

## **5 ENVIRONMENTAL RESOURCES ELEMENT**

### **5.1 PURPOSE**

This section identifies environmentally sensitive resources found within the Rio Del Oro Specific Plan (RDOSP) Area and outlines policies to guide the conservation, protection or mitigation of these resources, some of which will be impacted with the development of the Plan Area. The Environmental Resources Element addresses three key areas; wetlands, special-status species, and cultural resources

### **5.2 WETLAND RESOURCES**

Waters of the U. S. and waters of the state mapped within the Plan Area include wetlands and “other waters.” Wetlands consist of vernal pools, seasonal wetland swales, seasonal wetlands, and ponds. “Other waters” include ephemeral drainages (including Morrison Creek). Impacts to these features requires permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1616 of the California Fish and Game Code (Lake and Streambed Alteration Agreement), and the Porter-Cologne Water Quality Control Act.

A wetland investigation was conducted for the RDOSP Area to determine the relative distribution and extent of areas potentially subject to jurisdiction of the US Army Corps of Engineers under Section 404 of the Clean Water Act and the Regional Water Quality Control Board under the Porter-Cologne Water Quality Control Act. The site was originally delineated by Gibson and Skordal in 1999 and subsequently verified by the Army Corps of Engineers (Corps) on January 5, 2000 (Regulatory No. 199900590). The RDOSP Area was re-delineated by ECORP Consulting, Inc. in June 2004.

#### **5.2.1 Wetland Types**

The following wetland types were identified in the 2004 wetland delineation performed by ECORP Consulting, Inc. The delineation was verified by the Corps of Engineers on January 10, 2005. See Exhibit 5-1.

##### **5.2.1.1 Vernal Pools**

There are numerous vernal pools throughout the annual grassland habitat portions of the RDOSP Area, particularly in the non-mined areas. Vernal pools are types of shallow, seasonal wetland depression that are typically dominated by annual native wetland plant species adapted to an annual wet/dry cycle. Vernal pools are flooded in the winter and spring but completely dry by summer. On-site vernal pools

vary in maximum water depth from a couple of inches to 18 inches deep, and they range from 0.002 to 1.3 acres in size.

### **5.2.1.2 Seasonal Wetlands**

Seasonal wetlands are scattered throughout both the mined and non-mined areas of the RDOSP Area. These seasonal wetlands are ephemerally wet areas that are usually underlain by clay or a heavy clay loam that act to suspend runoff within low-lying areas. They become inundated during the winter and fall but dry completely during the summer months. Unlike vernal pool wetlands, vegetation inhabiting on-site seasonal wetlands is predominately non-native wetland generalist species such as Italian ryegrass (*Lolium multiflorum*), barley (*Hordeum murinum*), dock (*Rumex* spp.), and rabbits-foot grass (*Polypogon monspeliensis*). Less common are native species such as Baltic rush (*Juncus balticus*) and creeping spikerush (*Eleocharis macrostachya*). Many of the seasonal wetlands that occur within the cobble tailings low areas also contain woody species including willow (*Salix* spp.) and Fremonts cottonwood (*Populus fremontii*).

### **5.2.1.3 Ponds**

Several wetland features identified as ponds are present within the RDOSP Area and consist primarily of modified or excavated basins or impounded drainages. They currently provide water for cattle grazing. For the most part, the ponds are seasonally inundated yet they hold water significantly longer than other seasonal wetland types. Several may even remain inundated throughout the year. The ponds largely lack emergent vegetation except for scarce individuals that exist around the high water mark.

### **5.2.1.4 Seasonal Wetland Swales**

Various seasonal wetland swales are located in the RDOSP Area and consist of shallow, ephemerally wet areas that convey water between larger drainages or other wetland/water features during storm events. They occur as linear wetland features but lack bed-and-bank. Portions of a swale remain saturated into the growing season, support some hydrophytic vegetation, and exhibit hydric soil characteristics. The vegetation community of on-site swales consists primarily of non-native wetland generalist plants such as Italian ryegrass, Mediterranean barley, dock, as well as native annual species including coyote thistle.


### **5.2.1.5 Ephemeral Drainages**

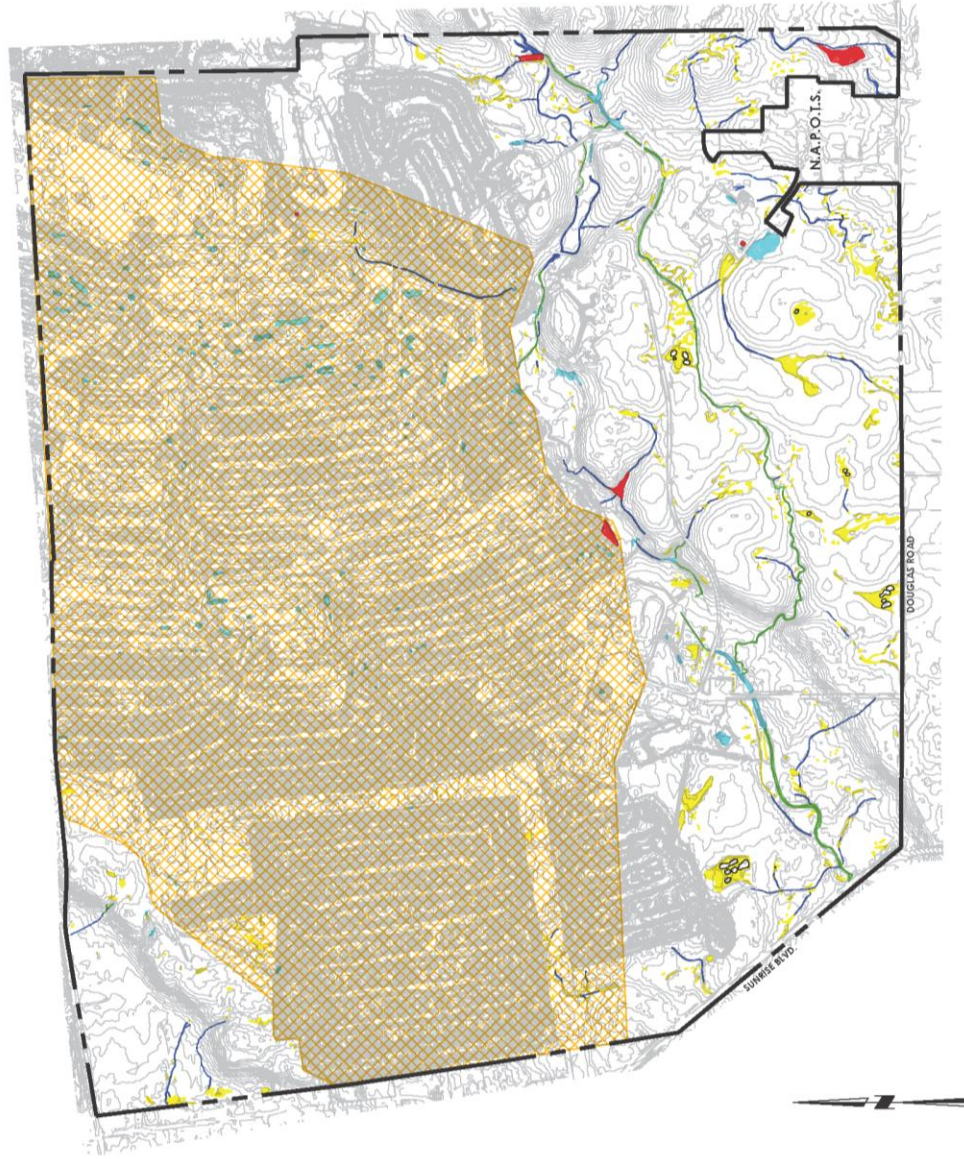
Several ephemeral drainages have been mapped within the RDOSP Area. Ephemeral drainages are linear features that provide a conduit to flow during storm events. In general, they exhibit bed-and-bank characteristics and are largely un-vegetated due to the depth and scouring effects of flowing water. Occasionally however, some hydrophytic vegetation is present along the upper edges, and in areas where sediment accumulation provides suitable substrate for plant establishment. The dominant ephemeral drainage (Morrison Creek) located on-site runs from east to west through the southern section of the site and is identified on the U.S.G.S topographic map as a blue line feature. Ultimately, Morrison Creek drains into Mather Lake, located southwest from the RDOSP Area. Several other smaller sections of ephemeral drainages mapped in the RDOSP Area. They consist originally of seasonal wetland swale features that have eroded and developed bed-and-bank characteristics.

# PRELIMINARY WETLAND ASSESSMENT RIO DEL ORO

## Legend

CLASSIFICATION	WATERS OF THE U.S. ACREAGE		
	JURISDICTIONAL ACREAGE	ISOLATED ACREAGE	EXISTING ACREAGE
Wetlands:			
Vernal Pool	35,485	2,414	37,899
Pond	3,540	0,721	4,261
Seasonal Wetland Swale	6,044	0,653	6,697
Seasonal Wetland	6,418	9,158	15,576
Other Waters:			
Ephemeral drainage	5,145	---	5,145
<b>TOTAL:</b>	<b>56,632</b>	<b>12,946</b>	<b>69,578</b>

 Isolated wetlands



### **5.3 WETLAND PRESERVATION AND MITIGATION**

Although the development of the project will be concentrated on the highly-disturbed areas that were mined in the 1920s and 1950s, unavoidable impacts to wetland features will occur.

A 510-acre area located in the southern portion of the Project containing the highest quality and density of vernal pools will be set aside as a Wetland Preserve. Existing wetlands within the Preserve area will be preserved, maintained, and monitored. Additional vernal pools and seasonal wetlands will be created within the Preserve that will also be maintained and monitored. The portion of Morrison Creek located within this area will also be preserved and enhanced. On-site success monitoring of both preserved and constructed vernal pool habitat within the Wetland Preserve will be conducted over a ten-year period.

Mitigation for non-vernal pool wetland habitat impacts will occur within drainage corridors and open space areas within the project boundaries. The corridors will range from 200 to 300 feet wide and will consist of created, meandering, low-flow channel, adjacent wetlands, riparian plantings, and a bike trail.

In addition to the onsite mitigation, there will be two offsite mitigation locations. The 160-acre Cook Property, located south of Highway 16 in Sacramento County, is proposed as additional mitigation for the Rio del Oro project. The Cook Property is bordered to the north and west by existing conservation properties, to the east by Eagles Nest Road, and to the south by Florin Road. The Cook property contains vernal pools, seasonal marsh, seasonal swales, other waters (ponds), and irrigated pasture. The likely presence of listed vernal pool invertebrates, as well as the property's proximity to other regional conservation areas, makes it ideal to mitigate impacts to biological resources resulting from the Rio Del Oro project. A conservation easement will be created for this preserve and managed by Sacramento Valley Conservancy or other conservation oriented third party.

The Rio Del Oro project will also purchase seasonal wetland credits at the Clay Station Mitigation Bank located approximately 15 miles south of the Rio del Oro project. The Rio del Oro project is within the service area of the Clay Station Mitigation Bank.

### **5.4 SPECIAL-STATUS SPECIES**

Special-status species refers to those species which:

- Have been designated by the California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Services (USFWS) as either *rare*, *threatened*, or *endangered*; and are legally protected under the California or federal endangered species acts;

- Are proposed or candidate species being considered for listing under either federal or California Endangered Species Acts; or
- Are of expressly stated interest to resource regulatory agencies, or local jurisdictions, such as CDFG species of special concern, or California Native Plant Society (CNPS) List species.

The following surveys have been conducted in the RDOSP Area to date:

- Results of Surveys for Special-Status Wildlife Species at the Aerojet Property, Sacramento County, California, Miriam Green Associates, April 1999
- Jurisdictional Delineation Rio del Oro Property, Gibson and Skordal, June 1999
- Listed Vernal Pool Branchiopods Wet Season Survey, Gibson and Skordal, August 2000
- Listed Vernal Pool Branchiopods Wet Season Survey, Gibson and Skordal, July 2001
- Elderberry Survey, Gibson and Skordal, September 2000
- Rio del Oro, Rancho Cordova, California – Rare Plant Survey, ECORP Consulting, Inc., August 2003
- Rio del Oro, Rancho Cordova, California – Rare Plant Survey, ECORP Consulting, Inc., November 2003
- Wetland Delineation, ECORP Consulting, Inc., July 2004
- Wetland Resource Assessment, ECORP Consulting, Inc., November 2004
- Late Season Special-Status Plant Survey, ECORP Consulting, Inc., August 2006
- Soil Investigation of Rio del Oro Wetland Preserve, Davis Consulting Earth Scientists, Inc., August 2007
- Watershed Analysis of the Hydrologic Function of the Rio del Oro Preserve for Preservation of Existing Wetlands and Construction of Mitigation Wetlands, ECORP Consulting, Inc., September 2007

Based upon vegetation communities present on the property, species' known distributive data, and the references cited above, a list of potentially occurring special-status species has been developed for the RDOSP Area and is included in the Recirculated Draft EIR/EIS.

#### **5.4.1 Plants**

Species known to occur on the site include Greene's legenere (*Legenere limosa*) and Northern California black walnut (*Juglans hindsii*), both CNPS List 1B species, although the Northern California black walnut identified on site are likely to be hybrids with other common species. No other special-status plant species are likely to occur on site. (See Recirculated Draft EIR/EIS, Table 3.10-1)

### 5.4.2 Invertebrates

Several of the wetland types on-site represent habitat for the federally-threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the federally-endangered vernal pool tadpole shrimp (*Lepidurus packardii*). The Conservancy fairy shrimp (*Branchinecta conservacion*), a federal endangered species, may also occur, according to the Recirculated Draft EIR/EIS.

In addition, there is suitable habitat for the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) whose exclusive host plant is the elderberry plant (*Sambucus mexicana*).

The U.S. Army Corps of Engineers, in consultation with the USFWS, is ultimately responsible in making the determination of potentially suitable habitat.

### 5.4.3 Fish

There are no immediate special-status fish issues within this reach of Morrison Creek, as it is a relatively narrow ephemeral drainage.

### 5.4.4 Amphibians and Reptiles

The vernal pools and adjacent grasslands in the RDOSP Area represent potentially suitable habitat for the western spadefoot toad (*Spea hammondi*, CDFG species of special concern and federal species of concern). No other special-status amphibians are likely to occur on-site. No special-status reptiles are likely to occur on the site. (See Recirculated Draft EIR/EIS, Table 3.10-2.)

### 5.4.5 Birds

The potentially occurring special-status birds in the RDOSP Area include nesting raptors, nesting songbirds, and wintering or migrant birds. The nesting raptors include both tree nesting and ground nesting species.

Tree nesting species that may nest or forage in the RDOSP Area are white-tailed kite (*Elanus leucurus*, Fish and Game Code fully protected and USFWS bird of management concern), Cooper's hawk (*Accipiter cooperii*, CDFG species of special concern), Swainson's hawk (*Buteo swainsoni*, California-threatened), sharp-shinned hawk (*Accipiter striatus*, a CDFG species of special concern), ferruginous hawk (*Buteo regalis*, CDFG species of special concern and USFWS-Bird of Management Concern), merlin (*Falco columbarius*, CDFG species of special concern), prairie falcon (*Falco mexicanus*, a CDFG species of special concern), and short-eared owl (*Asio flammeus*, a CDFG species of special concern). While not considered optimal foraging habitat, much of the site represents potential foraging habitat for Swainson's hawk and other raptors.

Potentially occurring ground-nesting birds in the RDOSP Area include northern harrier (*Circus cyaneus*, CDFG-species of special concern) and burrowing owl (*Athene cunicularia*, CDFG-species of special concern).

Special-status songbirds that may occur in the RDOSP Area include loggerhead shrike (*Lanius ludovicianus*, CDFG species of special concern and USFWS bird of management concern) and tricolored blackbird (*Agelaius tricolor*, CDFG species of special concern and USFWS bird of management concern).

#### **5.4.6 Mammals**

There is suitable habitat for the American badger (*Taxidea taxus*, a CDFG species of special concern) on site.

### **5.5 SPECIAL STATUS SPECIES MITIGATION**

Project implementation will involve impacts to the federally threatened vernal pool fairy shrimp and vernal pool tadpole shrimp. The U.S. Army Corps of Engineers, in consultation with the U.S. Fish and Wildlife Service will determine the acreage of potential vernal pool fairy shrimp and vernal pool tadpole shrimp habitat on the site. The applicant is proposing on-site preservation, restoration and creation of vernal pools as mitigation for impacts to these species.

Project implementation will also results in impacts to potential habitat for the federally threatened valley elderberry longhorn beetle. An elderberry preserve (totaling 12 acres) is proposed on the Project site. Elderberry seedlings will be transplanted and planted within the preserve and in other suitable areas on site, such as the drainage corridors.

The specific mitigation requirements for federally-listed species will be determined by the U.S. Fish and Wildlife Service through the Section 7 Consultation process. Mitigation for the non-federally listed special status species will be determined by the California Department of Fish and Game and the City.

If as a result of the final approval by Federal and State agencies of the Clean Water Act 404 Permit for the Specific Plan, or any approval related thereto , there is a material increase in the size of, or any material change in the dimensions or locations of any of the on-site wetland preserves from that shown on Exhibit 3-2 (the Land Use Plan), then prior to the commencement of any grading of any land within the Plan Area, the City shall have the right to approve or disapprove as part of a Specific Plan amendment, any such change in the on-site preserve(s) and any revision to the Land Use Plan which the City deems necessary as a result of such change; and there shall be no vested right under any development agreement to prevent or restrict the approval or applicability of such a Specific Plan Amendment.. For purposes of this paragraph, any change



to an on-site wetland preserve which necessitates a reduction in size of, or a reconfiguration of any parcel designated "RTC" in the Specific Plan, or which affects the location or dimensions of Rancho Cordova Parkway, shall be considered 'material'.

## **5.6 OAK AND RIPARIAN WOODLANDS**

The project site has been significantly disturbed by dredger mining activities which occurred approximately 50-100 years ago. The topography of the site is undulating, with large expanses of river cobble on the surface. Sierra Nevada Arborists prepared a tree survey in 2003. The results of the survey show that of the 1,520 trees of significance within the Plan Area, the majority of the trees are Fremont Cottonwood (*Populus Fremontii*), with some Pacific Willow (*Salix lasiandra*) being observed in the depressions between tailing rows. A total of 47 native oaks are documented in the survey and less than 50 smaller oaks (less than 6" DBH) were also observed on the site.

## **5.7 CULTURAL RESOURCES**

The Plan Area was researched and surveyed for historic and archaeological resources. In 1999 and 2004, research was completed by Peak & Associates, Inc. on known and potential cultural resources for the Specific Plan area. A field assessment was conducted surveying all areas of the site not disturbed by the extensive dredging activities, and in addition, several transects were made across various portion of the tailings to ascertain if any features were present. In April and May 2005, Weitz Research conducted an inventory evaluation for potential historic resources within the Plan Area. The Rio Del Oro EIR/EIS includes these studies and recommends mitigation measures for impacts to potential cultural resources. Further studies are also being carried out as part of compliance with Section 106 of the National Historic Preservation Act (NHPA) as required for permitting under Section 404 of the Clean Water Act. The studies are subject to review and approval by the California Office of Historic Preservation and the US Army Corp of Engineers. Mitigation of adverse effects to any resources identified as significant in the Section 106 process will be developed in consultation with the California Office of Historic Preservation and will be implemented.

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