating for the impact by replacing or providing a substitute resource or environments. Compensation is appropriate where the Planning Agency determines that avoiding or minimizing the impact is not acceptable. Compensation may include the on-site or off-site provision or creation, protection, and maintenance of a resource or habitat. Management Plan provisions to compensate for impacts shall become conditions of approval of the project. Lands used as compensation for unavoidable project impacts shall be acquired through fee title or conservation easements with the express purpose of maintenance as compensation for impacts to wildlife in perpetuity. Holders of title or easements shall be restricted to mutually



agreed upon agencies or private, non-profit conservation entities approved by the Planning Agency.

Realistic and effective avoidance of impacts and then minimization of impacts must first precede the use of compensatory mitigation.

Subdivision C provides additional direction on Management Plans, discussed in item 2 above. According to subdivision C,

- C. **Management Plan.** Management Plans are a tool that can be used to minimize the impacts of development on environmentally sensitive environmental resources and/or constraints. Where avoidance is not a feasible alternative, a Management Plan may be prepared, consistent with the provisions of this subsection.

Management Plans proposed in conjunction with a discretionary project, such as the proposed project, shall be considered by the hearing body reviewing the project. Management Plans are required for certain types of resources. With respect to biological resources, and those applicable to the Centennial and Brunswick Industrial Sites, these include Rare and Endangered Species and their Habitat (Sec. L-II 4.3.3(A)(i)) and Watercourses, Wetlands and Riparian Areas (Sec. L-II 4.3.3(A)(n)).

Two Management Plans have been prepared to address biological resources and minimization of project impacts to these resources on the Centennial Industrial Site (related to watercourse/wetlands/riparian areas and Pine Hill flannelbush) and one Management Plan has been prepared to address the watercourse/wetland/riparian areas on the Brunswick Industrial Site. The Management Plans consist of:

#### Watercourse/Wetlands/Riparian Areas Management Plan (Centennial and Brunswick)

Pursuant to the Nevada County LUDC, Chapter II; Zoning Regulations, Section L-II 4.3.17 (Ordinance Number 2033) requires a Watercourses, Wetlands, and Riparian Areas Management Plan be prepared for projects in non-disturbance buffers, including areas that are within 100 feet of the high water mark of perennial streams, watercourses, and wetlands, 50 feet from the high water mark of intermittent watercourses, and 100 feet upslope or 20 feet downslope from an Nevada Irrigation District (NID) canal (Nevada County LUDC, 2000). Therefore, aquatic resources Management Plans were developed for the Centennial and Brunswick Industrial Sites due to the proposed future impacts to protected aquatic resources and their non-disturbance buffers within the Sites. The Management Plans meet the requirements of the Nevada County LUDC for the proposed development within aquatic features mapped within the Sites, as well as potential disturbance within the non-disturbance buffers of the aquatic features.

#### Pine Hill Flannelbush (*Fremontodendron decumbens*) – Centennial Industrial Site Only

The Pine Hill Flannelbush Management Plan for the Centennial Industrial Site has been developed in compliance with the Nevada County LUDC, Section L-II 4.3.12, which includes regulations intended to follow the FESA and CESA, by avoiding the impact to development on rare, threatened, endangered, and special status species and their habitat, or where avoidance is not possible, to minimize or compensate for such impacts and to retain their habitat as non-disturbance open space. The regulations indicate that a project may only be approved when it is determined by the Nevada County Planning Agency that it will not adversely affect rare,



threatened, or endangered species or their occupied habitat and that it will result in no net loss of habitat function or value for the defined species. When it is determined that a project will adversely affect a defined species or their habitat, the regulations require that a site-specific habitat management plan consistent with state and federal requirements be prepared.

### Nevada County Landmark Groves and Landmark Oak Tree Regulations

Section L-II 4.3.18 of the Nevada County LUDC addresses trees. Landmark trees are any native oak tree species (*Quercus* species) with a trunk diameter of 36 inches or greater at DBH. Landmark groves are hardwood tree groves with 33+ percent canopy closure, or groves whose size, visual impact, or association with a historically significant structure or event has caused it to be marked for preservation by the county, state, or federal government.

Projects shall be approved only when they do not remove or disturb defined trees or groves, unless a Management Plan is prepared consistent with paragraph 3 or other standards are met consistent with paragraph 3. Exempted from this standard shall be trees or groves determined to be dead, dying, or a public safety hazard by a certified professional arborist, licensed landscape architect, registered professional forester, or qualified biologist or botanist (referred to herein as a qualified professional). In addition, exemption shall apply to those trees that must be removed to ensure fire safe access or provide adequate fuel reduction as determined by the California Department of Forestry or local fire district. Tree removal may also be allowed where necessary to provide for site access and public utilities or public right-of-way.

If the above standard effectively precludes development of the project or a revised project, or adversely affects another environmentally-sensitive resource, a Management Plan shall be prepared by a certified arborist, registered forester, qualified biologist or botanist, or landscape architect. Said Plan shall evaluate the impact of the project on defined trees and groves and recommend project modifications that avoid or minimize impacts. Emphasis shall be placed on protecting groups of trees rather than individuals. Defined trees that must be removed shall be replaced on an inch for an inch replacement of the removed tree(s). The total of replacement trees shall be required to have a combined diameter of the tree(s) removed. The Management Plan shall provide for the long-term maintenance of the replacement trees.

Management Plans shall emphasize protection of two varieties of oak: blue oak (*Quercus douglasii*) and valley oak (*Quercus lobata*). Both are of very limited distribution in Nevada County and considered to be sensitive plants worthy of special protection. However, no such protected oak resources were identified within the Centennial Industrial Site or Brunswick Area and thus a Management Plan would not be required to be developed for the protection of such landmark oak trees and/or landmark oak groves within the two areas.

## **4.4.4 IMPACTS AND MITIGATION MEASURES**

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to biological resources. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

### **Standards of Significance**

Consistent with Appendix G of the CEQA Guidelines, the County's General Plan, and professional judgment, a significant impact would occur if the proposed project would result in the following:



- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

Neither the Centennial Industrial Site, Brunswick Industrial Site, or East Bennett ROW are within an area covered by an adopted HCP, NCCP, or other approved local, regional or state habitat conservation plan. Thus, the proposed project would not conflict with the provisions of any such plan, and therefore this issue is not discussed further.

### **Method of Analysis**

This section provides an overview of the methods employed for the identification and documentation of various biological and aquatic resources documented onsite and/or in the vicinity and identified in the sections above.

### **Biological Resources Assessments**

Generally, in order to evaluate the Centennial Industrial Site, Brunswick Industrial Site, and East Bennett ROW for the presence of any sensitive biological resources, baseline information from databases and reporting for similar projects in the City of Grass Valley and Nevada County was collected and reviewed prior to conducting reconnaissance-level field biological surveys.

### **Sensitive Biological Resources Background Review**

The following information was used to identify potential sensitive biological resources, including the presence of special-status plant and wildlife species, within the Centennial Industrial Site and Brunswick Industrial Site, and East Bennett ROW region:

- California Department of Fish and Wildlife's California Natural Diversity Database records search of 5-mile buffer around the Centennial Industrial Site, Brunswick Industrial Site, and East Bennett ROW (CDFW, 2019a);
- The California Native Plant Society's online Inventory of Rare and Endangered Plants of California (CNPS, 2019);
- The U.S. Fish and Wildlife Service Information, Planning, and Consultation System (IPaC) for endangered, threatened, and proposed listed species (USFWS, 2019);
- National Wetland Inventory maps (NWI, 2019);
- United States Department of Agriculture (USDA) Soils Mapper (USDA, 2019);



- Natural Resources Conservation Service (NRCS) Hydric Soils List for Nevada County (NRCS, 2019);
- Nevada County General Plan (Nevada County, 1996 with subsequent amendments through 2012);
- Draft Environmental Impact Report, including Appendices, for the Idaho-Maryland Mine Project (ESA Associates, October 2008);
- Idaho-Maryland Mine Special-Status Plant Survey Report (ESA Associates, August 2006);
- Idaho-Maryland Mine Special-Status Wildlife Habitat Evaluation Report (ESA Associates, August 2006);
- Centennial Industrial Site Aquatic Resources Delineation of Waters of the United States and State of California (Matuzak, 2020); and
- Centennial Industrial Site Special Status Plant Survey Report (Boes, 2020).
- Brunswick Industrial Site and East Bennett Road ROW Aquatic Resources Delineation of Waters of the United States and State of California (Matuzak, 2020); and
- Brunswick Site Special Status Plant Survey Report (Boes, 2020).

### Reconnaissance Level Biological Resources Field Surveys

Reconnaissance level biological resources field surveys were conducted on foot for the entirety of the Centennial Industrial Site (56.41 acres), Brunswick Industrial Site, and East Bennett ROW (129.23 acres) by Greg Matuzak, Principal Biologist and owner of Greg Matuzak Environmental Consulting LLC, and Wendy Boes, a local Nevada County botanist, on December 9 through 12, and 17 and 18, 2018. Follow up reconnaissance level biological resources field surveys were conducted by Greg Matuzak for potential special-status wildlife species habitats on December 30, 2018 and by Wendy Boes for the special-status plant species habitat on January 3, 2019. The purpose of the surveys completed in December 2018 and January 2019 was to identify habitat and vegetation types and to determine the potential for any special-status plant and wildlife species identified in the desktop analysis and background research to occur within the Centennial Industrial Site and Brunswick Area.

Further evaluation of the Centennial Industrial Site was conducted on July 1, 10 and 14, 2019, and for the Brunswick Area, July 1, 14, and August 16, 2019, by Ms. Boes who implemented botanical surveys within the entirety of the Sites. The follow-up botanical surveys were conducted during the time of year when the majority of target special-status plant species with potential to occur within the two Sites are known to be in bloom and identification of each is most likely. Wendy Boes most recently served as a U.S. Forest Service botanist with the local Tahoe National Forest and has also been a local botanical expert consultant in the greater project area for many years.

During the site visits and surveys conducted in July 2019, Greg Matuzak also conducted reconnaissance-level wildlife surveys to document the presence of such species and associates suitable habitats within the Centennial Industrial Site and Brunswick Area.

Additional surveys were conducted on the Brunswick Industrial Site due to the presence of South Fork Wolf Creek. Mr. Matuzak conducted a habitat assessment and Visual Encounter Surveys (VES) for foothill yellow-legged frog within the South Fork Wolf Creek in the Brunswick Industrial Site, as well as within the portions of the creek that flow through public property downstream within the Empire Mine State Historic Park on August 29, 2019. The VES methodology is based on a CDFW-approved protocol following Yarnell et al. (January 2014) for evaluating the abundance, distribution, and habitat associations of foothill yellow-legged frog within rivers and



streams, and to provide the necessary data to coordinate other stream reach study efforts,<sup>13</sup> where feasible, such as instream flow studies where hydrodynamic modeling will be used. Given the intensity of the implementation of the VES methodology, it also provides the ability to assess the presence of other aquatic resources within the stream study area and to assess the overall habitat quality of the study stretch in terms of the potential of the stream to provide the necessary habitat structure and streambed substrate for macroinvertebrates, fish, and other aquatic resources.

### **Aquatic Resources Delineations**

The delineation of potential Section 404 “waters of the United States” and wetlands (as a subcategory of waters), RWQCB “waters of the State”, and CDFW jurisdictional areas within the Centennial Industrial Site was conducted on December 11, 12, 17, and 18, 2018, with follow up site visits on July 1, 10, and 14, 2019. For the Brunswick Area, the delineation was conducted on December 17 and 18, 2018, with follow up site visits on July 10, July 14, August 16, and August 29, 2019. For both Sites, the routine Corps methodology was employed, as detailed in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratories, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Regions* (Version 2.0) (Corps, 2010). Reconnaissance level site visits were conducted in late November and early December 2018 that aided the characterization of the extent of potential jurisdictional areas that were mapped in mid-December 2018 and in July and August 2019.

The entirety of the Centennial Industrial Site and Brunswick Area was surveyed on foot by wetland ecologist, Mr. Greg Matuzak, and GPS/GIS specialist and botanist, Ms. Wendy Boes, to identify and map the presence of “waters of the U.S.,” including wetlands, and “waters of the State of California.” The extent or boundary of wetland habitats was further defined using routine on-site wetland determination protocol currently in use by the Corps, published Corps regulatory guidance letters, and Sacramento District regulatory policy.

Additionally, Mr. Greg Matuzak conducted a follow up review of targeted areas within the central and eastern sections of the Centennial and Brunswick Industrial Sites on August 27, 2020 to reevaluate the potential presence of wetlands and streams not previously mapped as part of the December 2018 and July 2019 wetland assessment field related surveys.

### **Field Data Collection**

Data was collected on vegetation, soils, and hydrology using wetland determination protocol as described in the 1987 Manual. Both upland and wetland data were collected to distinguish wetland boundaries from the adjacent upland. No soil test pits were taken within potential aquatic features that were confined to channels, thus conforming to the definition of “other waters of the U.S.” (i.e., exhibits a distinct bed and bank with an OHWM). No soil test pits were taken within ponded areas with standing water as it was assumed that such ponded areas are potential jurisdictional wetland features since they exhibited a direct connection to mapped downstream stream and/or wetland features also considered jurisdictional.

---

<sup>13</sup> See for example, Greg Matuzak Environmental LLC. *Updated Technical Memorandum for the Idaho-Maryland Mine Project – South Fork Wolf Creek Discharge Biological Resources Assessment*. January 29, 2021.



## Botanical Reports

### Centennial Industrial Site, Brunswick Industrial Site and East Bennett Road ROW

The botanical field survey was conducted in general accordance with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). Wendy Boes, botanist, served as the lead investigator for the botanical survey. Denise Della Santina, biologist, provided additional field assistance. The field survey was floristic in nature and consisted of identifying each species observed to the taxonomic level necessary to determine whether the plant is a federal or state listed special-status species. Plant taxonomy followed Baldwin et al. (2012), including applicable errata and supplements (Jepson Flora Project 2019). The field surveys were performed by walking meandering transects through microhabitats with the potential to support special-status plants. Survey intensity was heightened in areas corresponding to vegetation communities having the potential to support the special status plants identified in the pre-field resource review.

Reconnaissance level surveys were conducted December 9-12, 18 & 19, 2018. These surveys were conducted in concurrence with wetland delineation efforts. The result of these surveys was to assess the potential habitat for special-status plants but were not conducted within the appropriate phenological timeframe for detection and confirmation for most, if not all, of the special-status plants.

Field surveys were conducted by Wendy Boes and Denise Della Santina on July 1, 10, and 14, and August 16, 2019. The field survey was conducted at a time when the majority of potentially occurring special-status plant species could be identified if they were present. A nearby reference population of finger rush was visited on June 24, 2019 prior to commencing field surveys to ensure this species was still detectable, which was confirmed. No other reference sites were required to be visited given the botanists local knowledge of the other target species as part of the survey effort. Adverse conditions (e.g., drought, herbivory) were not encountered that would affect the identification of potential special-status plant species.

### Independent Peer Review

Madrone Ecological Consulting was retained by Raney to conduct a third-party independent technical peer review of the various biological resources reports prepared for the Centennial Industrial Site and Brunswick Area by Greg Matuzak Environmental Consulting LLC.

Prior to the review of the project's biological resources reports, Madrone Ecological Consulting, LLC (Madrone) completed a review of publicly available database resources. Madrone queried the CNDDDB, the USFWS National Wetlands Inventory Online Mapper, and the CNPS Inventory of Rare and Endangered Plants. In addition, Madrone Senior Biologists Dustin Brown (wildlife biologist) and Daria Snider (botanist) conducted a field survey of the three sites discussed in the report to generally assess the adequacy of biological resource documentation. This reconnaissance-level field survey was conducted on 17 June 2020.

Madrone's field visit identified some aquatic features that were not discussed in the Aquatic Resource Delineations for the project. In response, Matuzak Environmental conducted a targeted review of site conditions within the central and eastern sections of the Brunswick Industrial Site



and the Centennial Industrial Site on August 27, 2020.<sup>14</sup> The purpose of this review was to reevaluate site conditions for the potential presence of wetlands within the site based on the July 2020 Madrone Ecological Consulting peer review. Except for the perennial drainage that runs along Brunswick Road (not identified in the December 2018 and July and August 2019 field surveys), this targeted survey did not identify any additional potential CWA regulated wetlands. These survey areas lacked the required indicators of wetland hydrology and hydric soils required by the Corps to be regulated under the CWA. As identified above, a perennial drainage was mapped that runs along the western edge of Brunswick Road in a northerly direction before entering a culvert that crosses through the central section of the Brunswick Industrial Site before exiting the large culvert and creating the South Fork Wolf Creek. The perennial drainage appears to cross Brunswick Road from the east and most likely is fed by perennial springs coming from the eastern hillsides before entering the perennial drainage along the western side of Brunswick Road.

Madrone's peer review also identified concerns with respect to the timing of the special-status plant surveys conducted for the Centennial and Brunswick botanical reports. The reports indicate that botanical surveys were conducted for the Centennial Industrial Site on July 1, 10 and 14, 2019, and for the Brunswick Area, on July 1, 14, and August 16, 2019, by Wendy Boes. The botanical surveys were conducted during the time of year when the majority of target special-status plant species with potential to occur within the two Sites are known to be in bloom and identification of each is most likely. Wendy Boes most recently served as a US Forest Service botanist with the local Tahoe National Forest and has also been a local botanical expert consultant in the greater project area for many years. Notwithstanding, in order to address the peer review comment, this EIR requires additional special-status plant surveys to be conducted prior to on-site ground disturbance activities to identify potential early blooming season (April to May) special-status plant species within the Centennial Industrial Site and Brunswick Area.

Madrone Ecological also recommended that CRPR List 3 species be treated as special-status. As demonstrated in this chapter, doing so should be based on whether the plants in question meet the criteria in CEQA Guidelines Section 15380. This chapter demonstrates that List 3 species potentially occurring on the Sites do not meet the criteria in Section 15380.

Madrone Ecological provided other peer review comments, including suggested revisions to mitigation language, which have been incorporated into this EIR and addressed by Greg Matuzak Environmental Consulting in the form of revised reports attached to the EIR as appendices. All peer review comments have been adequately addressed and resolved.

### **Project-Specific Impacts and Mitigation Measures**

The following discussion of impacts related to biological resources is based on implementation of the proposed project in comparison to baseline conditions and the standards of significance presented above.

---

<sup>14</sup> Greg Matuzak Environmental Consulting LLC. *Brunswick Industrial Site and East Bennett Road Right of Way (ROW) Biological Resources Assessment* [pg. 5-2]. January 2021; Greg Matuzak Environmental Consulting LLC. *Centennial Industrial Site Biological Resources Assessment* [pg. 5-4]. January 2021.



**4.4-1 Have a substantial adverse effect to special-status plant species either directly or through habitat modifications. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.**

Centennial Industrial Site

Special-status plant surveys were initially conducted in December 2018 and early January 2019, which is outside the blooming period for most special-status plant species with potential to occur within the Centennial Industrial Site. The blooming period for special-status plant species within the Centennial Industrial Site range between March and October. The Pine Hill flannelbush, a federally endangered and California Rare Plant was ostensibly<sup>15</sup> identified based on the perennial nature of the plant and from the identification of dried flowers from earlier in 2018 (Boes, 2020). Follow up special-status plant surveys were conducted in July and August 2019 during the time of year when most special-status plant species with the potential to occur within the Centennial Industrial Site are in bloom and most easily identified.

The Centennial Industrial Site contains two unlisted plant species. Neither species is rare nor threatened. The CNPS lists the species as “List 4 Species”, which include the Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*) and the Sierra brodiaea (*Brodiaea sierra*). A large population with thousands of individual Sierra brodiaea covering almost a quarter of the Centennial Industrial Site was mapped during 2019 field surveys and a single occurrence of the Humboldt lily consisting of 10 individuals in an area less than 110 square feet was also documented in the Centennial Industrial Site during 2019 field surveys. Neither Humboldt lily nor Sierra brodiaea meet the CEQA Guidelines Section 15380 as either “endangered” “threatened” or “rare” under the CEQA guidelines species definitions given their survival and reproduction in the wild are not threatened with endangerment.<sup>16</sup> Therefore, impacts to these species (CNPS List 4) do not require mitigation under CEQA Guidelines Section 15380.

Table 4.4-7 and Figure 4.4-7 identify the estimated acreage impacts to vegetation communities within the Centennial Industrial Site as a result of placement of engineered fill associated with the Brunswick Industrial Site mining operation. Approximately half of the Centennial Industrial Site will have been already disturbed during site remediation carried out under DTSC oversight, at which time the applicant would be required by DTSC to implement mitigation measures protective of special-status plants.

The vegetation communities further impacted by the proposed project (i.e., placement of engineered fill) have been identified to contain suitable habitat for other potentially occurring special-status plant species. Therefore, proposed disturbance within those vegetation communities remaining after remediation could impact special-status plant species, if present during such disturbance.

<sup>15</sup> This word is used due to the inconclusive genetic results of recent research and further discussed herein.

<sup>16</sup> Email communication between Greg Matuzak Environmental LLC. and Chris Powell, Mitchell Chadwick LLP. December 17, 2020.

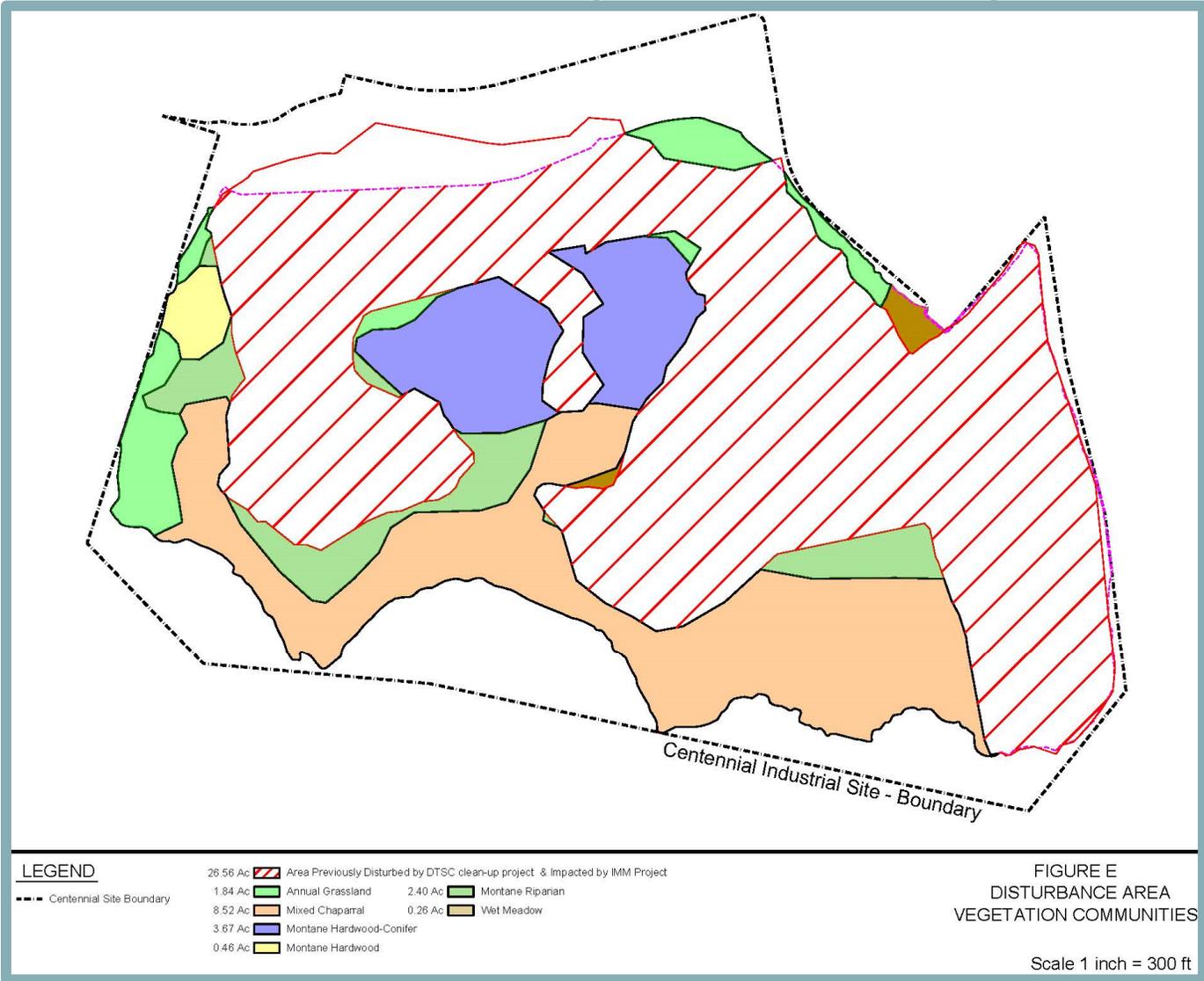


**Table 4.4-7  
 Centennial Industrial Site: Estimated Acreage Impacts to  
 Vegetation Communities**

<b>Vegetation Community</b>	<b>Estimated Acreage Impacts</b>	<b>Associated Special-Status Species</b>
Montane Hardwood-Conifer	3.67	Chaparral sedge (Rank 1B.2), Red Hills soaproot (Rank 1B.2), Sierra blue grass (Rank 1B.3), Cantelow's Lewisia (Rank 1B.2)
Montane Hardwood	0.46	Brandegee's clarkia (Rank 1B.2), Chaparral sedge (Rank 1B.2), Red Hills soaproot (Rank 1B.2), Sierra blue grass (Rank 1B.3), Cantelow's Lewisia (Rank 1B.2)
Wolf Creek and Montane Riparian	2.40	Sierra blue grass (Rank 1B.3), Foothill yellow-legged frog (CSC), Western pond turtle (CSC)
Mixed Chaparral	8.52	Pine Hill flannelbush (FE/CR), Stebbins' morning glory (FE/CE), finger rush (Rank 1B.1), Chaparral sedge (Rank 1B.2), Cantelow's lewisia (Rank 1B.2), Red Hills soaproot (Rank 1B.2), Coast horned lizard (CSC) and nesting migratory birds (CDFW)
Annual Grassland	1.84	Brownish beaked-rush (Rank 2B.2)
Wet Meadow	0.26	Brownish beaked-rush (Rank 2B.2) and finger rush (Rank 1B.1)
<b>Estimated Total Acreage Disturbance</b>	<b>17.15</b>	



**Figure 4.4-7  
 Centennial Industrial Site Vegetation Communities Impacts**



Therefore, prior to the implementation of future ground disturbing activities within the Centennial Industrial Site, an additional special-status plant survey would be required to identify potential early blooming season (April to May) special-status plant species within the Centennial Industrial Site.

### *Pine Hill Flannelbush*

As stated above, in the past there has been question as to whether the flannebush occurrences on the Centennial Industrial Site are Pine Hill flannelbush (i.e., ssp. *decumbens*). As previously discussed, recent genetic work has confirmed that Pine Hill flannelbush is known to occur in Nevada County, but this work is still in press. For the purposes of the Biological Report and this EIR, it is conservatively assumed that the individual plants identified within the Centennial Industrial Site may be the FESA listed Pine Hill flannelbush.

Sixty individual mature and flowering Pine Hill flannelbush plants occupy an absolute area of 0.22 acres over approximately 4.5 acres of the Centennial Industrial Site. The base of the engineered fill that would be placed on the Centennial Industrial Site during the proposed mining operations at Brunswick would extend approximately 44 acres across the site, although much of the area would have already experienced surface disturbance by site remediation efforts, as previously discussed. Disturbance and engineered fill placement would be avoided on the remaining 12.7 acres, which includes the main stem of Wolf Creek, the 100-foot non-disturbance setback of the main stem of Wolf Creek, and an undisturbed and protected zone containing Pine Hill flannelbush.

The proposed placement of engineered fill at the Centennial Site would impact 18 Pine Hill flannelbush plants directly by requiring their removal as part of the Idaho-Maryland Mine Project. The remaining 42 individual Pine Hill flannelbush plants are located outside of the proposed engineered fill areas and therefore, they would not be directly impacted by the Idaho-Maryland Mine Project. However, four individual Pine Hill flannelbush plants would be located within 30 feet of the edge of the engineered fill material and could be subject to indirect effects from changes in topography, runoff, etc. that could occur as an edge effect on those individual plants. The four individual plants are located approximately 27, 26, 28, and 29 feet from the edge of the proposed engineered fill. Therefore, it is estimated that 18 individual Pine Hill flannelbush plants would be directly impacted, and potentially four additional Pine Hill flannelbush plants could be indirectly impacted by the Idaho-Maryland Mine Project.

### Centennial Pine Hill Flannelbush Habitat Management Plan

A HMP has been developed for Pine Hill flannelbush in compliance with the Nevada County LUDC, Section L-II 4.3.12. When it is determined that a project would adversely affect a defined special-status species or their habitat, the regulations require that a site-specific habitat management plan consistent with state and federal requirements be prepared.

Pine Hill flannelbush within the Centennial Industrial Site have been confined to the southern section that has been mapped by the U.S. Department of Agriculture (USDA) as Secca-Rock outcrop complex, two to 50 percent slopes. The placement of engineered fill would impact a little less than half (approximately five acres) of



the total estimated gabbro soils (10.31 acres, Secca-Rock outcrop complex, two to 50 percent slopes) on the property.

Figure 4.4-8 contains mapping of USDA soils series within six miles of the Centennial Industrial Site that are known to contain gabbro parent material, the soil type required for the Pine Hill flannelbush. The soils series within Nevada County that are known to contain gabbro parent material include Secca, Sites, Boomer, and Chaix variants USDA soils series (from the Nevada County USDA Soils Series). A majority of the mapped Secca-Rock outcrop complex, two to 50 percent slopes soil type is located to the southwest of the Centennial Industrial Site where the largest area of previously mapped flannelbush in Nevada County has occurred within and adjacent to the Nevada County transfer station off of McCourtney Road (CNDDDB, 2020). Within six miles of the Centennial Industrial Site, approximately 8,124 acres of Secca-Rock outcrop complex, two to 50 percent slopes have been mapped, and a total of 30,741 acres of Secca, Sites, Boomer, and Chaix variants USDA soils series have been mapped within six miles of the Centennial Industrial Site. Therefore, gabbro soils are not a limiting factor within the region of the Centennial Industrial Site.

If in fact, the flannelbush specimens on the Centennial Industrial Site are the federally endangered Pine Hill flannelbush (ssp. *decumbens*), it is noteworthy that the USFWS's 5-Year Review of the Recovery Plan for Gabbro Soil Plants recommends securing and protecting the flannelbush within Nevada and Yuba counties if they are determined to be the listed decumbent flannelbush.

The Centennial Pine Hill flannelbush HMP sets forth an overall management approach and mitigation strategy, including such actions as protective measures for the 42 plants within the avoidance area, seed collection and propagation, transplanting, and monitoring to ensure success.

### Brunswick Industrial Site and East Bennet Road ROW

Special-status plant surveys were conducted in December 2018 and early January 2019, as well as July and August 2019, which is in the blooming period for most special-status plant species with potential to occur within the Brunswick Area. The blooming period for special-status plant species within the Brunswick Area range between March and October. The Humboldt lily, a CNPS List 4.2 special-status plant species, was identified within the Brunswick Industrial Site and along the East Bennett Road ROW in July and August 2019. As a CNPS List 4 species, Humboldt lily is not considered special-status under the criteria used in this analysis.

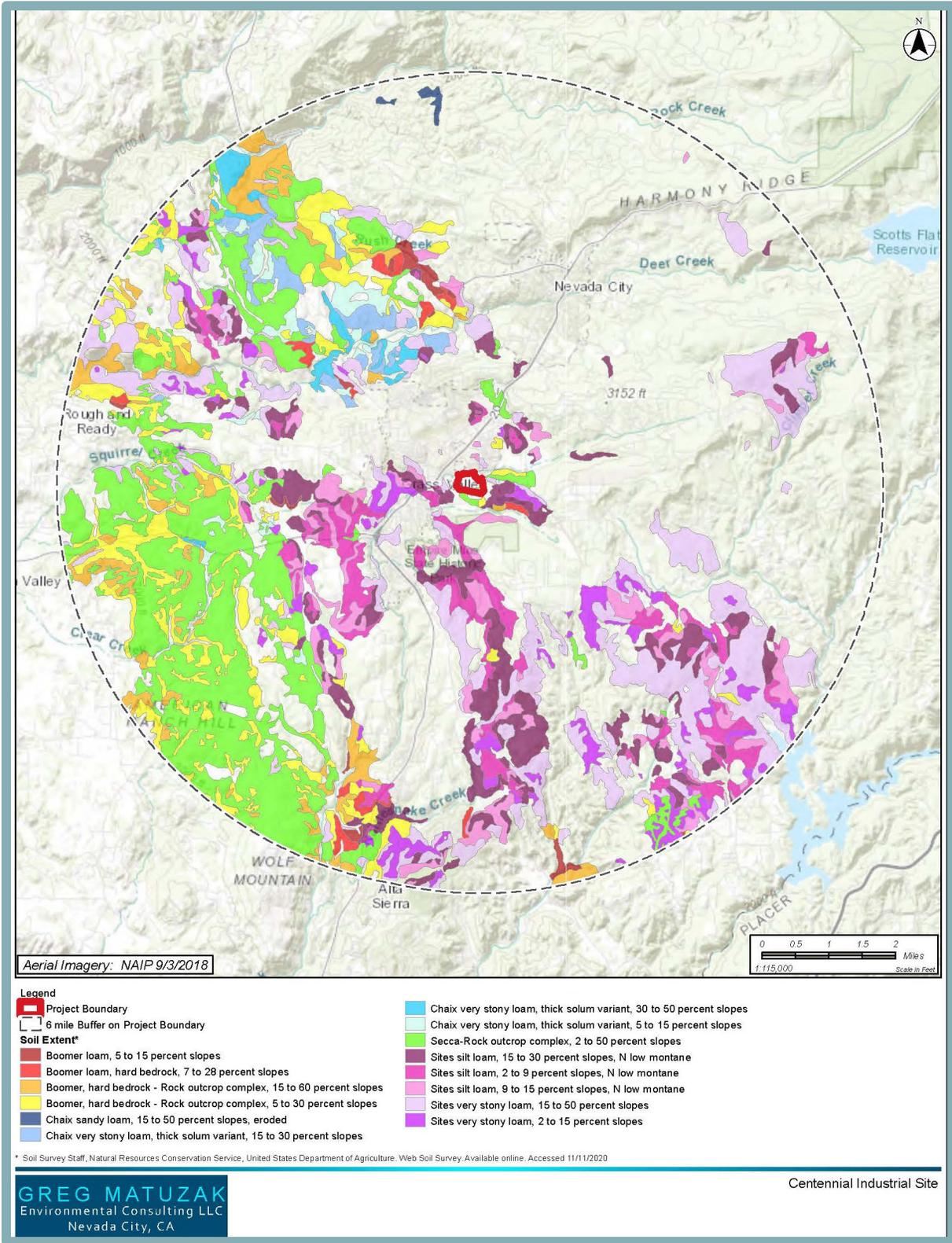
According to CNPS, "CRPR 4 taxa do not clearly meet CEQA standards and thresholds for impact considerations".<sup>17</sup> However, CNPS and CDFW strongly recommend that these taxa be evaluated in CEQA documents. Reasons for considering List 4 species in CEQA documents, according to CNPS, include among others, areas where the taxon is especially uncommon and areas where the taxon has sustained heavy losses (declining).

---

<sup>17</sup> California Native Plant Society. *Technical Memorandum: Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis*. January 2020.



**Figure 4.4-8  
 Gabbro Soils Within 6 Miles of Centennial Industrial Site**



Humboldt lily is known to occur in openings in chaparral, cismontane woodland and lower montane coniferous forests. It is known from Amador, Butte, Calaveras, El Dorado, Fresno, Mariposa, Nevada, Placer, Tehama, Tuolumne, and Yuba counties at elevations ranging between 295 and 4,200 feet above msl. The Brunswick Industrial Site has suitable habitat for the species and a single occurrence consisting of 10 individuals, within an area less than 110 square feet, was documented within a disturbed area of the Brunswick Industrial Site, and a single occurrence consisting of a few individuals was documented within the East Bennett Road ROW.

Humboldt lily does not meet the CEQA Guidelines Section 15380 as either “endangered” “threatened” or “rare” under the CEQA guidelines species definitions given their survival and reproduction in the wild are not threatened with endangerment.<sup>18</sup>

Special-status plants were not documented within the Brunswick Area during the site visits and surveys. However, as shown on Table 4.4-8, which identifies the acreage impacts to vegetation communities within the Brunswick Area, those vegetation communities have been identified to contain suitable habitat for special-status plant species. Therefore, proposed disturbance within those vegetation communities mapped within the Brunswick Area could impact special-status plant species if present during such disturbance.

<b>Vegetation Community</b>	<b>Estimated Acreage Impacts</b>	<b>Associated Special-Status Species</b>
Montane Hardwood-Conifer	1.24	Sierra arching sedge (Rank 1B.2), Sierra blue grass (Rank 1B.3), Cantelow’s lewisia (Rank 1B.2)
Montane Hardwood	0.06	Sierra arching sedge (Rank 1B.2), Sierra blue grass (Rank 1B.3), Cantelow’s lewisia (Rank 1B.2)
Ponderosa Pine	0.93	Sierra arching sedge (Rank 1B.2), Sierra blue grass (Rank 1B.3), Cantelow’s lewisia (Rank 1B.2)
Sierran Mixed Conifer	16.44	Sierra arching sedge (Rank 1B.2), Sierra blue grass (Rank 1B.3), Cantelow’s lewisia (Rank 1B.2)
Manmade Pond	7.28	Western pond turtle (CSC), California red-legged frog (ESA listed)
Disturbed and Developed	33.44	Coast horned lizard (CSC), Townsend’s big-eared bat (CSC)
Annual Grassland	0.26	Brownish beaked-rush (Rank 2B.2)
Wet Meadow	0.26	Brownish beaked-rush (Rank 2B.2) and finger rush (Rank 1B.1)
<b>Estimated Total Acreage Disturbance</b>	<b>60</b>	

Prior to the implementation of project ground disturbing activities within the Brunswick Area, an additional special-status plant survey would be required and is specified as

<sup>18</sup> Email communication between Greg Matuzak Environmental LLC. and Chris Powell, Mitchell Chadwick LLP. December 17, 2020.



mitigation below to identify potential early blooming season (April to May) special-status plant species within the Brunswick Area.

### Conclusion

An estimated 18 individual Pine Hill flannelbush plants would be impacted by proposed engineered fill placement at the Centennial Industrial Site. In addition, suitable habitat for other potentially occurring special-status plant species would be impacted at both the Centennial Industrial Site and Brunswick Area. Therefore, the proposed project would have a **significant** impact to special-status plant species either directly (e.g., threaten to eliminate a plant community) or through substantial habitat modifications.

### Mitigation Measure(s)

#### *Pine Hill Flannelbush*

Implementation of mitigation measure 4.4-1(a) would reduce the potential impact to Pine Hill flannelbush to a *less-than-significant* level.

Additionally, given the presence of and potential impacts to a FESA listed special-status plant species within the Centennial Industrial Site, the USFWS will develop a Biological Opinion (BO) if the Idaho-Maryland Mine Project is covered under a Section 7 FESA consultation, or if the Idaho-Maryland Mine Project is covered under a Section 10 FESA consultation, a HCP for the Pine Hill flannelbush would most likely be required. The BO or HCP covering impacts to this FESA listed species within the Centennial Industrial Site may contain additional requirements related to avoidance and minimization measures. Notwithstanding potential additional requirements that may be imposed by the USFWS under BO or HCP, Mitigation Measure 4.4-1(a) is considered sufficient to mitigate the project impact to Pine Hill flannelbush for the purposes of the County's CEQA review.

4.4-1(a) *Prior to issuance of grading permits for the Centennial Industrial Site, the project applicant shall implement project-specific mitigation measures 1-3 within the Centennial Pine Hill Flannelbush Habitat Management Plan (Matuzak 2021) (HMP), to the satisfaction of the County, USFWS and CDFW. Project-specific mitigation measures generally include protective measures for the Pine Hill flannelbush within the on-site avoidance area. For project actions that will directly impact the Pine Hill flannelbush, measure 4 (monitoring) shall occur on an ongoing basis, and measure 5 depends upon the results of monitoring, and thus, measures 4 and 5 are not required prior to issuance of grading permits):*

1. *Seed Collection;*

*Collect seed for seedbanking and for future replacement and recovery efforts pursuant to the requirements of Section 6.2 of the HMP.*

2. *Develop Transplantation Plan and Monitoring Plan;*

*The Transplantation and Monitoring Plan shall be developed in consultation with USFWS and CDFW, and shall, at a minimum,*



address location(s) for dormant season relocation, site selection for transplanting, and metrics of successful establishment (i.e., Section 6 of the HMP).

3. *Transplanting;*

*Transplant the individuals of Pine Hill flannelbush that fall within the disturbance footprint to another site with similar soil, hydrologic, vegetation type and aspect. The transplantation site(s) selected shall extend the known population spatially, in other words, planting beyond the known perimeters of the existing population is preferable, to maintain population coverage. Transplanting shall occur in the season deemed to have the greatest potential for success, generally the fall, after rains have commenced.*

4. *Transplant Monitoring; and*

*Transplants shall be monitored every month for the first six months, then subsequently, every two months for the first two years. After monitoring identifies successful establishment and flowering for the second season for each of the transplants, transplanting will have been deemed successful.*

5. *Alternative Measures to Transplantation and Seed Collection (if required pursuant to the criteria in the HMP)*

*If Steps 1-4 of the HMP are not successful in maintaining the Pine Hill flannelbush population numbers, then the following measures shall be taken:*

- Individuals shall be grown from seed and transplanted out in a 100:1 ratio for those taken.*
- Transplants of individuals grown from seed shall be planted with similar soil, hydrologic, vegetation type and aspect.*
- Transplanting shall occur in the season deemed to have the greatest potential for success, generally the fall, after rains have commenced.*
- Transplants shall be monitored every month for the first six months, then subsequently, every two months for the first two years.*

*Habitat Enhancement: Prior to issuance of grading permits, pursuant to the HMP, the applicant shall enhance Pine Hill flannelbush habitat outside the disturbance footprint, which could include removal of invasive plants and conducting a pilot study by collaborating with CAL FIRE or other research facility to conduct prescribed fire in areas to enhance natural germination and recruitment, as Pine Hill flannelbush need fire for successful germination, and root sprouts.*



***Conservation Easement:** Prior to issuance of grading permits, the applicant shall record a Conservation Easement for the on-site Pine Hill flannelbush avoidance area, or use a similar land protection mechanism that runs with the land in perpetuity, to protect the Pine Hill flannelbush plants within the avoidance area. The management guidelines for the Conservation Easement or similar mechanism shall require that the habitat be managed for the Pine Hill flannelbush and its associated habitat. The applicant shall also record a Conservation Easement or use a similar land protection mechanism for any offsite areas not owned by the applicant where the transplants are to be located.*

### *Other Special-Status Plant Species*

Implementation of mitigation measure 4.4-1(b) would reduce the potential project impacts to other special-status plants to a *less-than-significant* level.

4.4-1(b) *Prior to issuance of grading permits for the Centennial Industrial Site and Brunswick Area (i.e., Brunswick Industrial Site and East Bennett Road ROW), focused plant surveys shall be performed according to CDFW and CNPS protocol (e.g., “Procotols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities”, CDFW 2018), as generally described below. If special-status plant species (i.e., federal and/or state endangered, threatened, or proposed candidates for listing; CRPR Lists 1 or 2) are not found during appropriately timed focused surveys, then further mitigation is not necessary. The results of the surveys shall be submitted to the Nevada County Planning Department.*

*Prior to Improvement Plan approval for each phase of the project, focused surveys shall be performed by a qualified botanist during the appropriate early blooming period (April to May) for those special-status plant species identified in the Biological Resources Assessments as potential occurring within the Centennial Industrial Site and/or Brunswick Area. Furthermore, should additional plants having the potential to occur within these areas be given special-status in the future, the qualified botanist shall also determine the presence/absence of such species. The survey(s) shall be conducted on-site as well as in any off-site improvement areas, as applicable for each phase, during the early identification periods (bloom periods) for all potentially occurring special-status plant species. If the special-status plant species are not found to be present during the focused survey(s), then no further action is required. The results of the focused surveys shall be submitted to the Nevada County Planning Department.*

*If any special-status plant species are found, protection of such plant shall include complete avoidance, transplantation, or on- or off-site restoration of the special-status plant species that could be impacted by site disturbance. These protective measures for such plants shall be included as part of the required development of a Habitat Management Plan (HMP) as part of compliance with the Nevada County Land Use and Development Code, Section L-II 4.3.12, which includes regulations intended to avoid the*



*impact of development on rare, threatened, endangered, and special-status species and their habitat, or where avoidance is not possible, to minimize or compensate for such impacts and to retain their habitat as non-disturbance open space. The HMP shall include the avoidance, minimization, and mitigation measures outlined below as part of compliance with the Nevada County Land Use and Development Code, Section L-II 4.3.12.*

*At a minimum, the HMP shall include the following protective measures for special-status plant species with the potential to be impacted by the proposed disturbance:*

- *a map of the location of special-status species that may be disturbed or need to be protected;*
- *location of environmental protection fencing to be placed around the individual plants to be protected;*
- *identification of the location of protected plants on design and construction drawings;*
- *environmental awareness training for all personnel working on the project during initial site disturbance to discuss the location of the protected plants and the measures to be taken to avoid impacts to them; and*
- *weekly site monitoring by a qualified biologist to ensure that the special-status plants are being protected during site disturbance and construction.*

*Where individuals would be potentially affected directly by site disturbance and transplantation of individual plants is required to minimize and mitigate for impacts to such species, the following shall be integrated into the HMP:*

- *remove bulbs of individual plants to be directly impacted during the dormant season;*
- *relocate the bulbs to a site with similar soil, hydrologic, vegetation type and aspect as the portion of the project site where the plants are found; and*
- *identify the location(s) for dormant season relocation and site selection for transplantation.*

*The HMP would also include a requirement to meet the following criteria:*

- *metrics of successful establishment, which would include a minimum of 80 percent survival of the transplants after two years of transplanting the species.*

*If the 80 percent survival is not established after two years, transplants of individuals grown from seed shall be planted at a location with similar soil, hydrologic, vegetation type and aspect as the portion of the site where they are found. Transplantation shall occur in the season deemed to have the greatest potential for success, generally the fall, after rains have*



*commenced. Transplants shall be monitored every month for the first six months, then every two months for a minimum of two years. After two summer seasons of monitoring identifies successful establishment of 50 percent of the initial transplants, transplant seedlings will be deemed successful.*

**4.4-2 Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status wildlife species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.**

This impact statement evaluates the potential for special-status wildlife to occur within the Centennial Industrial Site and the Brunswick Area, and whether the construction and operation associated with the proposed project could have a substantial adverse effect on any special-status wildlife species. As previously discussed, approximately half of the Centennial Industrial Site will have been already disturbed during site remediation carried out under DTSC oversight, at which time the applicant would be required by DTSC to implement mitigation measures protective of special-status wildlife.

Foothill Yellow-Legged Frog

*Centennial Industrial Site*

The main stem of Wolf Creek within the Centennial Industrial Site is considered suitable habitat for Foothill Yellow-Legged Frog. This species was not identified during any surveys of the Centennial Industrial Site for special-status wildlife species between 2018 and 2019. Protocol-level surveys (VES method surveys pursuant to the CDFW protocol) for this species were not performed within the Centennial Industrial Site as part of this reporting, as the potential for this species to occur within the Centennial Industrial Site is considered very low.

Pre-construction activities and grading near the toe of the engineered fill industrial pad on the Centennial Industrial Site may cause temporary impacts to the 100-foot non-disturbance buffer of Wolf Creek (perennial creek). All construction activities would remain outside the Special Flood Hazard Area as pursuant to Federal Emergency Management Agency (FEMA) regulations, which is covered under a separate Management Plan prepared by Nevada City Engineering, Inc. for the Idaho-Maryland Mine Project (see Chapter 4.8, Hydrology and Water Quality, of this EIR).

Temporary or permanent impacts would not occur to Wolf Creek from project development; however, in the event that temporary encroachment within the Wolf Creek 100-foot non-disturbance buffer would be required as part of construction, the project could have an adverse effect on foothill yellow-legged frog were it present within Wolf Creek.

*Brunswick Industrial Site*

Foothill yellow-legged frog was not identified during focused VES method surveys for this species conducted on August 29, 2019 within South Fork Wolf Creek within the



Brunswick Area, as well as within the portions of South Fork Wolf Creek that flow through public property downstream within the Empire Mine State Historic Park.

The stretches of South Fork Wolf Creek within the Brunswick Industrial Site from the large 48-inch culvert creating the stream, and downstream 700 feet from the culvert, do not contain suitable habitat for the species given the silty nature of the bed of the stream and lack of rocky stream habitat in that area. However, from approximately 700 feet downstream of the 48-inch culvert to the northwestern boundary of the Brunswick Industrial Site (approximately 2,000 feet of South Fork Wolf Creek) there is marginal suitable habitat for the species. Given the species has not been previously identified within the South Fork Wolf Creek watershed and only marginal suitable habitat occurs within the Brunswick Industrial Site for the species, there is a very low likelihood this species occurs within the South Fork Wolf Creek.

The proposed project includes limited disturbance to South Fork Wolf Creek within the Brunswick Industrial Site, such as the installation of the outfall for the treated mine water discharge and the outfall for the stormwater detention pond, as well as the replacement of the 48-inch culvert and outfall where South Fork Wolf Creek originates on the Site. While these improvements would occur within stretches of South Fork Wolf Creek that are only considered marginally suitable habitat, it is conservatively concluded that the proposed project could adversely affect foothill yellow-legged frog if present during construction of these improvements.

In addition to the physical improvements, the project includes discharge of treated mine water into South Fork Wolf Creek. As discussed in detail in Chapter 4.8, Hydrology and Water Quality, the proposed project will discharge a maximum of 5.6 cubic feet per second (cfs) of treated mine water to South Fork Wolf Creek and such discharges will be in compliance with the waste discharge requirements of General Order R5-2016-0076, National Pollutant Discharge Elimination System (NPDES) No. CAG995002 for Tier 3 Dischargers: Discharges of wastewater from hard rock mines.

Base flow in South Fork Wolf Creek may range from 0.17 cfs in the summer to 6.5 cfs in the winter between storm events, at the location of the proposed discharge of the treated mine water (Balance, 2020).<sup>19</sup> During field monitoring in January 2020, Balance noted that small to moderate storm flows of 11 cfs upstream of the proposed discharge location and 17.3 cfs downstream of the proposed discharge location did not produce any evidence of bed sediment transport, meaning that there was no erosion or sedimentation occurring in the stream bed during the monitored storm flows. Sediment pebble count analysis conducted by Balance (2020) indicate that the flow rate at which sediment within the channel may become mobilized ranges from 20 cfs to 90 cfs.

With the addition of the maximum proposed discharge of 5.6 cfs and increasing measured baseflows by a 50 percent safety factor, post-project baseflows during non-storm periods would be expected to range between approximately 5.8 cfs and 15 cfs. These estimates are less than 23 cfs, the threshold for bedload sediment mobility and well below flows that commonly exhibit significant work on the channel (i.e., 1- to 2-year

---

<sup>19</sup> Balance Hydrologics, Inc. *Geomorphic Assessment, South Fork Wolf Creek, Near Grass Valley, California* [pg. 39]. March 2020.



flood). Balance therefore concludes that discharges during baseflow periods would not result in substantial erosion or siltation on site in South Fork Wolf Creek.<sup>20</sup>

During larger storm events, the proposed detention pond on the Brunswick Industrial Site would reduce the peak flows within South Fork Wolf Creek by much more than 5.6 cfs. Thus, under project conditions the overall peak storm flows would be lower than they are under existing conditions, resulting in less potential for erosion and sediment transport than under existing conditions.

Therefore, based on the conclusion of Balance, potential downstream impacts to the stream channel and associated riparian zone along both sides of South Fork Wolf Creek from the additional discharge of 5.6 cfs would be minimal on sensitive biological resources, such as foothill yellow-legged frog, and do not represent a potential significant impact to the stream channel or associated riparian zone within South Fork Wolf Creek.<sup>21</sup>

It is also important to note that, as part of the NPDES coverage through the Central Valley RWQCB General Order R5-2016-0076 (NPDES No. CAG995002), regular monitoring would be required and Rise would be required to meet the discharge requirements as detailed in the NPDES permit. Several NPDES regulated parameters (e.g., temperature, pH, turbidity, dissolved oxygen) have the potential to affect aquatic resources and sensitive aquatic habitat if those parameters are found to be outside the safe threshold limits identified within the NPDES discharge requirements. According to the Water Treatment Plant Design Report, the Water Treatment Plant has been designed to meet the discharge standards in NPDES No. CAG995002.<sup>22</sup> In addition, the NPDES parameters would be regularly monitored to ensure compliance with the NPDES discharge requirements (see Mitigation Measure 4.8-1(a) of the Hydrology and Water Quality chapter). This would ensure that State of California water quality standards are met as part of the proposed discharge and to ensure that impacts to biological resources, including benthic macroinvertebrates (BMI) and the food web within South Fork Wolf Creek and downstream further within the main stem of Wolf Creek, would not be adverse.

## Western Pond Turtle

### *Centennial Industrial Site*

The main stem of Wolf Creek, a perennial stream, and the large marsh wetlands within the eastern section of the Centennial Industrial Site containing perennial water/ponding are considered suitable habitat for this species. The species has not been documented within five miles of the Centennial Industrial Site and has also not been identified within the Centennial Industrial Site during the surveys implemented within the Centennial Industrial Site; however, it has a high potential to occur given the suitable habitat that occurs within the Centennial Industrial Site. It is important to note that the wetlands within the eastern section of the Centennial Industrial Site are anticipated to be removed during

<sup>20</sup> Balance Hydrologics, Inc. *Geomorphic Assessment, South Fork Wolf Creek, Near Grass Valley, California* [pg. 40]. March 2020.

<sup>21</sup> Greg Matuzak Environmental Consulting, LLC. *Updated Technical Memorandum for the Idaho-Maryland Mine Project – South Fork Wolf Creek Discharge Biological Resources Assessment* [pg. 10]. January 29, 2021.

<sup>22</sup> Linkan Engineering. *Idaho-Maryland Mine Water Treatment Plant Design Report* [pg. 2-1]. February 2021.



remediation activities under DTSC oversight, and thus, DTSC would require mitigation measures protective of western pond turtle.

Temporary or permanent impacts would not occur to Wolf Creek from project development; however, in the event that temporary encroachment within the Wolf Creek 100-foot non-disturbance buffer would be required as part of construction, the project could have an adverse effect on western pond turtle if present within Wolf Creek.

### *Brunswick Area*

The South Fork Wolf Creek (perennial stream), the large manmade pond, and the marsh wetlands within the Brunswick Area that contain perennial water/ponding are considered suitable habitat for this species. The species has not been documented within five miles of the Brunswick Area and has not been identified within the Brunswick Area during the biological resources species surveys conducted within the Brunswick Area. The species is considered to have a high potential to occur within the Brunswick Area.

The proposed project includes minimal physical improvements to South Fork Wolf Creek within the Brunswick Industrial Site, such as the installation of the outfall for the treated mine water discharge and the outfall for the stormwater detention pond, as well as the replacement of the 48-inch culvert and associated outfall where South Fork Wolf Creek originates on the Site. In addition, the project includes improvements to the clay-lined pond, including synthetic liner installation and dam repair work. The proposed project could adversely affect western pond turtle if present during construction of these improvements.

Discharge of treated mine water would not result in substantial adverse effects to western pond turtle within South Fork Wolf Creek for the reasons discussed above regarding foothill yellow-legged frog.

### California Red-Legged Frog

#### *Centennial Industrial Site*

Potential suitable reproductive habitat for this species may occur within the large marsh wetlands with perennial water/ponding in the eastern section of the Centennial Industrial Site. It is unknown if there are suitable breeding locations within 1.25 miles of the Centennial Industrial Site and connected by barrier-free dispersal habitat that is at least 300 feet in width, which would be required for suitable dispersal habitat to be located within the Centennial Industrial Site. However, the species has not been documented within the Centennial Industrial Site, it has not been documented in the watershed, and was not documented by the species surveys conducted. Therefore, this species has a very low potential to occur within the Centennial Industrial Site. In addition, the wetlands within the eastern section of the Centennial Industrial Site are anticipated to be removed during remediation activities under DTSC oversight, and thus, DTSC would require mitigation measures protective of CRLF.

#### *Brunswick Area*

Potential suitable reproductive habitat for this species may occur within the larger marsh wetlands with perennial water/ponding and within the large manmade pond within the Brunswick Area. It is unknown if there are suitable breeding locations within 1.25 miles



of the Brunswick Area and connected by barrier-free dispersal habitat that is at least 300 feet in width, which would be required for suitable dispersal habitat to be located within the Brunswick Area. However, the species has not been documented within the Brunswick Area, it has not been documented in the watershed, and was not documented during the biological resources surveys conducted within the Brunswick Area. Therefore, this species has a very low potential to occur within the Brunswick Area.

The proposed project includes physical improvements to the clay-lined pond, including synthetic liner installation and dam repair work, as well as disturbance of the marsh wetlands. While there is a very low potential of occurrence, it is conservatively concluded that the proposed project could adversely affect CRLF if present during construction of these improvements.

### California Black Rail

#### *Centennial Industrial Site*

This species was not identified during the December 2018 or early January 2019 site visits or during reconnaissance-level biological surveys conducted in July 2019. The potential for this species to occur within the Centennial Industrial Site is considered very low. Suitable habitat for this species occurs within the large marsh wetlands within the eastern section of the Centennial Industrial Site. The wetlands within the eastern section of the Centennial Industrial Site are anticipated to be removed during remediation activities under DTSC oversight, and thus, DTSC would require mitigation measures protective of California black rail.

#### *Brunswick Area*

California black rail has been identified within three miles to the southeast and the southwest of the Brunswick Area. The species was not identified during field surveys. Suitable habitat for this species occurs within the larger marsh wetlands within the southwestern section of the Brunswick Industrial Site where there is permanent ponding of water and dense vegetation along the edges of those wetland features. The potential for this species to occur within the Brunswick Area is considered very low given the developed nature of the Brunswick Industrial Site where suitable habitat for the species is located. While there is a very low potential of occurrence, it is conservatively concluded that the proposed project could adversely affect California black rail if present during disturbance of on-site wetlands.

### Coast Horned Lizard

Coast horned lizard has been documented between three and five miles of the Centennial Industrial Site and Brunswick Area to the west, northwest, and southwest. Potential suitable habitat exists within the sandy and rocky locations within the Centennial Industrial Site, and the open disturbed and developed locations within the Brunswick Industrial Site. As both Sites include the required open areas of exposed, sandy soils for this species, this species has the potential to occur within the Sites. Coast horned lizards were not observed during the December 2018 or early January 2019 site visits or during reconnaissance-level biological surveys conducted in July 2019. The potential for this species to occur within the Centennial and Brunswick Industrial Sites is considered moderate. Thus, construction activities could have an adverse effect on coast horned lizard if present during on-site disturbance.



### Special-Status Bats

Three special-status bats have the potential to occur within the Centennial and Brunswick Industrial Sites: Townsend's big-eared bat, hoary bat, and pallid bat.

The Townsend's big-eared bat species inhabits lower montane coniferous and mixed conifer forest habitats where abandoned buildings and structures occur for roosting. This species has been identified within three miles, generally south, of the Centennial Industrial Site and Brunswick Area, within an abandoned building at the Empire Mine State Historic Park.

Limited suitable roosting sites for this species occurs within the Centennial Industrial Site given the lack of abandoned structures. The existing decant tower, which is located in the northwest portion of the Centennial Industrial Site, may contain suitable roosting habitat for this species. Limited suitable roosting sites for this species occurs within the Brunswick Area given the presence of only one abandoned structure. Therefore, the potential for this species to occur within the Centennial Industrial Site and Brunswick Area is considered low.

The hoary bat is considered a Medium Risk species by the Western Bat Working Group and the pallid bat is a CDFW species of special concern. Neither species has been previously identified within five miles of the Centennial Industrial Site and Brunswick Area (CDFW 2019a). However, the Centennial and Brunswick Industrial Sites provide roosting habitat for both species within the riparian and woodlands. Therefore, if either species is present during the proposed disturbance, bat day roosts could be impacted.

Nevertheless, if any of these bats is present prior to demolition of on-site structures or tree removal, the project could adversely affect the bat(s).

### Non-Special Status Birds Protected by Other Laws

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal MBTA prohibits the intentional killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California FGC states, "It is unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the code or any regulation adopted pursuant thereto."

The Centennial Industrial Site and Brunswick Area contain many larger trees, several of which contain suitable habitat for nesting raptors, including suitable nesting sites for Cooper's hawk. In addition, the Centennial Industrial Site and Brunswick Area also includes smaller riparian trees and shrubs as well as grasslands that provide suitable nesting habitat for other protected bird species. The breeding season for raptors and other protected bird species in the vicinity of the overall project area is generally from February 1 to August 31 but varies depending on the species and localized weather patterns. On-site removal of vegetation could result in adverse effects to nesting raptors and other birds protected under the MBTA should they be nesting on-site prior to commencement of construction.



### Wildlife Disturbance

Hauling of engineered fill would result in vehicle trips to and from the Sites. Vehicle traffic on roadways causes increased vehicle-related noise and other effects, which have the potential to affect wildlife in surrounding areas.<sup>23</sup> Studies of the effects of noise on wildlife populations have shown that while some species can be negatively affected by traffic noise and wildlife densities are generally inversely proportional to distance from roadways, many species of wildlife are unaffected by roadway noise.<sup>24</sup> In general, wildlife species have been shown to acclimate to the noise environment in which the species resides,<sup>25</sup> or to select habitat based on a range of factors including the level of disturbance.<sup>26</sup> Currently, heavy trucks frequent the proposed haul route, in particular, Brunswick Road. Thus, wildlife species in proximity to the haul route would be considered acclimated to noise levels associated with such operations.

With respect to blasting, the Blasting Report for the project states: “In underground mining, especially the type proposed at the Idaho-Maryland Mine, there would be no air overpressure produced on the surface. The blast would not cause this pressure wave to form or an audible sound produced.”<sup>27</sup>

Above-ground activities would generate noise during project operations, including placement of engineered fill, shaft ventilation fan, exterior pumps outside the process plant building, water treatment plant pumps and turbine aerator, and Brunswick shaft skipping within the headframe building. However, it is important to remember that most protected species have a low to very low potential to occur on the Centennial Industrial Site and Brunswick Area. For example, CRLF and yellow-legged frog, species who use vocalizations to communicate, and thus could be sensitive to increases in noise, are considered to have a very low potential to occur on-site. California black rail is the only special-status bird that was identified as potentially occurring on the Sites, though it is considered to have only a very low potential to occur. Common avian species having no special status are not at risk of populations declining below self-sustaining levels. Notwithstanding, it is noted that song birds have been observed to adjust their songs in response to anthropogenic noise.<sup>28</sup>

With regard to lighting and potential effects on wildlife behavior at nighttime, it is noted that limited night work would occur at the Centennial Industrial Site. Hauling and dumping of engineered fill at the Centennial Industrial Site would occur between 6:00 AM and 10:00 PM. The project would not include the installation of any new lighting elements on the Centennial Industrial Site. Lighting during nighttime hauling and dumping of engineered fill would be limited to haul truck headlights.

---

<sup>23</sup> California Department of Transportation, Division of Environmental Analysis. *The Effects of Highway Noise on Birds*. September 30, 2007.

<sup>24</sup> U.S. Department of Transportation, Federal Highway Administration. *Synthesis of Noise Effects on Wildlife Populations*. September 2004.

<sup>25</sup> Davies S, Haddad N, Ouyang JQ. *Biology Letters*, 13:20170276: “Stressful City Sounds: Glucocorticoid Responses to Experimental Traffic Noise are Environmentally Dependent.” October 2017.

<sup>26</sup> Francis, Clinton D., Ortega, Catherine P., and Cruz, Alexander. *Current Biology*, Volume 19: “Noise Pollution Changes Avian Communities and Species Interactions.” July 23, 2009.

<sup>27</sup> IDC-PBS. *Environmental Factors of Blasting Report for the Proposed Idaho-Maryland Gold Project, Nevada County, CA* [pg. 27]. September 27, 2019.

<sup>28</sup> Katherine E. Gentry et al. “Evidence of suboscine song plasticity in response to traffic noise fluctuations and temporary road closures” in *Bioacoustics* (2017). Halfwerk and Slabbekoorn. “A behavioural mechanism explaining noise-dependent frequency use in urban birdsong”, in *Animal Behaviour* (December 2009).



With regard to the Brunswick Industrial Site, vehicles would be entering and exiting the site mostly during daytime hours, considering shift changes at 7:00 AM, 3:30 PM, and 7:00 PM. While hauling of materials off-site would occur until 10:00 PM, which would add light from vehicle headlights, such lighting sources would not result in substantially increased light pollution relative to existing vehicle traffic on local roadways. Placement, grading, and compaction of engineered fill at Brunswick Industrial Site would not occur during nighttime hours. All exterior lighting within the Brunswick Industrial Site would comply with Section L-II 4.2.8, Lighting, of the Nevada County LUDC; Section E, Lighting, of the Western Nevada County Design Guidelines; and Section 5.0, Lighting, of the City of Grass Valley Community Design Guidelines. The lighting associated with the proposed improvements on the Brunswick Industrial Site is not anticipated to substantially affect the lighting environment in the surrounding area.

Consequently, noise and nighttime lighting related to proposed operations would not be anticipated to result in adverse impacts to wildlife behavior.

### Conclusion

Both the Centennial Industrial Site and the Brunswick Area contain aquatic and other natural habitats that could support a variety of special-status wildlife species. The proposed project would result in disturbance to natural habitats as a result of activities, such as grading, placement of engineered fill, installation of outfalls (South Fork Wolf Creek), etc. As discussed above, for the Centennial Industrial Site, western pond turtle and CRLF would only be expected to occur within the larger wetlands in the eastern portion of the property. The wetlands within the eastern section of the Centennial Industrial Site are anticipated to be removed during remediation activities under DTSC oversight, and thus, DTSC would require mitigation measures protective of western pond turtle and CRLF. In the event that the final RAP approved by DTSC includes modified disturbance limits, such that a portion of the easterly wetlands remain on-site, the proposed placement of engineered fill associated with the mining operations could have an adverse effect on western pond turtle and CRLF if present during fill activities at the Centennial Industrial Site. Thus, mitigation for western pond turtle and CRLF has been included for both the Centennial Industrial Site and Brunswick Area to cover all potential outcomes.

In conclusion, development of the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. This is considered a **significant** impact.

### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impacts to a *less-than-significant* level.

#### *Foothill Yellow-Legged Frog*

- 4.4-2(a) *Pre-construction Survey and Avoidance and Minimization Measures.* *A pre-construction survey shall be conducted by a qualified biologist following CDFW recommended Visual Encounter Survey (VES) methods no more than fourteen (14 days) prior to disturbance within and directly adjacent to (i.e., riparian zone) the South Fork Wolf Creek and Wolf Creek. If the pre-*



construction survey does not detect foothill yellow-legged frog, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required.

If this species is documented during pre-construction VES method surveys (egg masses, juveniles, or adults), disturbance to the stream and species shall be completely avoided given the species is listed as Threatened under CESA. If the species is documented during the pre-construction VES surveys, CDFW shall be contacted immediately. An Incidental Take Permit (ITP) may be required from CDFW as part of the development of conservation measures to ensure avoidance and minimization of potential impacts to any frogs identified within South Fork Wolf Creek and/or Wolf Creek. The ITP may allow a CDFW qualified wildlife biologist with a CDFW handling permit for the species to move individuals out of the disturbance areas to avoid impacting this species and/or other potential conservation measures to avoid and minimize impacts to the species.

Watercourse/Wetlands/Riparian Areas Management Plans. The applicant shall implement the mitigation measures identified in the Aquatic Resources Management Plans for the Centennial Industrial Site and Brunswick Area, pursuant to Mitigation Measure 4.4-3, which include measures designed to protect aquatic resources and the biological resources they support. Such measures generally include, but are not limited to, mitigation for encroachment into non-disturbance buffers, restoration of impacted areas within stream zones, implementation of Best Management Practices (BMPs) during construction, and post construction erosion control.

### Western Pond Turtle

4.4-2(b) Pre-construction Survey and Avoidance and Minimization Measures. A pre-construction survey shall be conducted by a qualified biologist no more than seven (7) days prior to the proposed disturbance within 325 feet of perennial water sources at both the Centennial and Brunswick Industrial Sites. The survey(s) shall include a search of these suitable habitat areas for western pond turtle nests and mature adults. If the pre-construction survey does not detect western pond turtle, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required. If a western pond turtle is found, it should be allowed to move out of the way of the disturbance zone on its own or a qualified wildlife biologist with a CDFW handling permit for the species can move individuals out of the disturbance areas to avoid impacting this species.

If a nest is documented during pre-construction surveys, a non-disturbance buffer shall be established, as determined by a qualified biologist, based on the location of the nest until all eggs have hatched and the juveniles have dispersed out of the proposed impact area.



Watercourse/Wetlands/Riparian Areas Management Plans. The applicant shall implement the mitigation measures identified in the Aquatic Resources Management Plans for the Centennial Industrial Site and Brunswick Area, pursuant to Mitigation Measure 4.4-3, which include measures designed to protect aquatic resources and the biological resources they support. Such measures generally include, but are not limited to, mitigation for encroachment into non-disturbance buffers, restoration of impacted areas within stream zones, implementation of BMPs during construction, and post construction erosion control.

### **California Red-Legged Frog**

4.4-2(c) Pre-construction Survey and Avoidance and Minimization Measures. A qualified wildlife biologist approved by USFWS shall conduct preconstruction surveys within areas of suitable habitat on both the Centennial and Brunswick Industrial Sites in accordance with The Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog (USFWS Guidance, August 2005) to avoid disturbance and take of the species. This Guidance recommends a total of up to eight (8) surveys to determine the presence of CRLF at or near a project site. If the protocol surveys do not detect CRLF, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required.

If CRLF are identified during the pre-construction surveys, coordination and consultations with the USFWS shall be required through a FESA Section 7 or Section 10 process. As part of the consultation process, specific avoidance, minimization, and mitigation measures shall be required to be implemented, which could include, but may not be limited to the following: additional pre-construction surveys and daily monitoring to ensure that the proposed site disturbance will not disturb individual CRLF, environmental awareness training to contractors working within or adjacent to CRLF habitat, and exclusionary fencing installation between CRLF aquatic habitat and disturbance areas.

Additionally, a Habitat Management Plan (HMP) shall be required for any state or federally listed special-status wildlife species if documented within the Centennial or Brunswick Industrial Sites. The HMP would be developed for the special-status species as part of compliance with the Nevada County Land Use and Development Code, Section L-II 4.3.12 and it would include the avoidance, minimization, and mitigation measures outlined above and as part of any coordination or consultation with the USFWS compliance with the Nevada County Land Use and Development Code, Section L-II 4.3.12.

Watercourse/Wetlands/Riparian Areas Management Plans. The applicant shall implement the mitigation measures identified in the Aquatic Resources Management Plans for the Centennial and Brunswick Industrial Sites, pursuant to Mitigation Measure 4.4-3, which include measures designed to protect aquatic resources and the biological resources they



support. Such measures generally include, but are not limited to, mitigation for encroachment into non-disturbance buffers, restoration of impacted areas within stream zones, implementation of BMPs during construction, and post construction erosion control.

### **California Black Rail**

4.4-2(d) Pre-construction Survey and Avoidance and Minimization Measures. Pre-construction surveys for California black rail shall be conducted by a qualified biologist prior to the implementation of any ground disturbance within or directly adjacent to any perennial marsh habitat within the Centennial and Brunswick Industrial Sites. The pre-construction surveys for this species shall occur no more than fourteen (14) days prior to any such disturbance within or directly adjacent to the species habitat. The pre-construction surveys shall include conducting call back/response surveys. This species is most active between two hours before and three hours after sunrise; therefore, surveys shall start at sunrise and continue no later than 0930. If evening surveys are to be conducted, they shall be paired with a morning survey, and all sites shall have surveys conducted at both time periods. The preferred method for conducting surveys via the call-back/response protocol of Evens et al (1991). If the pre-construction survey does not detect evidence of California black rail, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required. If a positive call back is identified during the surveys, then the species is assumed to be present and the area shall be avoided from disturbance in order to avoid impacts to individuals of the species, if feasible.

Given the species is a CESA listed species, coordination with CDFW shall occur if a positive response to the call-back/response surveys occurs and if any proposed disturbance may impact the species. Any area containing this species would likely need to be avoided in order to avoid impacts to and take of this species, if feasible, or additional mitigation measures would be required in coordination with CDFW to minimize and avoid impacts to such species. Additional avoidance measures could include, but may not be limited to the following: environmental awareness training, daily construction monitoring by a CDFW qualified biologist when disturbance related activities occur within or directly adjacent to the species habitat, and exclusionary fencing installation between the species habitat and the proposed disturbance areas. Additionally, an ITP could be required by CDFW if complete avoidance of the species is not feasible. Areas where no positive response to the call-back/response surveys are assumed to not contain individuals of the species and therefore, disturbance in those areas would have no impact on this species.

Watercourse/Wetlands/Riparian Areas Management Plans. The applicant shall implement the mitigation measures identified in the Aquatic Resources Management Plans for the Centennial and Brunswick Industrial Sites, pursuant to Mitigation Measure 4.4-3, which include measures designed to protect aquatic resources and the biological resources they



support. Such measures generally include, but are not limited to, mitigation for encroachment into non-disturbance buffers, restoration of impacted areas within stream zones, implementation of BMPs during construction, and post construction erosion control.

### Coast Horned Lizard

4.4-2(e) Pre-construction Survey and Avoidance and Minimization Measures. A pre-construction survey shall be conducted by a qualified biologist no more than seven (7) days prior to disturbance within the areas of the Centennial and Brunswick Industrial Sites that contain disturbed or developed surfaces and annual grassland vegetation community. If the pre-construction survey does not show evidence of coast horned lizard, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required.

If the species is documented during pre-construction survey(s), a qualified wildlife biologist (approved by CDFW) shall move individual coast horned lizards outside of the proposed disturbance area(s) in order to avoid an impact to this species. Once the coast horned lizard(s) have been removed from the disturbance area(s) and out of harm's way, the proposed work would no longer pose a risk to individuals of the species.

### Special-Status Bats

4.4-2(f) Pre-construction Survey and Avoidance and Minimization Measures. A pre-construction bat roosting survey shall be conducted by a qualified biologist no more than seven (7) days prior to disturbance of any structures or riparian and forested woodlands within the Centennial Industrial Site and Brunswick Area to identify the presence or absence of roosting bats. If the pre-construction survey does not show evidence of roosting bats, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required.

If any Townsend's big-eared bats (or any other species of bat, including the hoary and pallid bat) are identified during roosting surveys, passive removal of the roosting bats prior to disturbance to structures and riparian and forested woodlands shall be implemented to avoid impacts to this species. Passive removal includes allowing roosting bats to freely leave the roost site (riparian and forested woodlands and any structure). Once the roosting bats have been passively removed from the structure(s) and riparian and forested woodlands, the structure(s) would be closed off from recurring bat roosting within the structure(s) and the proposed work within the structure(s) would no longer pose a risk to individuals of the species. For riparian and forested woodlands containing bat roosts, the removal of trees associated with such woodlands would only occur once the bats leave the day roosts. Furthermore, if a maternal (breeding) roost is documented, no disturbance shall occur until the breeding roost has dispersed from the structure or riparian and forested woodlands they are found in.



### *Non-Special Status Raptors and Migratory Birds*

4.4-2(g) Pre-construction Survey and Avoidance and Minimization Measures. Prior to initiation of ground-disturbing activities for any phase of project construction, if construction is expected to occur during the raptor nesting season (February 1 to August 31), a qualified biologist shall conduct a preconstruction survey prior to vegetation removal. The pre-construction survey shall be conducted within 7 days prior to commencement of ground-disturbing activities. The survey shall be conducted within all areas of proposed disturbance and all accessible areas within 250 feet of proposed disturbance. If the pre-construction survey does not show evidence of active nests, a letter report documenting the results of the survey shall be provided to the Nevada County Planning Department, and additional measures are not required. If construction does not commence within 7 days of the pre-construction survey, or halts for more than 14 days, an additional pre-construction survey shall be required.

*If any active nests are located within the proposed disturbance area, an appropriate buffer zone shall be established around the nests, as determined by the project biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or the young have successfully fledged. Buffer zones are typically 100 feet for migratory bird nests and 500 feet for raptor nests. If active nests are found within the disturbance footprint, a qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. Guidance from CDFW shall be required if establishing the typical buffer zone is impractical. If construction activities cause the nesting bird(s) to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased, as determined by the qualified biologist, such that activities are far enough from the nest to stop the agitated behavior. The exclusionary buffer shall remain in place until the young have fledged or as otherwise determined by a qualified biologist.*

**4.4-3 Have a substantial adverse effect on riparian habitat or other sensitive natural community, or State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Based on the analysis below and with implementation of mitigation, the impact is less than significant.**

#### Centennial Industrial Site

Under baseline conditions that assume completion of the separate Centennial Industrial Site Clean-Up Project, as discussed previously, the placement of engineered fill at the Centennial Industrial Site as part of the proposed Idaho-Maryland Mine Project is not anticipated to have any impacts on mapped wetlands within the Centennial Industrial Site, given that any fill or dredge of mapped wetlands within the Centennial Industrial Site would occur as part of the separate remediation project approved through DTSC,



prior to the development of the proposed project. DTSC is the lead agency for a separate CEQA review of the remediation activities, and through such process, DTSC will require the applicant to mitigate for impacts for wetlands, pursuant to federal and state laws governing such resources.

Table 4.4-9 below includes the disturbance impacts to mapped streams within the Centennial Industrial Site from the implementation of the proposed project. The disturbance area is graphically illustrated in Figure 4.4-9. The project-specific impacts are discussed in more detail in what follows.

<b>Table 4.4-9 Area of Disturbance to Mapped Streams within the Centennial Industrial Site (Post-Remediation Baseline)</b>			
<b>Stream Type</b>	<b>Wetland ID Number</b>	<b>Size (Acres)</b>	<b>Maximum Potential Impact by Proposed Project (Acres)</b>
Perennial Stream	Wolf Creek – 1	0.377	--
Ephemeral Stream	E – 3	0.015	0.015
Ephemeral Stream	E – 4	0.018	0.018
	<b>TOTAL</b>	<b>0.41</b>	<b>0.033</b>

*Permanent fill to streams from construction and grading of engineered fill industrial pad.*

Construction and grading related to the placement of engineered fill on the Centennial Industrial Site would cause permanent impacts to two mapped stream features (E-3 and E-4) and their associated 50-foot non-disturbance buffer zone. The two features consist of two ephemeral streams. It is estimated that a maximum of approximately 0.033-acre of streams would be permanently filled.

The impacted stream features convey site drainage in developed or disturbed areas, or immediately adjacent to developed and disturbed areas of the Centennial Industrial Site. The ephemeral stream feature E-3 transmits site drainage from the southern area of the Centennial Industrial Site towards the north. Ephemeral stream feature E-4 drains from the hills along the western edge of Centennial Industrial Site, coming from runoff off of the DeMartini RV Sales site and flowing northeast until it connects with the large wet meadow wetland (WM-5).

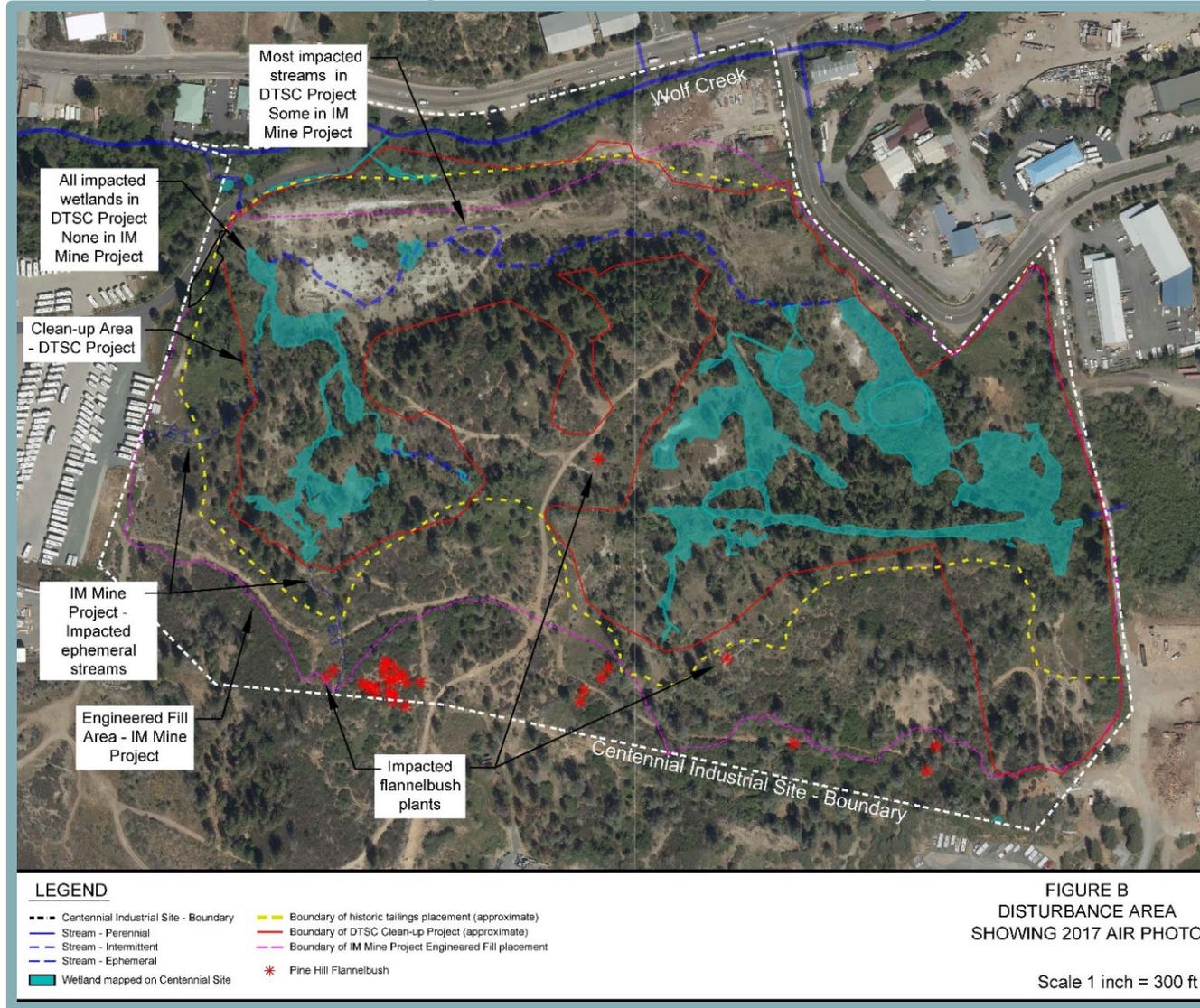
*Site construction activities may encroach on 100-foot non-disturbance buffer of Wolf Creek.*

Pre-construction activities and grading near the toe of the engineered fill pad on the Centennial Industrial Site may cause temporary impacts to the 100-foot non-disturbance buffer of Wolf Creek (perennial creek). All construction activities would remain outside the Special Flood Hazard Area as pursuant to FEMA regulations.

Temporary or permanent impacts would not occur to Wolf Creek from project development; however, this potential temporary impact is being included within this analysis in the event that temporary encroachment within the Wolf Creek 100-foot non-disturbance buffer would be required as part of construction.



**Figure 4.4-9**  
**Centennial Industrial Site: Proposed Disturbance Area and Aquatic Feature Impacts**



### Brunswick Area

Several aquatic features are present within the Brunswick Area, only one of which – a roadside ditch – occurs along East Bennett Road. These existing features are shown in Figure 4.4-4 and Figure 4.4-5. Table 4.4-10 and Table 4.4-11 below include the estimated disturbance on mapped wetlands and streams within the Brunswick Area, according to the Brunswick Industrial Site and East Bennett Road ROW Aquatic Resources Delineation of Waters of the United States and State of California (Greg Matuzak Environmental Consulting LLC, 2020) in comparison to the proposed on- and off-site improvements. The disturbance area is graphically illustrated in Figure 4.4-10. The project-specific impacts are discussed in more detail in what follows.

No.	Wetland Type	Wetland ID Number	Size (Acres)	Area of Disturbance (Acres)
1	Meadow wetland	WM-1	0.02	0.02
2	Meadow wetland	WM-2	0.01	0.01
3	Meadow wetland	WM-3	0.01	0.01
4	Meadow wetland	WM-4	6.93	-----
5	Marsh	MA-1	0.1	0.1
6	Marsh	MA-2	0.3	0.3
7	Marsh	MA-3	0.02	0.02
8	Marsh	MA-4	0.007	0.007
9	Marsh	MA-5	0.05	0.05
10	Marsh	MA-6	0.02	0.02
11	Riparian	RI-1	0.03	0.03
12	Riparian	RI-2	0.76	-----
13	Riparian	RI-3	0.37	-----
14	Roadside Wetland	RW-1	0.09	-----
<b>14</b>	-----	<b>TOTAL</b>	<b>8.72</b>	<b>0.57 acres</b>

No.	Stream Type	Stream ID Number	Size (Acres)	Estimated Disturbance (acres and linear feet)
1	Perennial Stream	South Fork Wolf Creek – 1	0.59	15 lf. (0.01 acres) * 40 lf. (0.04 acres) *
2	Perennial Drainage	P – 1	0.16	-----
3	Intermittent Stream	I – 1	0.05	-----
4	Intermittent Stream	I – 2	0.002	-----
5	Intermittent Stream	I – 3	0.006	-----
6	Intermittent Stream	I – 4	0.003	-----
7	Intermittent Stream	I – 5	0.004	33.5 lf. (0.002 acres)
8	Ephemeral Stream	E – 1	0.01	16 lf. (0.0007 acres)
9	Ephemeral Stream	E – 2	0.05	188 lf. (0.05 acres)
<b>9</b>	-----	<b>TOTAL</b>	<b>0.88</b>	<b>293 lf. (0.103 acres) **</b>

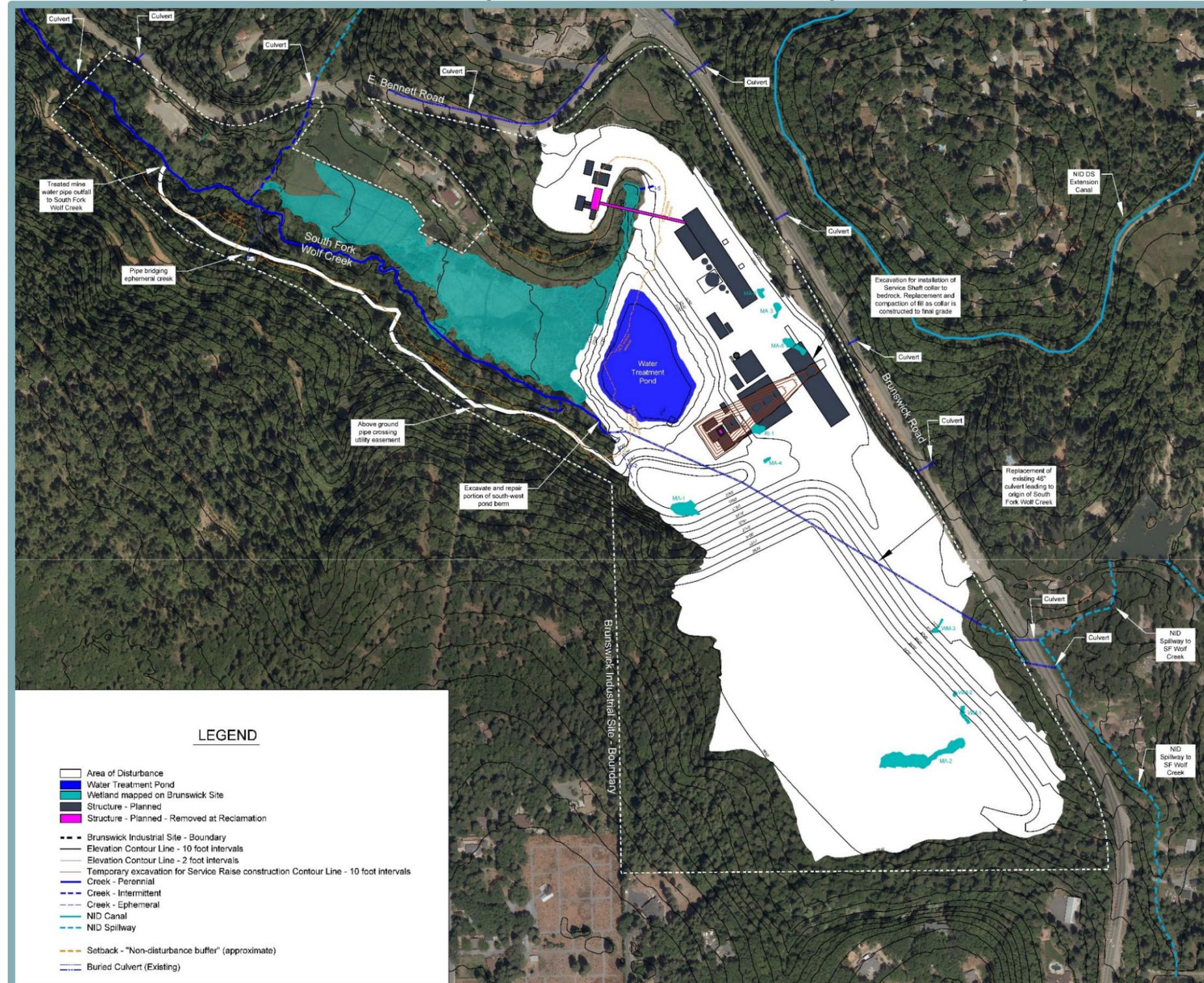
Notes:

\* impacts estimated at 0.01-acre (permanent) and 0.04-acre (temporary)

\*\* impacts estimated at 0.062-acre (permanent) and 0.041-acre (temporary)



**Figure 4.4-10  
 Brunswick Industrial Site: Proposed Disturbance Area and Aquatic Feature Impacts**



The existing clay-lined pond (referred to as PD-1 in the Matuzak Environmental Aquatic Resources Delineation) associated with prior saw milling operations does not have a direct outlet or connection to the South Fork Wolf Creek. PD-1 contains a 2-foot clay liner to limit any potential infiltration and receives its water mainly from surface runoff and precipitation.

PD-1 is a manmade pond used previously as a recycling pond for site runoff containment and log watering during mill operations. PD-1 is non-jurisdictional pursuant to federal CWA regulations given it receives water from sheet flow within the Brunswick Industrial Site and does not connect directly or indirectly with South Fork Wolf Creek or any other "waters of the U.S." and therefore, it does not receive water from or connect to a "waters of the U.S."

#### *Construction of Treated Mine Water Outfall to South Fork Wolf Creek*

Pursuant to Nevada County LUDC Section L-II 4.3.17, South Fork Wolf Creek (perennial stream) has a 100-foot non-disturbance buffer zone. The proposed treated mine water discharge pipe outfall would be placed within or adjacent to South Fork Wolf Creek. Construction of the outfall may cause approximately 15 linear feet of permanent impact (approximately 0.01-acre) to the southern bank of the creek from placement of the pipe and modification of the stream bank to ensure adequate energy dissipation and erosion protection.

Placement of the discharge pipeline connecting the proposed outfall within the southern bank of the South Fork Wolf Creek may cause a "temporary impact" to the non-disturbance buffer zone during construction or placement of the pipeline. The pipeline has been routed along an existing access road to minimize the potential impacts to non-disturbance setback environments.

#### *Replacement of deteriorated culvert at South Fork Work Creek*

The deteriorated 48-inch buried culvert that runs underneath the Brunswick Industrial Site would be replaced and upgraded as part of the proposed project. It is estimated that the culvert replacement may have a temporary impact area of 40 foot. x 40 foot. (0.04-acre) within or adjacent to South Fork Wolf Creek. This would cause a temporary impact during replacement and existing conditions would be re-established once the culvert is replaced.

#### *Repair of existing clay lined pond berm will require work in the 100-foot non-disturbance buffer near the head of South Fork Wolf Creek*

The project includes excavation and reconstruction of a segment of the berm of the existing clay-lined pond to remove pockets of sawdust not removed during prior construction. This segment of the pond berm is located adjacent to South Fork Wolf Creek and in the 100-foot non-disturbance buffer zone of South Fork Wolf Creek. This crest of the berm would be paved to provide a surfaced access road along the perimeter of the pond and a section of the pond berm is within the 100-foot non-disturbance buffer zone of South Fork Wolf Creek and the adjacent wetland meadow. The paved perimeter access road would be cross-sloped to drain water into the pond rather than towards the creek or wetland meadow.



*Treated water pipe placement will cross an ephemeral stream (E-1)*

The proposed treated mine water discharge pipe is an aboveground pipe that would be located along an existing access road on the south side of South Fork Wolf Creek. The existing access road crosses the ephemeral stream feature E-1. A support structure would be constructed across the ephemeral stream (E-1) so that the pipe crosses over the two-foot wide stream instead of through the stream, which may cause a temporary impact to approximately 16 linear feet of the stream.

Riparian vegetation, if present along the existing access road, may be impacted from placement of the discharge pipe. The pipeline has been routed along an existing access road to minimize the potential impacts to riparian environments, as well as the 50-foot non-disturbance buffer of the ephemeral stream (pursuant to Nevada County LUDC Section L-II 4.3.17).

*Site grading will encroach on intermittent stream (I-5)*

Grading of the site for construction preparation would cause a permanent impact to approximately 34 linear feet of the intermittent stream feature I-5, which has a 50-foot non-disturbance buffer zone pursuant to Nevada County LUDC. This mapped intermittent stream feature originates from a culvert which transports surface drainage from the northeastern portion of the Brunswick Industrial Site. The intermittent stream extends to a drainage gully which is identified as a riparian wetland. Proposed construction activities would require extension of the existing culvert so that flow of surface drainage is not interrupted.

*Engineered fill industrial pad will encroach on ephemeral stream (E-2)*

Currently, the ephemeral stream feature E-2 transmits site drainage from the southeastern hills, as well as off-site drainage, which eventually flows into South Fork Wolf Creek.

Placement of engineered fill material would cause surface disturbance on the eastern area of the site. The industrial pad would include a surface detention pond to manage storm water drainage. The construction extents of the surface detention pond would cause a permanent impact to approximately 188 linear feet of ephemeral stream feature E-2, which has a 50-foot non-disturbance buffer zone pursuant to Nevada County LUDC. Following construction, site drainage would continue to drain to the lower reaches of ephemeral stream feature E-2 and subsequently South Fork Wolf Creek, similar to pre-construction conditions.

*Permanent fill to small wetlands from construction and grading*

Construction and grading from surface facilities and the engineered fill industrial pad on the Brunswick Industrial Site would cause permanent impacts to ten (10) mapped wetland features (WM-1, WM-2, WM-3, MA-1, MA-2, MA-3, MA-4, MA-5, MA-6, and RI-1), which have a 100-foot non-disturbance buffer zone pursuant to Nevada County LUDC. The 10 wetland features consist of three meadow wetlands, seven marsh wetlands, and one riparian wetland. It is estimated that approximately 0.57-acre of mapped wetlands would be permanently filled.

The impacted wetland features are small wetlands located in already developed or disturbed areas or immediately adjacent to developed or disturbed areas of the



Brunswick Industrial Site. Wetland features MA-1 and MA-2 have developed in site drainage features, constructed by previous operations, that connect to culverts as part of the existing management of surface drainage on the site.

### Watercourse/Wetlands/Riparian Areas Management Plans

Due to the fact that certain project improvements would encroach within the non-disturbance buffer zones required for aquatic features pursuant to Nevada County LUDC, Chapter II; Zoning Regulations, Section L-II 4.3.17 (Ordinance Number 2033), management plans have been prepared for the Centennial Industrial Site and Brunswick Area. These Watercourse, Wetlands, and Riparian Areas Management Plans include recommended mitigation and conditions, generally including obtaining resource agency permits and complying with permit conditions (e.g., habitat replacement), BMPs related to encroachment into non-disturbance buffers, restoration of South Fork Wolf Creek and Wolf Creek impacted areas, where feasible, and post construction erosion control.

Any temporary impacts to the stream zones within the Centennial and Brunswick Industrial Sites, including riparian habitat, would be required to be restored to pre-construction contours and revegetated immediately following construction. Site restoration would include all exposed/disturbed areas and access points within any stream as a result of the disturbance activities (pipeline, outfall, new culvert, etc.). These areas shall be restored using locally native vegetation.

### Conclusion

Based on the above, implementation of the proposed project at the Centennial Industrial Site and Brunswick Industrial Site, and East Bennett ROWs could have a substantial adverse effect on riparian habitat and/or other sensitive natural communities and/or have a substantial adverse effect on State or Federally protected aquatic resources (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means. Thus, a **significant** impact could occur.

### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

- 4.4-3(a) *Prior to initiation of ground-disturbing activities, the applicant shall provide a US Army Corps of Engineers (Corps) verification letter to the Nevada County Planning Department, indicating Corps' concurrence with the total acreage of jurisdictional waters that would be impacted within the Centennial Industrial Site and Brunswick Area as a result of the proposed project.*
- 4.4-3(b) *The applicant shall implement the Watercourse/Wetlands/Riparian Areas Management Plans prepared for the Centennial Industrial Site and Brunswick Area, as approved in their final form by Nevada County. Specifically, the applicant shall implement the mitigation measures and conditions identified in the Management Plans, which include measures designed to protect aquatic resources and the biological resources they support. Such measures generally include, but are not limited to, the following and shall be implemented in accordance with their specified*



timing (e.g., either prior to, during, or after ground disturbance activities within non-disturbance buffers):

- **Encroachment into the Non-Disturbance Buffers**
  - Limit construction to periods of extended dry weather and the dry summer season, if feasible;
  - Establishing the areas around active stream channels and wetlands as Environmentally Sensitive Area where those areas will not be impacted by construction or thereafter;
  - No fill or dredge material will enter or be removed from any wetlands or streams except for those identified in Table 4.0 and Table 5.0 in the Management Plans during construction and thereafter;
  - Use appropriate machinery and equipment to limit disturbance within and directly adjacent to these areas;
  - Placement of soil erosion control devices (such as wattles, hay bales, etc.) between the protected aquatic resources (wetlands and streams) and the areas to be graded and disturbed to limit potential runoff and sedimentation into such protected resources;
  - Dewatering of any streams that will be required to occur as part of the proposed disturbance within the Brunswick Area must include a Water Diversion Plan and be approved by CDFW prior to the implementation of such dewatering activities; and
  - Implement Best Management Practices during and following construction.

- **Restoration of Areas Adjacent to Impacted Streams**

- Centennial Industrial Site

- Placement of rock and rip rap along the embankment of Wolf Creek should be avoided given the proposed Centennial Site Idaho-Maryland Mine Project will not encroach into Wolf Creek;
  - Some rock and rip rap can be placed at the top of the embankment of the ephemeral and intermittent streams within the Centennial Site Idaho-Maryland Mine Project, if needed, to protect the embankment(s) from erosion after construction is completed. This would potentially be implemented for ephemeral and intermittent streams that will not be completely filled or impacted and occur directly adjacent to the proposed fill of those streams; and
  - Plant willow cuttings from the adjacent willow trees and other native shrubs and riparian trees along the embankments of streams not being impacted and filled as needed. A revegetation plan will be a requirement of the CDFW Streambed Alteration Agreement that will include impacts to the bed and bank, of any stream within the Centennial Site Idaho-Maryland Mine Project Area. Implementation of General and Project Specific Conditions will be required for all permits for the proposed project.



**Brunswick Area**

- *Placement of rock and rip rap along the embankment of the South Fork Wolf Creek should be minimized to reduce the footprint of such impacts to the perennial creek and its embankments;*
- *Some of the rock and rip rap can be placed at the top of the embankment of the South Fork Wolf Creek to protect the embankment from further erosion during restoration of the riparian zone and embankment on the southern side of the perennial stream.*
- *Plant willow cuttings from the adjacent willow trees and other native shrubs and riparian trees along the embankment and broadcast seed the embankment with local, native grass seed. A revegetation plan will be a requirement of the CDFW Streambed Alteration Agreement that will include impacts to the bed and bank, of any stream within the Brunswick Area. Implementation of General and Project Specific Conditions will be required for all permits for the proposed project.*
- **Implement BMPs During Construction**
  - *Minimize the number and size of work areas for equipment and spoil storage sites in the vicinity of any streams and wetlands that will not be disturbed by project development. Place staging areas and other work areas outside of the 50-foot non-disturbance buffers of ephemeral and intermittent aquatic resources and 100-foot non-disturbance buffers of perennial aquatic resources.*
  - *The applicant shall exercise reasonable precaution to protect the aquatic resources within the Centennial Industrial Site and Brunswick Area, as well as the adjacent non-disturbance buffers of such aquatic resources, from pollution with fuels, oils, and other harmful materials. Construction byproducts and pollutants such as oil, cement, and wash water shall be prevented from discharging into or near these resources and shall be collected for removal off the site. All construction debris and associated materials and litter shall be removed from the work site immediately upon completion.*
  - *No equipment for vehicle maintenance or refueling shall occur within the 50-foot and 100-foot non-disturbance buffers. The contractor shall immediately contain and clean up any petroleum or other chemical spills with absorbent materials such as sawdust or kitty litter. For other hazardous materials, follow the cleanup instruction on the label.*
- **Implement Post Construction Erosion Control**
  - *Exposed bare soil along the embankment of South Fork Wolf Creek, where the outfall and dissipation rip rap will occur, as well as the embankment of Wolf Creek and any exposed bare soil adjacent to the other mapped aquatic resources within the Centennial Industrial Site and Brunswick Area, including their*



*50-foot and 100-foot non-disturbance buffers, shall be protected against loss from erosion by the seeding of an erosion control mixture and restored with native grasses and mulching pursuant to Nevada County and regulatory agency guidelines. Non-native species that are known to invade wild lands, such as orchard grass, velvet grass, rose clover, winter and spring vetch, and wild oats shall not be used as they displace native species.*

- 4.4-3(c) *To the extent feasible, as determined by the qualified biologist in coordination with the Corps, the project shall be designed to avoid and minimize adverse effects to waters of the U.S. or jurisdictional waters of the State of California within the project area. Prior to initiation of ground-disturbing activities, a Section 404 permit for fill of any jurisdictional wetlands within the Centennial Industrial Site and Brunswick Area shall be acquired, and mitigation for impacts to jurisdictional waters that cannot be avoided shall conform with the Corps “no-net-loss” policy, and be based on the final impact acreages verified by the Corps. Mitigation for impacts to both federal and State jurisdictional waters shall be addressed using these guidelines. Compensatory mitigation can include but is not limited to the following: onsite and/or offsite wetland creation and/or restoration, purchase or placement of conservation easements, payment of an in-lieu fee, and/or purchase of mitigation credits at an approved Corps wetland mitigation or conservation bank.*

*The applicant must also obtain a water quality certification from the RWQCB under Section 401 of the Clean Water Act (CWA). Written verification of the Section 404 permit and the Section 401 water quality certification shall be submitted to the Nevada County Planning Department.*

- 4.4-3(d) *Prior to initiating of ground disturbing activities within the non-disturbance buffers for aquatic resources on the Centennial Industrial Site and Brunswick Area, the applicant shall apply for a Section 1600 Lake or Streambed Alteration Agreement from CDFW. Impacts to CDFW 1600 jurisdictional areas shall be outlined in the application and are expected to be in substantial conformance with the impacts to biological resources outlined in this EIR (see Tables 4.4-9 through 4.4-11). Impacts for each activity shall be broken down by temporary and permanent, and a description of the proposed mitigation for biological resource impacts shall be outlined per activity and then by temporary and permanent. Minimization and avoidance measures within jurisdictional areas shall be proposed as appropriate and may include: preconstruction species surveys and reporting, protective fencing around avoided biological resources, worker environmental awareness training, seeding disturbed areas immediately adjacent to riparian areas with native seed, and installation of project-specific storm water BMPs. Mitigation may include restoration or enhancement of jurisdictional resources on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, off-site or on-site conservation easements,*



*working with a local land trust to preserve aquatic or riparian areas, or any other method acceptable to CDFW.*

*A site revegetation plan would be required to be developed and approved by CDFW as part of a Streambed Alteration Agreement permit condition and native trees planned for removal with a diameter at breast height of 4 inches or greater would need to be mitigated for through planting of native riparian trees within adjacent stream zones not being impacted by the Idaho-Maryland Mine Project, with clear success criteria identified, monitoring and reporting required, and corrective actions to be taken if mitigation measures do not meet the proposed success criteria.*

*Written verification of the Section 1600 Lake or Streambed Alteration Agreement shall be submitted to the Nevada County Planning Department.*

**4.4-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Based on the analysis below, the impact is *less than significant*.**

Movement corridors serve two primary purposes: first, to enable migratory animals, especially deer, to move seasonally from and between winter and summer habitats, and second, to allow animals to move within their home range or residence areas. Seasonal corridors also sustain overall habitat values and insure population density and diversity. These corridors are not necessarily individual paths, but can also be characterized as zones or corridors through which animals move. In the case of deer, the corridors serve to link winter and summer habitats which serve the life cycle of the animal. In general, animal movement generally occurs along riparian corridors and/or low-lying “saddles” which connect various micro-habitat areas. The creeks, streams and drainages in the County constitute riparian corridors which are capable of support, for both migratory and resident wildlife movement.

The deer population in Nevada County is made up of both resident and migrating animals. The western portion of the county supports both resident deer and winter populations of migrating deer. The western portion of the County supports the migratory Nevada City deer herd, as well as resident populations of the Motherlode deer herd. Winter ranges of the Nevada City and Motherlode herds often overlap.

Known migratory deer ranges outlined in the Nevada County General Plan were reviewed for deer migration corridors, critical range, and critical fawning areas. According to the Migratory Deer Ranges Nevada County General Plan map, the Centennial Industrial Site and Brunswick Area are located in an area of potential Deer Winter Range.<sup>29</sup> The field surveys did not record any observations of deer. The Centennial Industrial Site and Brunswick Area do not contain any known major deer migration corridors, known deer holding areas, nor critical deer fawning areas.

<sup>29</sup> Nevada County. *Nevada County General Plan, Volume 2: Background Data and Analysis* [Figure 5]. 1996.



The primary movement corridor within the Brunswick Industrial Site is South Fork Wolf Creek and its associated riparian zone. With little exception, South Fork Wolf Creek and its riparian zone would remain intact, and while limited improvements (e.g., treated water pipe outfall installation, culvert replacement) would occur within the non-disturbance buffer zones required pursuant to the Nevada County LUDC, the Creek and its riparian zone would be able to continue to serve as a movement corridor for wildlife. In addition, the Watercourse/Wetlands/Riparian Areas Management Plan for the Brunswick Area requires restoration of impacted areas within the non-disturbance buffer zone.

The primary movement corridor within the Centennial Industrial Site is Wolf Creek and its associated riparian zone. With the possible exception of limited grading disturbance around the toe of the engineered fill pad, no other proposed improvements would impact the non-disturbance buffer zone associated with Wolf Creek required pursuant to Nevada County LUDC. The Creek and its riparian zone would be able to continue to serve as a movement corridor for wildlife. In addition, the Watercourse/Wetlands/Riparian Areas Management Plan for the Centennial Industrial Site requires restoration of impacted areas within the non-disturbance buffer zone.

Given the above, the proposed project would not interfere substantially with the movement of any wildlife and a *less-than-significant* impact would result.

Mitigation Measure(s)

*None required.*

**4.4-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or have a substantial adverse effect on the environment by converting oak woodlands. Based on the analysis below, the impact is *less than significant*.**

According to Nevada County LUDC, Chapter II; Zoning Regulations, Section L-II 4.3.18, for Trees, landmark trees are any native oak tree species (*Quercus* species) with a trunk diameter of 36 inches or greater at DBH, or four feet six inches. This section identifies landmark groves as hardwood tree groves with 33+ percent canopy closure, or groves whose size, visual impact, or association with a historically significant structure or event has caused it to be marked for preservation by the county, state, or federal government.

Projects shall be approved only when they do not remove or disturb defined trees or groves, unless a Management Plan is prepared consistent with the Nevada County LUDC for such trees. The Centennial Industrial Site and Brunswick Area Biological Reports do not include an assessment of or proposed mitigation for potential impacts to such protected oak resources given the Centennial Industrial Site and Brunswick Area do not contain protected oak resources pursuant to the Nevada County LUDC, which would require such an assessment and Management Plan.<sup>30</sup>

<sup>30</sup> Greg Matuzak Environmental Consulting, LLC. *Centennial Industrial Site Biological Resources Assessment* [pg. 5-16]. January 2021; Greg Matuzak Environmental Consulting LLC. *Brunswick Industrial Site and East Bennett Road Right of Way (ROW) Biological Resources Assessment* [pg. 5-13]. October 2020.



Additionally, the Centennial Industrial Site and Brunswick Area do not contain protected oak resources pursuant to the State of California oak woodlands protections set forth in PRC Section 21083.4. Though the Centennial Industrial Site and Brunswick Area contain several species of native oak trees, the conifer and hardwood woodlands within the Centennial Industrial Site and Brunswick Area are dominated by ponderosa pine, incense cedar, Douglas fir, and madrone. The most dominant native oak tree within the Centennial Industrial Site and Brunswick Area is the California black oak and it was not identified in the densities required to grant them protection under State of California law (10 percent canopy cover requirement) or under the Nevada County LUDC (minimum 33 percent canopy cover).

Considering that the proposed project would not involve removal of landmark trees nor landmark groves protected under local regulations, the proposed project would not conflict with local policies and/or ordinances that protect biological resources, including tree resources. Therefore, a **less-than-significant** impact could occur.

Mitigation Measure(s)

*None required.*

**Cumulative Impacts and Mitigation Measures**

For further detail related to the cumulative setting of the proposed project, refer to Chapter 5, Statutorily Required Sections, of this EIR.

**4.4-6 Cumulative loss of habitat for special-status species. Based on the analysis below and with implementation of mitigation, the project's incremental contribution to cumulative biological resources impacts is less than cumulatively considerable.**

The following section discusses the cumulative list of projects that could produce related effects to biological resources in combination with the proposed project. A total of 12 of the cumulative projects are located within the City of Grass Valley, the majority of which are consistent with the City's General Plan, and thus, cumulative biological resources impacts attributable to these projects have been accounted for in the City's General Plan EIR. The City of Grass Valley General Plan EIR found that while buildout of the General Plan<sup>31</sup> would have the potential to result in significant impacts to biological resources, these impacts would be reduced to a less-than-significant level through compliance with the policies and standards identified in the General Plan. For example, the General Plan EIR found that with a requirement that development cause no net loss of habitat functions or values through avoidance of the resource, or through creation or restoration of habitat of superior or comparable quality, in accordance with guidelines of the USFWS and the CDFW, cumulative impacts to habitat would be reduced to a less-than-significant level. Specifically, the General Plan EIR found that potential cumulative impacts related to loss of habitat, particularly for sensitive species, loss of wetlands, and adverse effects on movement and dispersal of wildlife and wildlife migration corridors

---

<sup>31</sup> It is noted that Loma Rica Ranch Specific Plan, the largest cumulative project, is identified as a "Special Development Area" in the Grass Valley General Plan (Figure 3-4), and thus development within this area, and related impacts to biological resources, was considered in the General Plan EIR.



would all be reduced to less-than-significant levels through compliance with the General Plan and City ordinances.

Based on the Grass Valley General Plan EIR's cumulative biological resources analysis, the Dorsey Marketplace Draft EIR, which evaluates a project for which a General Plan Amendment is required, concluded that "Thus, there would be no significant cumulative impact to which the project could contribute. Further, implementation of Mitigation Measures 6a through 6f would ensure that the project would result in no net loss of habitat functions or values..."<sup>32</sup> Generally, the measures included in the Dorsey Marketplace Draft EIR require protection of special-status species and replacement of impacted wetland and woodland habitats.

The remaining eight cumulative projects are located within unincorporated Nevada County. Several of these project sites include one or more natural habitats that could be partially impacted should development ultimately occur as planned (excludes the 12836 Greenhorn Road site which was not found to contain habitats supporting special-status species). For example, Housing Element Rezone Site 3 contains a perennial stream along its southern boundary, and as such, an Environmentally Sensitive Area was designated on the southern portion of the site in the Housing Element Rezone Implementation Program EIR.<sup>33</sup> Mitigation Measures in the EIR require special-status plant and wildlife surveys for Site 3, and if detected, implementation of avoidance and minimization measures. Unlike Site 3, Site 5 does not contain any designated Environmentally Sensitive Areas. Nevertheless, due to the presence of Sierran mixed conifer habitat, the EIR requires implementation of preconstruction wildlife surveys, and depending upon survey results, implementation of avoidance and minimization measures. The 30-acre Tranquility Lane Estates project site along Idaho-Maryland Road contains Lava Cap habitat and two old growth trees; these sensitive habitats are within protected open space on the tentative final map. Potential impacts to migratory birds through removal of other vegetation would be addressed by mitigation requiring preconstruction surveys and nest avoidance. The 152-acre South Woodlands Subdivision project site is located east of the Greenhorn Road/Brunswick Road intersection and contains sensitive natural habitats, including 44 landmark oak trees (> 36" DBH), of which approximately 60 percent are black oaks and 40 percent are canyon live oaks, as well as approximately 10 acres of landmark oak groves. Altogether, the project would result in the potential removal of up to 14 landmark oaks and 63 native oak trees within landmark oak groves. An oak resources management plan for on-site oaks has been prepared to offset these losses and minimize impacts to the remaining resources. On-site road improvements would require four culverted seasonal stream crossings for road and driveway construction. An aquatic resources management plan has been prepared to offset the potential loss of the habitat value of the ephemeral streams from the future road and driveway construction. The project could result in potential impacts to several special-status species; however, the adopted Initial Study includes mitigation measures to ensure avoidance of protected species if detected on-site during preconstruction surveys. The seven-acre ZAP Manufacturing project site and 6.3-acre Event Helper project site are located adjacent to one another within the Loma Rica Industrial Park. These sites contain oak woodland habitat on steeper slopes, which have been designated a "Non-Disturbance Area", pursuant to Nevada County LUDC

<sup>32</sup> Dudek. *Dorsey Marketplace Draft EIR* [pg. 6-22]. March 2019.

<sup>33</sup> RBF. *Housing Element Rezone Implementation Program EIR* [Figure 3-17]. September 2013.



Section L-II 4.3.13. Due to the removal of other conifer and deciduous trees, protected birds may be impacted if nesting on-site prior to construction. However, the adopted Initial Studies include measures ensuring preconstruction surveys, and nest avoidance, if active nests are found on-site.

With respect to the proposed project, this chapter provides a wide range of mitigation to minimize potential adverse effects to habitat for special-status species. For instance, Mitigation Measure 4.4-3(c) would require that the proposed project conform with the Corp's "no-net-loss" policy for wetland mitigation. Thus, any wetlands lost within the project area must be compensated through the protection of existing wetlands, avoidance of wetland impacts, or creation of new wetland habitat elsewhere.

It should be noted that while the project would involve loss of some existing on-site habitat, other areas of the overall project site would be avoided and protected. Notably, 12.7 acres of the Centennial Industrial Site would be preserved, including the main stem of Wolf Creek, the 100-foot non-disturbance setback of the main stem of Wolf Creek, and an undisturbed and protected zone containing Pine Hill flannelbush. Regarding the latter, the southern portion of the Centennial Industrial Site, containing the majority of Pine Hill flannelbush, would remain undeveloped and be protected in perpetuity. Within this avoidance area, 42 of the 60 flannelbush plants would be protected. Furthermore, as previously noted, while Pine Hill flannelbush is conservatively assumed to be present on the Centennial Industrial Site for purposes of this EIR, the presence of said species is inconclusive based on current published scientific literature. As previously discussed, the USFWS Recovery Plan Amendment for Gabbro Soil Plants of the Central Sierra Nevada Foothills: El Dorado Bedstraw (*Galium californicum* ssp. *sierrae*) and Pine Hill flannelbush (*Fremontodendron californicum* ssp. *decumbens*) states that "Results of subsequent genetic work by a University of California, Davis researcher, to determine if Nevada and Yuba County flannelbushes are Pine Hill flannelbush, were inconclusive; therefore, we [the USFWS] continue under the assumption that these plants are not the listed entity."<sup>34</sup> Yet, according to the botanical study prepared for the Centennial Industrial Site, the recent genetic work conducted by Dr. Shannon Still from U.C. Davis has confirmed that Pine Hill flannelbush is known to occur in Nevada County, but this work is still in press (Bill Wilson, personal communication 2019).<sup>35</sup> During protocol-level field surveys implemented in 2019 for the Pine Hill flannelbush, the plants in the population were confirmed to have morphological characteristics, the floral and habit, of the Pine Hill flannelbush.

This EIR requires implementation of a Habitat Management Plan for the assumed Pine Hill flannelbush, which includes, among other action items, a robust transplantation strategy, the details of which will ultimately be subject to review and approval by USFWS and CDFW. For example, the 18 individual plants that would be directly impacted by the engineered fill placement at Centennial Industrial Site would be transplanted to another site with similar soil, hydrologic, vegetation type and aspect, and monitoring to ensure

<sup>34</sup> United States Fish and Wildlife Service. *Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills: El Dorado bedstraw (Galium californicum ssp. sierrae) and Pine Hill Flannelbush (Fremontodendron californicum ssp. decumbens)* [pg. 3]. September 2019.

<sup>35</sup> Wendy Boes. *Centennial Industrial Site CNPS Ranked Plants and Special Status Plant Survey Report*. January 2021.



success. If transplanting ultimately proves unsuccessful, substantial transplanting from seedbank shall occur at a 100:1 ratio.

This chapter has also demonstrated that gabbro soils, the type required for Pine Hill flannelbush, are not believed to be a limiting factor in the project area. The soils series within Nevada County that are known to contain gabbro parent material include Secca, Sites, Boomer, and Chaix variants USDA soils series (from the Nevada County USDA Soils Series). Within six miles of the Centennial Industrial Site, approximately 8,124 acres of Secca-Rock outcrop complex, two to 50 percent slopes have been mapped, and a total of 30,741 acres of Secca, Sites, Boomer, and Chaix variants USDA soils series have been mapped within six miles of the Centennial Industrial Site. Based on Figure 4.4-8, and adopted environmental documents for such projects, it is not anticipated that the cumulative list of projects would substantially impact gabbro soils (most notable areas include limited portions of the Loma Rica Ranch Specific Plan). The placement of engineered fill would impact a little less than half (approximately five acres) of the total estimated gabbro soils (10.31 acres, Secca-Rock outcrop complex, two to 50 percent slopes) on the property.

In addition to mitigation measures requiring the compensation of lost sensitive habitat, this EIR contains mitigation measures requiring that pre-construction surveys be conducted to reduce the potential for implementation of the proposed project to result in loss of individual special-status species. Such mitigation measures require that should pre-construction surveys identify special-status species within areas to be impacted by the proposed project, avoidance measures must be implemented to prevent the loss of identified special-status species.

In summary, while the Grass Valley General Plan EIR concluded that buildout within the City would result in a less-than-significant cumulative impact to biological resources through compliance with policies and standards identified in the General Plan, and the cumulative projects within unincorporated Nevada County has been shown to be responsible for mitigating their incremental impacts associated with loss of sensitive habitats, this EIR conservatively concludes that the combined effects on biological resources resulting from the cumulative list of projects could be considered significant. However, the proposed project's incremental contribution to the significant cumulative effect could be reduced with implementation of the mitigation measures required in this EIR. Without implementation of the required mitigation measures, the proposed project's incremental contribution to the potential significant cumulative effect could be considered ***cumulatively considerable*** and ***significant***.

#### Mitigation Measure(s)

Implementation of the following mitigation measures is sufficient to reduce all project-specific impacts to a less-than-significant level. With implementation of the following mitigation measure, which requires implementation of project-specific mitigation measures, the project's incremental contribution to cumulative biological resources impacts would be reduced to a *less than cumulatively considerable* level.

4.4-6            *Implement Mitigation Measures 4.4-1(a-b), 4.4-2 (a-g), and 4.4-3(a-d).*

